



Catalyst for a better Hawai'i



Kākou

Working together for Hawai'i's future



2019 Annual Report to Shareholders

Hawai'i has some of the nation's most ambitious clean energy goals—100% renewable energy and a carbon neutral economy by 2045.

Achieving these goals in the right way for our island state will take balancing important community needs, like affordability, resilience, social equity and cultural considerations, and addressing key challenges, like limited land and competing needs for that resource—from affordable housing to clean energy to agriculture.

This is why we say reaching our goals must be done in a way that is **“kākou,”** meaning that it will take our whole community working together, and **“pono,”** done in a way that is right and just for our communities. Only together can we find the solutions that strike the right balance for our island home.



Letter to Shareholders

Dear Fellow Shareholders,

We have long viewed the success of our enterprise and the value we deliver to shareholders as inextricably linked with the value we deliver to our customers, our employees and our communities, and with the health of our environment, our economy and our state as a whole. This link has become even more important in the context of achieving our state's clean energy and carbon neutrality goals. Our work to achieve these goals will help preserve our environment, increase our energy independence, strengthen our economy and create long-term value for our shareholders. Our company, our employees, our customers and our communities each play a unique role in achieving these goals, and all of us need to work together to be successful. In other words, it's a "kākou" thing.

The paragraphs that follow summarize what our HEI family of companies achieved over the course of 2019, and how we are working to advance our state's goals and create value for all of our stakeholders.

Solid Financial Results

In 2019 our consolidated companies generated \$218 million in net income and \$1.99 in earnings per share (EPS), representing 8% growth over net income and EPS in 2018. Hawaiian Electric grew earnings by 9% and strengthened its return on equity, while continuing to deliver on priorities established in its five-year strategic plan. American Savings Bank (ASB) grew earnings and maintained a strong net interest margin, while growing its dividend to the holding company by 12%. Now that the bank is operating in its new campus, it sold two of its former properties and is focused on realizing the benefits of the consolidation into the new space, including increased collaboration and efficiencies.

Growing Our Dividend

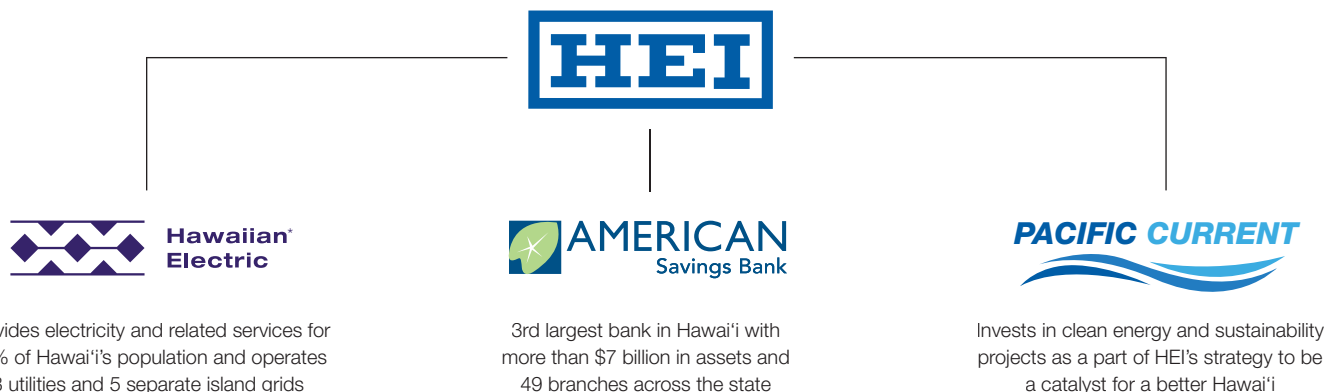
In 2019 we not only continued our record of paying uninterrupted dividends to our shareholders since 1901, we also increased our annual dividend by 3%. In early 2020 we announced a second consecutive 3% increase, raising the quarterly dividend from 32 cents to 33 cents per share, reflecting the strength of our financial performance, and the Board's confidence in our future.



“Our work to achieve our state's clean energy and carbon neutrality goals will help preserve our environment, increase our energy independence, strengthen our economy and create long-term value for our shareholders. Our company, our employees, our customers and our communities each play a unique role in achieving these goals, and all of us need to work together to be successful. In other words, it's a 'kākou' thing.”

Constance H. Lau

President and Chief Executive Officer
Hawaiian Electric Industries, Inc.



*Hawaiian Electric Company, Inc. is a subsidiary of HEI. As a holding company, HEI does not sell products or services and therefore is not regulated by the state Public Utilities Commission.

HAWAIIAN ELECTRIC 2019 HIGHLIGHTS

4.6%

The number of residential rooftop solar systems increased 4.6%

28%

Over 28% of electricity sales achieved with renewable energy. On track to meet or exceed 2020 goal of 30%

#1

#1 in the nation in residential rooftop solar penetration, at 19% (more than double that of the next highest state, California)

Hawaiian Electric

2019 was a milestone year for Hawaiian Electric. We added a record amount of solar to our grids, maintained our position as number one in the nation for residential rooftop solar penetration, and, along with the state of Hawai'i, received national recognition for leadership in the transformation to a clean energy, carbon neutral economy. We were also proud to be named "Utility of the Year" by Utility Dive, an independent industry publication. In December, we announced that Scott Seu would succeed Alan Oshima as our utility's next President and CEO, which became effective February 2020. Scott has been a leader in the utility's transformation into a more customer-focused enterprise, and under his leadership, we are confident that the utility can continue its success in partnering with our many stakeholders to achieve our state's clean energy targets.

We made important strides on key priorities of our multi-year strategic transformation plan, which focuses on delivering affordable, reliable, renewable energy; providing more value to customers; strengthening our relationships with communities; building resilience; and maintaining our financial strength. We saw a 21% increase in solar capacity, our largest single-year increase ever, driven by new utility-scale projects and a nearly 5% increase in rooftop solar. Utility-scale projects placed in service included our West Loch solar project, which is now delivering the lowest cost solar in the state. We reached over 28% of energy sales from renewables, and we are well-positioned to integrate even more renewable energy onto our grids in the coming years. Regulators approved seven contracts for the lowest cost solar-plus-storage projects yet seen in Hawai'i, and we launched one of the industry's largest procurement efforts for renewables, with the successful bidders to be named later in 2020.



Scott W. H. Seu

President and CEO, Hawaiian Electric

Prior to his appointment as President and CEO on February 15, 2020, Scott served as Hawaiian Electric's Senior Vice President for Public Affairs. Scott has held leadership positions across the utility since 1993, including in environmental management, customer programs, renewable energy development and system operations.



We strive to improve our customers' experience, and in the fourth quarter we achieved customer satisfaction scores that placed us in the top third of the industry. We continue to develop new programs for customers to benefit from the clean energy transformation. These include our Project Footprint campaign to inspire customers to adopt sustainable practices and contribute to Hawai'i's renewable energy goals. In 2019, Project Footprint gained national recognition and gained numerous rewards for its innovative approach to customer engagement.

Community engagement drove much of our resource planning and resilience work in 2019, providing valuable customer and stakeholder insights to such varied initiatives as Integrated Grid Planning and a series of resilience and preparedness workshops we led for the windward communities of Oahu. Stakeholder engagement has also been central to the evolution of our regulatory framework. In 2019, regulators, the utility and stakeholders began the design phase of Performance-based Regulation, or PBR, which will be implemented starting in 2021. We look forward to continued collaboration with participants as we move toward implementation.

Below: Community engagement is a central part of Hawaiian Electric's strategy, and it is essential in achieving our clean energy goals in a way that is affordable, safe, reliable and resilient. In 2019 Hawaiian Electric held numerous forums across our islands to engage directly with customers and other stakeholders on issues such as renewable energy, resilience and emergency preparedness.



“Collaborating with communities to strengthen resilience—working with community leaders, as well as our partners in government and the private sector to prepare for the impacts of weather and other emergencies—is one of the many reasons I’m proud of our company’s role in the community.”

Brandi Crabbe

Community Relations Specialist
Hawaiian Electric



HAWAIIAN ELECTRIC
2019 HIGHLIGHTS

21%

2019 saw our largest ever increase in solar generation capacity, which increased 21% over 2018

900 MW
500 GWh
210 MW

Launched one of the largest ever utility renewables procurement efforts for up to 900 MW renewables, 500 GWh storage and 210 MW grid services

7 PPAs
260 MW
1 GWh

Secured lowest cost renewables to date for our customers: 7 PPAs approved representing 260 MW solar and 1 GWh storage

\$109 million in customer savings

Completed 20 MW, company-owned West Loch solar project, which is expected to save customers \$109 million and reduce fossil fuel usage by 3 million gallons annually over its 25-year life, while delivering the lowest-cost renewable energy to date in the state.



We also advanced efforts to improve the utility's culture and efficiency, and a key accomplishment in 2019 was completing consolidation of functions and branding under our "One Company" initiative. Our three utilities across our five-island territory are now operating under a single name, "Hawaiian Electric."

Below: Connecting to the 'āina (land) at Ka'ala Farm—Hawaiian Electric employees and their families and friends were among the 150 volunteers who joined The Trust for Public Land to open lo'i (taro flats) and plant kalo (taro) at Ka'ala Farm, the nonprofit organization focused on restoring ancient, abandoned lo'i kalo in an area that once served as a "poi bowl" for O'ahu.



American Savings Bank

ASB continued its record of solid performance in 2019. We performed well through a challenging interest rate environment for banks, highlighting the consistency, stability and resiliency of the business. ASB grew earnings while delivering solid loan and core deposit growth, and remaining relentlessly focused on making banking easy for customers. In 2019, ASB invested nearly \$2 billion in our community—providing the capital to help customers grow their businesses, plan for retirement or their children's education, buy a first home, or invest in energy efficiency and renewable energy systems.

In April, we celebrated the grand opening of our new ASB Campus. At 11-stories and 373,000 square feet, the ASB Campus is the first new office building in the downtown Honolulu area in the past 25 years. It brings together more than 650 team members previously spread out across five separate office locations. Being together under one roof allows team members to work even better together to carry out the bank's vision of making dreams possible for Hawai'i's families, businesses and communities. We're already seeing the benefits of the innovative open floorplans, teammate training center, and variety of collaboration spaces, which have facilitated faster decisions, process improvements and greater efficiency. ASB's focus on its teammates and their work environment shows why it again won several workplace awards in 2019, including Hawaii Business magazine's Best Places to Work (for the 11th year in a row); Fortune's Great Places to Work (Best Workplaces for Diversity List), and Working Mother's Multicultural Workplaces List.

Below: In April 2019, American Savings Bank unveiled the ASB Campus—the first new office building in downtown Honolulu in nearly 25 years. The 11-story, 373,000-square-foot Campus is located at 300 N. Beretania Street, directly across from 'A'ala Park.



“Our locally-owned and operated bakery has served the state of Hawai'i with quality food products and services since 1984.

By partnering with American Savings Bank, we were able to secure a loan to install rooftop solar on our facilities in Honolulu.

We are proud to partner with another Hawai'i-based company to play a part in helping our state achieve its goal towards clean energy.”

Brandon Lam

President
La Tour Bakehouse



ASB
2019 HIGHLIGHTS

\$1.8 billion

invested in our community
in 2019

\$8.7 billion

loaned to Hawai'i customers
over the last five years

11

consecutive years on Hawaii
Business magazine's Best
Places to Work list

15,025

Seeds of Service
volunteer hours
(27% increase over 2018)



Above: ASB continues to gain recognition as a great place to work. The bank received numerous recognitions in 2019, including Hawaii Business magazine's Best Places to Work (for the 11th year in a row); Fortune's Great Places to Work (Best Workplaces for Diversity List), and Working Mother's Multicultural Workplaces List.

The bank's investment in the campus neighborhood has helped improve Honolulu's urban core for the whole community, and ASB's teammates have continued to give back to the community in numerous ways. In 2019, teammates contributed more than 15,000 volunteer hours and the bank donated more than \$1.15 million dollars to local non-profits statewide. Additionally, more than 1,000 local students across the islands participated in ASB's 2019 KeikiCo business plan competition last fall, which resulted in awards totaling \$190,000 to 14 local schools.

Below: ASB's Seeds of Service program encourages ASB teammates to give their time and talent to schools and community organizations. Since the program's inception, ASB teammates have donated more than 63,000 hours of volunteer service to schools and non-profit organizations on O'ahu, Hawai'i Island, Maui, Moloka'i and Kaua'i.





Above: The Pacific Current rooftop solar system and EverCharge EV charging station power the Harry and Jeanette Weinberg Ho'okupu Center while encouraging EV adoption.

Pacific Current

2019 marked Pacific Current's first year with its own management team in place. Under the new team's leadership, Pacific Current continued to invest in projects advancing Hawai'i's sustainability goals, while optimizing the existing portfolio. In November, Pacific Current's first investment, the Hamakua plant, received its first shipment of locally-sourced biodiesel as part of its fuel needs. We also launched the EverCharge Hawai'i joint venture to improve electric vehicle charging options for multi-unit dwellings and high-rise office buildings, encouraging broader electric vehicle adoption. Construction for the University of Hawai'i solar-plus-storage projects also moved forward, and we will start seeing those projects become operational in 2020. We're proud that Pacific Current is able to contribute to the sustainability and energy independence of our islands, and also contribute towards the achievement of our state's renewable energy goals.

Commitment to Our Communities

HEI has consistently been recognized as one of our state's most charitable companies. In 2019 our family of companies donated more than \$2.4 million in charitable contributions and devoted over 27,000 volunteer hours to the communities we serve.

Management and Governance Updates

Our Board is committed to ensuring we have the diversity of perspective, skills and expertise to continue to drive value for our stakeholders. The HEI Board recently welcomed the addition of Micah Kāne, whose extensive leadership experience and in-depth understanding of the communities HEI serves add to the Board's oversight of HEI's Hawai'i-focused strategies, and Eva Zlotnicka, whose investment expertise on sustainability matters and experience overseeing ambitious strategic initiatives will contribute to our efforts to advance Hawai'i's sustainability goals.

Finally, I would like to thank Alan Oshima for his tremendous leadership during a time of great change, as he led our utility through a major transformation and mentored and prepared our next generation of leaders.

Looking Ahead

I am excited for the opportunities our companies have to continue creating long-term value for shareholders while helping our state meet its broader renewable energy and sustainability goals. We are confident that working together, we and our communities and other stakeholders can achieve our shared renewable energy and carbon neutral future. On behalf of our employees, our executives, and our Board, we extend a big mahalo (thank you) to our shareholders for supporting us and making these goals possible.

Aloha,

Constance H. Lau
President and Chief Executive Officer
Hawaiian Electric Industries, Inc.



“The mission of our Hawai'i-based non-profit, Kupu, is to empower people to bring life to the land and ocean through service while restoring the larger community for a better tomorrow. We were especially thankful to partner with Pacific Current to install rooftop solar and an EverCharge electric vehicle charging station at our Harry and Jeanette Weinberg Ho'okupu Center, which houses our culinary program. This will allow us to save on our electric bill and significantly reduce our building's carbon footprint. We're proud to have worked with a local partner on a project that supports the missions of both organizations as well as the broader sustainability goals of our community and state.”

John Leong
Chief Executive Officer
Kupu Hawai'i

Financial Highlights

Years ended December 31 (dollars in millions, except per share amounts)	2019	2018	2017
Operating income ¹	\$ 349	\$ 333	346
Net income (loss) for common stock by segment			
Electric utility	157	144	120
Bank ¹	89	83	67
Other	(28)	(24)	(22)
Net income for common stock ¹	218	202	165
Core ² net income for common stock ¹	218	202	179
Diluted earnings per common share ¹	1.99	1.85	1.52
Core ² diluted earnings per common share ¹	1.99	1.85	1.65
Return on average common equity ¹	9.8%	9.5%	7.9%
Core ² return on average common equity ¹	9.8%	9.5%	8.6%
Dividends per common share	1.28	1.24	1.24
Annual dividend yield ³	2.7%	3.4%	3.4%
Common shares (millions)			
December 31	109.0	108.9	108.8
Weighted-average — basic	108.9	108.9	108.7
Weighted-average — diluted	109.4	109.1	108.9

Total Shareholder Return

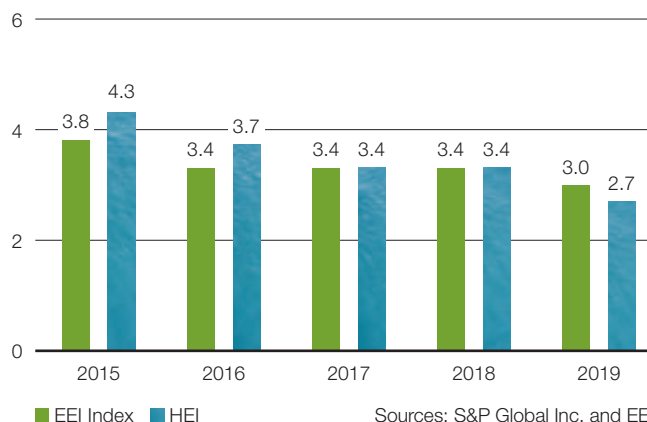
(percent)

	HEI	S&P 500 Index	Edison Electric Institute (EEI) Index	KBW Regional Banking Index
2019	31.9	31.5	25.8	23.8
3-Year	57.1	53.2	45.7	3.9
5-Year	68.2	73.9	64.4	53.0
10-Year	245.5	256.7	214.0	197.7

Source: S&P Global Inc.
HEI NYSE symbol: HE

Dividend Yield

(percent)



(1) 2019 results include an after-tax gain of \$5.5 million (\$0.05 per diluted share), composed of \$10.8 million of gains (\$7.9 million after-tax, or \$0.07 per diluted share) on sales of real estate associated with ASB's transition to its new campus, partially offset by \$3.2 million (\$2.4 million after-tax, or \$0.02 per diluted share) of exit costs associated with the move to the new campus. After-tax amounts are computed at ASB's statutory tax rate of 26.8%.

(2) Non-GAAP measure that excludes, for 2017, the tax reform act and related items. See Appendix B to this 2019 Annual Report to Shareholders for the reconciliation of GAAP to non-GAAP measures.

(3) At December 31.

Hawaiian Electric Industries, Inc.
2019 Annual Report to Shareholders

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549
FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2019
OR
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

Exact Name of Registrant as Specified in Its Charter	Commission File Number	I.R.S. Employer Identification No.
Hawaiian Electric Industries, Inc.	1-8503	99-0208097
Hawaiian Electric Company, Inc.	1-4955	99-0040500

State of Hawaii

(State or other jurisdiction of incorporation)

1001 Bishop Street, Suite 2900, Honolulu, Hawaii 96813 - Hawaiian Electric Industries, Inc. (HEI)
1001 Bishop Street, Suite 2500, Honolulu, Hawaii 96813 - Hawaiian Electric Company, Inc. (Hawaiian Electric)

(Address of principal executive offices and zip code)

Registrant's telephone number, including area code:

(808) 543-5662 - HEI

(808) 543-7771 - Hawaiian Electric

Not applicable

(Former name or former address, if changed since last report.)

Securities registered pursuant to Section 12(b) of the Act:

Registrant	Title of each class	Trading Symbol	Name of each exchange on which registered
Hawaiian Electric Industries, Inc.	Common Stock, Without Par Value	HE	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

Registrant	Title of each class
Hawaiian Electric Industries, Inc.	None
Hawaiian Electric Company, Inc.	Cumulative Preferred Stock

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Hawaiian Electric Industries, Inc. Yes No Hawaiian Electric Company, Inc. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Hawaiian Electric Industries, Inc. Yes No Hawaiian Electric Company, Inc. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Hawaiian Electric Industries, Inc. Yes No Hawaiian Electric Company, Inc. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Hawaiian Electric Industries, Inc. Yes No Hawaiian Electric Company, Inc. Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Hawaiian Electric Industries, Inc.:	Large accelerated filer <input checked="" type="checkbox"/>	Smaller reporting company <input type="checkbox"/>	Hawaiian Electric Company, Inc.:	Large accelerated filer <input type="checkbox"/>	Smaller reporting company <input type="checkbox"/>
	Accelerated filer <input type="checkbox"/>	Emerging growth company <input type="checkbox"/>		Accelerated filer <input type="checkbox"/>	Emerging growth company <input type="checkbox"/>
	Non-accelerated filer <input type="checkbox"/>			Non-accelerated filer <input checked="" type="checkbox"/>	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Hawaiian Electric Industries, Inc. Yes No Hawaiian Electric Company, Inc. Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Hawaiian Electric Industries, Inc. Yes No Hawaiian Electric Company, Inc. Yes No

	Aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrants as of June 30, 2019	Number of shares of common stock outstanding of the registrants as of	
		June 30, 2019	February 13, 2020
Hawaiian Electric Industries, Inc. (Without Par Value)	\$4,745,752,027	108,972,492	108,973,328
Hawaiian Electric Company, Inc. (\$6-2/3 Par Value)	None	16,751,488	17,048,783

DOCUMENTS INCORPORATED BY REFERENCE

Hawaiian Electric’s Exhibit 99.1, consisting of:

- Hawaiian Electric’s Directors, Executive Officers and Corporate Governance—Part III
- Hawaiian Electric’s Executive Compensation—Part III
- Hawaiian Electric’s Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters—Part III
- Hawaiian Electric’s Certain Relationships and Related Transactions, and Director Independence—Part III
- Hawaiian Electric’s Principal Accounting Fees and Services—Part III

Selected sections of Proxy Statement of HEI for the 2020 Annual Meeting of Shareholders to be filed-Part III

This combined Form 10-K represents separate filings by Hawaiian Electric Industries, Inc. and Hawaiian Electric Company, Inc. Information contained herein relating to any individual registrant is filed by each registrant on its own behalf. Hawaiian Electric makes no representations as to any information not relating to it or its subsidiaries.

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GLOSSARY OF TERMS

Defined below are certain terms used in this report:

<u>Terms</u>	<u>Definitions</u>
ABO	Accumulated benefit obligation
ACL	Allowance for credit losses as determined under the new credit loss standard (ASU No. 2016-13), which requires the measurement of lifetime expected credit losses for financial assets held at the reporting date (based on historical experience, current conditions and reasonable and supportable forecasts)
ADIT	Accumulated deferred income tax balances
AES Hawaii	AES Hawaii, Inc.
AFS	Available-for-sale
AFUDC	Allowance for funds used during construction
ALL	Allowance for loan losses, as determined under the existing credit loss standard, requires recording the allowance based on an incurred loss model
AOCI	Accumulated other comprehensive income (loss)
AOS	Adequacy of supply
APBO	Accumulated postretirement benefit obligation
ARO	Asset retirement obligations
ASB	American Savings Bank, F.S.B., a wholly-owned subsidiary of ASB Hawaii Inc.
ASB Hawaii	ASB Hawaii, Inc. (formerly American Savings Holdings, Inc.), a wholly-owned subsidiary of Hawaiian Electric Industries, Inc. and the parent company of American Savings Bank, F.S.B.
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Btu	British thermal unit
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
Chevron	Chevron Products Company, which assigned their fuel oil supply contracts with the Utilities to Island Energy Services, LLC
CIAC	Contributions in aid of construction
CIS	Customer Information System
Company	When used in Hawaiian Electric Industries, Inc. sections and in the Notes to Consolidated Financial Statements, “Company” refers to Hawaiian Electric Industries, Inc. and its direct and indirect subsidiaries, including, without limitation, Hawaiian Electric Company, Inc. and its subsidiaries (listed under Hawaiian Electric); ASB Hawaii, Inc. and its subsidiary, American Savings Bank, F.S.B.; Pacific Current, LLC and its subsidiaries, Hamakua Holdings, LLC (and its subsidiary, Hamakua Energy, LLC) and Mauo Holdings, LLC (and its subsidiary, Mauo, LLC) and The Old Oahu Tug Service, Inc. (formerly Hawaiian Tug & Barge Corp.). When used in Hawaiian Electric Company, Inc. sections, “Company” refers to Hawaiian Electric Company, Inc. and its direct subsidiaries.
Consolidated Financial Statements	HEI’s or Hawaiian Electric’s Consolidated Financial Statements, including notes, in Item 8 of this Form 10-K
Consumer Advocate	Division of Consumer Advocacy, Department of Commerce and Consumer Affairs of the State of Hawaii
CBRE	Community-based renewable energy
D&O	Decision and order from the PUC
DBF	State of Hawaii Department of Budget and Finance
DG	Distributed generation
DER	Distributed energy resources
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010
DOH	State of Hawaii Department of Health
DRIP	HEI Dividend Reinvestment and Stock Purchase Plan
ECAC	Energy cost adjustment clause
ECRC	Energy cost recovery clause
EEPS	Energy Efficiency Portfolio Standards
EGU	Electrical generating unit
EIP	2010 Executive Incentive Plan, as amended
EPA	Environmental Protection Agency - federal

GLOSSARY OF TERMS *(continued)*

<u>Terms</u>	<u>Definitions</u>
EPS	Earnings per share
ERISA	Employee Retirement Income Security Act of 1974, as amended
ERL	Environmental Response Law of the State of Hawaii
ERP/EAM	Enterprise Resource Planning/Enterprise Asset Management
ESG	Environmental, social and governance
Exchange Act	Securities Exchange Act of 1934
FASB	Financial Accounting Standards Board
FDIC	Federal Deposit Insurance Corporation
FDICIA	Federal Deposit Insurance Corporation Improvement Act of 1991
federal	U.S. Government
FERC	Federal Energy Regulatory Commission
FHLB	Federal Home Loan Bank
FHLMC	Federal Home Loan Mortgage Corporation
FICO	Fair Isaac Corporation
Fitch	Fitch Ratings, Inc.
FNMA	Federal National Mortgage Association
FRB	Federal Reserve Board
GAAP	Accounting principles generally accepted in the United States of America
GHG	Greenhouse gas
GNMA	Government National Mortgage Association
Gramm Act	Gramm-Leach-Bliley Act of 1999
Hamakua Energy	Hamakua Energy, LLC, an indirect subsidiary of Pacific Current and successor in interest to Hamakua Energy Partners, L.P., an affiliate of Arclight Capital Partners (a Boston based private equity firm focused on energy infrastructure investments) and successor in interest to Encogen Hawaii, L.P.
Hawaii Electric Light	Hawaii Electric Light Company, Inc., an electric utility subsidiary of Hawaiian Electric Company, Inc.
Hawaiian Electric	Hawaiian Electric Company, Inc., an electric utility subsidiary of Hawaiian Electric Industries, Inc. and parent company of Hawaii Electric Light Company, Inc., Maui Electric Company, Limited, HECO Capital Trust III (unconsolidated financing subsidiary), Renewable Hawaii, Inc. and Uluwehiokama Biofuels Corp.
Hawaiian Electric's MD&A	Hawaiian Electric Company, Inc.'s Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 of this Form 10-K
HEI	Hawaiian Electric Industries, Inc., direct parent company of Hawaiian Electric Company, Inc., ASB Hawaii, Inc., Pacific Current, LLC and The Old Oahu Tug Service, Inc. (formerly Hawaiian Tug & Barge Corp.)
HEI's 2020 Proxy Statement	Selected sections of Proxy Statement for the 2020 Annual Meeting of Shareholders of Hawaiian Electric Industries, Inc. to be filed after the date of this Form 10-K and not later than 120 days after December 31, 2019, which are incorporated in this Form 10-K by reference
HEI's MD&A	Hawaiian Electric Industries, Inc.'s Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 of this Form 10-K
HEIRSP	Hawaiian Electric Industries Retirement Savings Plan
HELOC	Home equity line of credit
HPOWER	City and County of Honolulu with respect to a power purchase agreement for a refuse-fired plant
HSFO	High sulfur fuel oil
HTM	Held-to-maturity
IPP	Independent power producer
IRP	Integrated resource plan
IRR	Interest rate risk
Kalaeloa	Kalaeloa Partners, L.P.
kV	Kilovolt
kW	Kilowatt/s (as applicable)
kWh	Kilowatthour/s (as applicable)
LNG	Liquefied natural gas
LSFO	Low sulfur fuel oil
LTIP	Long-term incentive plan
Maui Electric	Maui Electric Company, Limited, an electric utility subsidiary of Hawaiian Electric Company, Inc.

GLOSSARY OF TERMS *(continued)*

<u>Terms</u>	<u>Definitions</u>
Mauo	Mauo, LLC, an indirect subsidiary of Pacific Current
MBtu	Million British thermal unit
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
Merger	As provided in the Merger Agreement (see below), merger of NEE Acquisition Sub II, Inc. with and into HEI, with HEI surviving, and then merger of HEI with and into NEE Acquisition Sub I, LLC, with NEE Acquisition Sub I, LLC surviving as a wholly owned subsidiary of NextEra Energy, Inc.
Merger Agreement	Agreement and Plan of Merger by and among HEI, NextEra Energy, Inc., NEE Acquisition Sub II, Inc. and NEE Acquisition Sub I, LLC, dated December 3, 2014 and terminated July 16, 2016
Moody's	Moody's Investors Service's
MOU	Memorandum of Understanding
MPIR	Major Project Interim Recovery
MSFO	Medium sulfur fuel oil
MSR	Mortgage servicing right
MW	Megawatt/s (as applicable)
MWh	Megawatthour/s (as applicable)
NA	Not applicable
NEE	NextEra Energy, Inc.
NEM	Net energy metering
NII	Net interest income
NM	Not meaningful
NPBC	Net periodic benefits costs
NPPC	Net periodic pension costs
O&M	Other operation and maintenance
OCC	Office of the Comptroller of the Currency
OPEB	Postretirement benefits other than pensions
OTS	Office of Thrift Supervision, Department of Treasury
OTTI	Other-than-temporary impairment
Pacific Current	Pacific Current, LLC, a wholly owned subsidiary of HEI and indirect parent company of Hamakua Energy and Mauo
PBO	Projected benefit obligation
PCB	Polychlorinated biphenyls
PGV	Puna Geothermal Venture
PIMs	Performance incentive mechanisms
PPA	Power purchase agreement
PPAC	Purchased power adjustment clause
PSIPs	Power Supply Improvement Plans
PUC	Public Utilities Commission of the State of Hawaii
PURPA	Public Utility Regulatory Policies Act of 1978
PV	Photovoltaic
QF	Qualifying Facility under the Public Utility Regulatory Policies Act of 1978
QTL	Qualified Thrift Lender
RAM	Rate adjustment mechanism
RBA	Revenue balancing account
Registrant	Each of Hawaiian Electric Industries, Inc. and Hawaiian Electric Company, Inc.
REIP	Renewable Energy Infrastructure Program
RFP	Request for proposals
RHI	Renewable Hawaii, Inc., a wholly-owned nonregulated subsidiary of Hawaiian Electric Company, Inc.
ROA	Return on assets
ROACE	Return on average common equity
RORB	Return on rate base
RPS	Renewable portfolio standards
S&P	Standard & Poor's
SASB	Sustainability Accounting Standards Board
SEC	Securities and Exchange Commission

GLOSSARY OF TERMS *(continued)*

<u>Terms</u>	<u>Definitions</u>
See	Means the referenced material is incorporated by reference (or means refer to the referenced section in this document or the referenced exhibit or other document)
SLHCs	Savings & Loan Holding Companies
SOIP	1987 Stock Option and Incentive Plan, as amended. Shares of HEI common stock reserved for issuance under the SOIP were deregistered and delisted in 2015.
Spin-Off	The previously planned distribution to HEI shareholders of all of the common stock of ASB Hawaii immediately prior to the Merger, which was terminated
SPRBs	Special Purpose Revenue Bonds
ST	Steam turbine
state	State of Hawaii
Tax Act	2017 Tax Cuts and Jobs Act (H.R. 1, An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018)
TCFD	Task Force on Climate-related Financial Disclosure
TDR	Troubled debt restructuring
Tesoro	Tesoro Hawaii Corporation dba BHP Petroleum Americas Refining Inc., a fuel oil supplier
TOOTS	The Old Oahu Tug Service, Inc., a wholly-owned subsidiary of Hawaiian Electric Industries, Inc.
Trust III	HECO Capital Trust III
UBC	Uluwehiokama Biofuels Corp., a wholly-owned nonregulated subsidiary of Hawaiian Electric Company, Inc.
Utilities	Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc. and Maui Electric Company, Limited
VIE	Variable interest entity

Cautionary Note Regarding Forward-Looking Statements

This report and other presentations made by Hawaiian Electric Industries, Inc. (HEI) and Hawaiian Electric Company, Inc. (Hawaiian Electric) and their subsidiaries contain “forward-looking statements,” which include statements that are predictive in nature, depend upon or refer to future events or conditions and usually include words such as “will,” “expects,” “anticipates,” “intends,” “plans,” “believes,” “predicts,” “estimates” or similar expressions. In addition, any statements concerning future financial performance, ongoing business strategies or prospects or possible future actions are also forward-looking statements. Forward-looking statements are based on current expectations and projections about future events and are subject to risks, uncertainties and the accuracy of assumptions concerning HEI and its subsidiaries (collectively, the Company), the performance of the industries in which they do business and economic, political and market factors, among other things. These forward-looking statements are not guarantees of future performance.

Risks, uncertainties and other important factors that could cause actual results to differ materially from those described in forward-looking statements and from historical results include, but are not limited to, the following:

- international, national and local economic and political conditions—including the state of the Hawaii tourism, defense and construction industries; the strength or weakness of the Hawaii and continental U.S. real estate markets (including the fair value and/or the actual performance of collateral underlying loans held by ASB, which could result in higher loan loss provisions and write-offs); decisions concerning the extent of the presence of the federal government and military in Hawaii; the implications and potential impacts of future Federal government shutdowns, including the impact to our customers to pay their electric bills and/or bank loans and the impact on the state of Hawaii economy; the implications and potential impacts of U.S. and foreign capital and credit market conditions and federal, state and international responses to those conditions; and the potential impacts of global and local developments (including economic conditions and uncertainties; unrest, terrorist acts, wars, conflicts, political protests, deadly virus epidemic, potential pandemic or other crisis; the effects of changes that have or may occur in U.S. policy, such as with respect to immigration and trade);
- the effects of future actions or inaction of the U.S. government or related agencies, including those related to the U.S. debt ceiling or budget funding, monetary policy, trade policy and tariffs, and other policy and regulatory changes advanced or proposed by President Trump and his administration;
- weather, natural disasters (e.g., hurricanes, earthquakes, tsunamis, lightning strikes, lava flows and the increasing effects of climate change, such as more severe storms, flooding, droughts, heat waves, and rising sea levels) and wildfires, including their impact on the Company’s and Utilities’ operations and the economy;
- the timing, speed and extent of changes in interest rates and the shape of the yield curve;
- the ability of the Company and the Utilities to access the credit and capital markets (e.g., to obtain commercial paper and other short-term and long-term debt financing, including lines of credit, and, in the case of HEI, to issue common stock) under volatile and challenging market conditions, and the cost of such financings, if available;
- the risks inherent in changes in the value of the Company’s pension and other retirement plan assets and ASB’s securities available for sale, and the risks inherent in changes in the value of the Company’s pension liabilities, including changes driven by interest rates;
- changes in laws, regulations (including tax regulations), market conditions, interest rates and other factors that result in changes in assumptions used to calculate retirement benefits costs and funding requirements;
- the impact of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) and of the rules and regulations that the Dodd-Frank Act requires to be promulgated, as amended by the Economic Growth, Regulatory Relief and Consumer Protection Act;
- increasing competition in the banking industry (e.g., increased price competition for deposits, or an outflow of deposits to alternative investments, which may have an adverse impact on ASB’s cost of funds);
- the potential delay by the Public Utilities Commission of the State of Hawaii (PUC) in considering (and potential disapproval of actual or proposed) renewable energy proposals and related costs; reliance by the Utilities on outside parties such as the state, independent power producers (IPPs) and developers; and uncertainties surrounding technologies, solar power, wind power, biofuels, environmental assessments required to meet renewable portfolio standards (RPS) goals and the impacts of implementation of the renewable energy proposals on future costs of electricity;
- the ability of the Utilities to develop, implement and recover the costs of implementing the Utilities’ action plans included in their updated Power Supply Improvement Plans, Demand Response Portfolio Plan, Distributed Generation Interconnection Plan, Grid Modernization Plans, and business model changes, which have been and are continuing to be developed and updated in response to the orders issued by the PUC, the PUC’s April 2014 statement of its inclinations on the future of Hawaii’s electric utilities and the vision, business strategies and regulatory policy changes required to align the Utilities’ business model with customer interests and the state’s public policy goals, and subsequent orders of the PUC;
- capacity and supply constraints or difficulties, especially if generating units (utility-owned or IPP-owned) fail or measures such as demand-side management, distributed generation (DG), combined heat and power or other firm capacity supply-side resources fall short of achieving their forecasted benefits or are otherwise insufficient to reduce or meet peak demand;
- fuel oil price changes, delivery of adequate fuel by suppliers and the continued availability to the electric utilities of their energy cost recovery clauses (ECRCs);
- the continued availability to the electric utilities or modifications of other cost recovery mechanisms, including the purchased power adjustment clauses (PPACs), rate adjustment mechanisms (RAMs) and pension and postretirement benefits other than pensions (OPEB) tracking mechanisms, and the continued decoupling of revenues from sales to mitigate the effects of declining kilowatt-hour sales;
- the ability of the Utilities to recover increasing costs and earn a reasonable return on capital investments not covered by RAMs;
- the ability of the Utilities to achieve performance incentive goals currently in place;
- the impact from the PUC’s implementation of performance-based ratemaking for the Utilities pursuant to Act 005, Session Laws 2018, including the potential addition of new performance incentive mechanisms (PIMs), third-party proposals adopted by the PUC in its implementation of performance-based regulation (PBR), and the implications of not achieving performance incentive goals;
- the impact of fuel price levels and volatility on customer satisfaction and political and regulatory support for the Utilities;

- the risks associated with increasing reliance on renewable energy, including the availability and cost of non-fossil fuel supplies for renewable energy generation and the operational impacts of adding intermittent sources of renewable energy to the electric grid;
- the growing risk that energy production from renewable generating resources may be curtailed and the interconnection of additional resources will be constrained as more generating resources are added to the Utilities' electric systems and as customers reduce their energy usage;
- the ability of IPPs to deliver the firm capacity anticipated in their power purchase agreements (PPAs);
- the potential that, as IPP contracts near the end of their terms, there may be less economic incentive for the IPPs to make investments in their units to ensure the availability of their units;
- the ability of the Utilities to negotiate, periodically, favorable agreements for significant resources such as fuel supply contracts and collective bargaining agreements and avoid or mitigate labor disputes and work stoppages;
- new technological developments that could affect the operations and prospects of the Utilities and ASB or their competitors such as the commercial development of energy storage and microgrids and banking through alternative channels;
- cybersecurity risks and the potential for cyber incidents, including potential incidents at HEI, its third-party vendors, and its subsidiaries (including at ASB branches and electric utility plants) and incidents at data processing centers used, to the extent not prevented by intrusion detection and prevention systems, anti-virus software, firewalls and other general IT controls;
- failure to achieve cost savings consistent with the minimum \$246 million in Enterprise Resource Planning/Enterprise Asset Management (ERP/EAM) project-related benefits (including \$150 million in operation and maintenance (O&M) benefits) to be delivered to customers over its 12-year estimated useful life;
- federal, state, county and international governmental and regulatory actions, such as existing, new and changes in laws, rules and regulations applicable to HEI, the Utilities and ASB (including changes in taxation, increases in capital requirements, regulatory policy changes, environmental laws and regulations (including resulting compliance costs and risks of fines and penalties and/or liabilities), the regulation of greenhouse gas emissions, governmental fees and assessments (such as Federal Deposit Insurance Corporation assessments), and potential carbon "cap and trade" legislation that may fundamentally alter costs to produce electricity and accelerate the move to renewable generation);
- developments in laws, regulations and policies governing protections for historic, archaeological and cultural sites, and plant and animal species and habitats, as well as developments in the implementation and enforcement of such laws, regulations and policies;
- discovery of conditions that may be attributable to historical chemical releases, including any necessary investigation and remediation, and any associated enforcement, litigation or regulatory oversight;
- decisions by the PUC in rate cases and other proceedings (including the risks of delays in the timing of decisions, adverse changes in final decisions from interim decisions and the disallowance of project costs as a result of adverse regulatory audit reports or otherwise);
- decisions by the PUC and by other agencies and courts on land use, environmental and other permitting issues (such as required corrective actions, restrictions and penalties that may arise, such as with respect to environmental conditions or RPS);
- potential enforcement actions by the Office of the Comptroller of the Currency (OCC), the Federal Reserve Board (FRB), the Federal Deposit Insurance Corporation (FDIC) and/or other governmental authorities (such as consent orders, required corrective actions, restrictions and penalties that may arise, for example, with respect to compliance deficiencies under existing or new banking and consumer protection laws and regulations or with respect to capital adequacy);
- the risks associated with the geographic concentration of HEI's businesses and ASB's loans, ASB's concentration in a single product type (i.e., first mortgages) and ASB's significant credit relationships (i.e., concentrations of large loans and/or credit lines with certain customers);
- changes in accounting principles applicable to HEI and its subsidiaries, including the adoption of new U.S. accounting standards, the potential discontinuance of regulatory accounting, the effects of potentially required consolidation of variable interest entities (VIEs), or required capital/finance lease or on-balance-sheet operating lease accounting for PPAs with IPPs;
- downgrades by securities rating agencies in their ratings of the securities of HEI and Hawaiian Electric and their impact on results of financing efforts;
- faster than expected loan prepayments that can cause an acceleration of the amortization of premiums on loans and investments and the impairment of mortgage-servicing assets of ASB;
- changes in ASB's loan portfolio credit profile and asset quality and/or mix, which may increase or decrease the required level of provision for loan losses, allowance for loan losses (ALL) and charge-offs;
- the adoption of Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" on January 1, 2020, which may result in more volatility in the provision for loan losses prospectively;
- changes in ASB's deposit cost or mix which may have an adverse impact on ASB's cost of funds;
- unanticipated changes from the expected discontinuance of LIBOR and the transition to an alternative reference rate, which may include adverse impacts to the Company's cost of capital, loan portfolio and interest income on loans;
- the final outcome of tax positions taken by HEI and its subsidiaries;
- the risks of suffering losses and incurring liabilities that are uninsured (e.g., damages to the Utilities' transmission and distribution system and losses from business interruption) or underinsured (e.g., losses not covered as a result of insurance deductibles or other exclusions or exceeding policy limits);
- the ability of the Company's non-regulated subsidiary, Pacific Current, LLC (Pacific Current), to achieve its performance and growth objectives, which in turn could affect its ability to service its non-recourse debt;
- the Company's reliance on third parties and the risk of their non-performance;
- the impact of activism that could delay the construction, or preclude the completion, of third-party or Utility projects that are required to meet electricity demand and RPS goals; and
- other risks or uncertainties described elsewhere in this report (e.g., Item 1A. Risk Factors) and in other reports previously and subsequently filed by HEI and/or Hawaiian Electric with the Securities and Exchange Commission (SEC).

Forward-looking statements speak only as of the date of the report, presentation or filing in which they are made. Except to the extent required by the federal securities laws, HEI, Hawaiian Electric, ASB, Pacific Current and their subsidiaries undertake no obligation to publicly update or revise any forward-looking statements, whether written or oral and whether as a result of new information, future events or otherwise.

PART I

ITEM 1. BUSINESS

HEI Consolidated

HEI and subsidiaries and lines of business. HEI is a holding company with its subsidiaries principally engaged in electric utility, banking, and renewable/sustainable infrastructure investment businesses operating in the State of Hawaii. HEI was incorporated in 1981 under the laws of the State of Hawaii. HEI's predecessor, Hawaiian Electric, was incorporated under the laws of the Kingdom of Hawaii (now the State of Hawaii) on October 13, 1891. As a result of a 1983 corporate reorganization, Hawaiian Electric became an HEI subsidiary and common shareholders of Hawaiian Electric became common shareholders of HEI. As a holding company with no significant operations of its own, HEI's sources of funds are dividends or other distributions from its operating subsidiaries, borrowings, and sales of equity. The rights of HEI and its creditors and shareholders to participate in any distribution of the assets of any of HEI's subsidiaries are subject to the prior claims of the creditors and preferred shareholders of such subsidiary, except to the extent that claims of HEI in its capacity as a creditor are recognized as primary. The abilities of certain of HEI's subsidiaries to pay dividends or make other distributions to HEI are subject to contractual and regulatory restrictions (see Note 14 of the Consolidated Financial Statements). HEI is headquartered in Honolulu, Hawaii and has three reportable segments—Electric utility, Bank, and Other.

Electric Utility. Hawaiian Electric and its operating utility subsidiaries, Hawaii Electric Light Company, Inc. (Hawaii Electric Light) and Maui Electric Company, Limited (Maui Electric), are regulated electric public utilities that provide essential electric service to approximately 95% of Hawaii's population through the operation of five separate grids that serve communities on the islands of Oahu, Hawaii, Maui, Lanai and Molokai. Over the past few years, the three utilities have been working on restructuring their functions and processes across the islands under an initiative to improve operational efficiencies, provide consistent positive customer experience, and reduce cost. This initiative was substantially completed in 2019 and, as of January 1, 2020, the three utilities now operate under one brand, "Hawaiian Electric," on all five islands served by the utilities, but remain three separate entities. See also "Electric utility" section below.

Bank. HEI acquired American Savings Bank, F.S.B. (ASB) in 1988. ASB is one of the largest financial institutions in the State of Hawaii (based on total assets), with assets totaling approximately \$7.2 billion as of December 31, 2019. ASB provides a wide array of banking and other financial services to consumers and businesses. See also "Bank" section below.

Other. The "Other" segment is composed of HEI's corporate-level operating, general and administrative expenses and the results of Pacific Current, LLC (Pacific Current). Pacific Current was formed in September 2017 to focus on investing in non-regulated clean energy and sustainable infrastructure in the State of Hawaii to help reach the state's sustainability goals. See also "Electric utility—Hawaii Electric Light firm capacity PPAs" section below and Note 2 of the Consolidated Financial Statements for additional information on Pacific Current activities. The "Other" segment also includes ASB Hawaii, Inc. (ASB Hawaii) (a holding company, formerly known as American Savings Holdings, Inc.), which owns ASB, and The Old Oahu Tug Service, Inc. (TOOTS), which is inactive.

Additional information. For additional information about HEI, see HEI's MD&A, HEI's "Quantitative and Qualitative Disclosures about Market Risk" and HEI's Consolidated Financial Statements.

The Company's website address is www.hei.com, where annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports (last 10 years) are made available free of charge in the Investor Relations section as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC (and available at the SEC's website at www.sec.gov). The information on the Company's website is not incorporated by reference in this annual report on Form 10-K unless, and except to the extent, specifically incorporated herein by reference. HEI and Hawaiian Electric intend to continue to use HEI's website as a means of disclosing additional information. Accordingly, investors should routinely monitor such portions of HEI's website, in addition to following HEI's, Hawaiian Electric's and ASB's press releases, SEC filings and public conference calls and webcasts. Investors may also wish to refer to the PUC website at dms.puc.hawaii.gov/dms in order to review documents filed with and issued by the PUC. No information at the PUC website is incorporated herein by reference, and the Company has no control over its accuracy or completeness.

Regulation. HEI and Hawaiian Electric are each holding companies within the meaning of the Public Utility Holding Company Act of 2005 and implementing regulations, which requires holding companies and their subsidiaries to grant the Federal Energy Regulatory Commission (FERC) access to books and records relating to FERC's jurisdictional rates. FERC granted HEI and Hawaiian Electric a waiver from its record retention, accounting and reporting requirements, effective May 2006.

HEI is subject to an agreement entered into with the PUC (the PUC Agreement) which, among other things, requires PUC approval of any change in control of HEI. The PUC Agreement also requires HEI to provide the PUC with periodic financial information and other reports concerning intercompany transactions and other matters. It also prohibits the electric utilities from loaning funds to HEI or its nonutility subsidiaries and from redeeming common stock of the electric utility subsidiaries without PUC approval. Further, the PUC could limit the ability of the electric utility subsidiaries to pay dividends on their common stock. See also Note 14 of the Consolidated Financial Statements and “Electric utility—Regulation” below.

HEI and ASB Hawaii are subject to Federal Reserve Board (FRB) regulation, supervision and reporting requirements as savings and loan holding companies. As a result of the enactment of the Dodd-Frank Act, supervision and regulation of HEI and ASB Hawaii, as thrift holding companies, moved to the FRB, and supervision and regulation of ASB, as a federally chartered savings bank, moved to the Office of the Comptroller of the Currency (OCC) in July 2011. In the event the OCC has reasonable cause to believe that any activity of HEI or ASB Hawaii constitutes a serious risk to the financial safety, soundness or stability of ASB, the OCC is authorized to impose certain restrictions on HEI, ASB Hawaii and/or any of their subsidiaries. Possible restrictions include precluding or limiting: (i) the payment of dividends by ASB; (ii) transactions between ASB, HEI or ASB Hawaii, and their subsidiaries or affiliates; and (iii) any activities of ASB that might expose ASB to the liabilities of HEI and/or ASB Hawaii and their other affiliates. See also Note 14 of the Consolidated Financial Statements.

The Gramm-Leach-Bliley Act of 1999 (Gramm Act) permitted banks, insurance companies and investment firms to compete directly against each other, thereby allowing “one-stop shopping” for an array of financial services. Although the Gramm Act further restricted the creation of so-called “unitary savings and loan holding companies” (i.e., companies such as HEI whose subsidiaries include one or more savings associations and one or more nonfinancial subsidiaries), the unitary savings and loan holding company relationship among HEI, ASB Hawaii and ASB is “grandfathered” under the Gramm Act so that HEI and its subsidiaries will be able to continue to engage in their current activities so long as ASB maintains its qualified thrift lender (QTL) status test discussed under “Bank—Regulation—Qualified thrift lender test.” ASB met the QTL test at all times during 2019; however, the failure of ASB to satisfy the QTL test in the future could result in a need for HEI to divest ASB. Under the Gramm Act, any proposed sale of ASB would have to satisfy applicable statutory and regulatory requirements and potential acquirers of ASB would most likely be limited to companies that are already qualified as, or capable of qualifying as, either a traditional savings and loan association holding company or a bank holding company, or as one of the authorized financial holding companies permitted under the Gramm Act.

HEI is also affected by provisions of the Dodd-Frank Act relating to corporate governance and executive compensation, including provisions requiring shareholder “say on pay” and “say on pay frequency” votes, mandating additional disclosures concerning executive compensation and compensation consultants and advisors and further restricting proxy voting by brokers in the absence of instructions. See “Bank—Legislation and regulation” in HEI’s MD&A for a discussion of effects of the Dodd-Frank Act on HEI and ASB.

Environmental regulation. HEI and its subsidiaries are subject to federal and state statutes and governmental regulations pertaining to water quality, air quality and other environmental factors. See the “Environmental regulation” discussions in the “Electric utility” and “Bank” sections below, and Note 1 of the Consolidated Financial Statements.

Employees. The Company had full-time employees as follows:

December 31	2019	2018	2017	2016	2015
HEI	45	46	41	41	39
Hawaiian Electric and its subsidiaries	2,670	2,704	2,724	2,662	2,727
ASB	1,126	1,148	1,115	1,093	1,152
	3,841	3,898	3,880	3,796	3,918

The employees of HEI and its direct and indirect subsidiaries, other than the electric utilities, are not covered by any collective bargaining agreement. The International Brotherhood of Electrical Workers Local 1260 represents roughly half of the Utilities’ workforce covered by a collective bargaining agreement that expires on October 31, 2021.

Properties. HEI leases office space from nonaffiliated lessors in downtown Honolulu under leases that expire in December 2022. See “Electric Utility” and “Bank” sections for a description of properties they own and lease.

Hamakua Energy, LLC, an indirect wholly owned subsidiary of Pacific Current, LLC, owns a total of approximately 93 acres located on the Hamakua coast on the island of Hawaii. Its power plant is situated on approximately 59 acres and the remaining 34 acres includes surrounding parcels of which 30 acres are located on the ocean front.

Electric utility

Hawaiian Electric and subsidiaries and service areas. Hawaiian Electric, Hawaii Electric Light and Maui Electric (Utilities) are regulated operating electric public utilities engaged in the production, purchase, transmission, distribution and sale of electricity on the islands of Oahu; Hawaii; and Maui, Lanai and Molokai, respectively. Over the past few years, the three utilities have been working on restructuring their functions and processes across the islands under an initiative to improve operational efficiencies, provide consistent positive customer experience, and reduce cost. This initiative was substantially completed in 2019 and, as of January 1, 2020, the three utilities now operate under one brand, “Hawaiian Electric,” on all five islands served by the utilities, but remain three separate entities.

In 2019, the electric utilities’ revenues and net income amounted to approximately 89% and 72% respectively, of HEI’s consolidated revenues and net income, compared to approximately 89% and 71% in 2018 and approximately 88% and 73% in 2017, respectively.

The islands of Oahu, Hawaii, Maui, Lanai and Molokai have a combined population estimated at 1.4 million, or approximately 95% of the total population of the State of Hawaii, and comprise a service area of 5,815 square miles. The principal communities served include Honolulu (on Oahu), Hilo and Kona (on Hawaii) and Wailuku and Kahului (on Maui). The service areas also include numerous suburban communities, resorts, U.S. Armed Forces installations and agricultural operations. The state has granted Hawaiian Electric, Hawaii Electric Light and Maui Electric nonexclusive franchises, which authorize the Utilities to construct, operate and maintain facilities over and under public streets and sidewalks. Each of these franchises will continue in effect for an indefinite period of time until forfeited, altered, amended or repealed.

Sales of electricity.

Years ended December 31 (dollars in thousands)	2019		2018		2017	
	Customer accounts*	Electric sales revenues	Customer accounts*	Electric sales revenues	Customer accounts*	Electric sales revenues
Hawaiian Electric	306,368	\$ 1,784,982	305,456	\$ 1,789,527	304,948	\$ 1,592,016
Hawaii Electric Light	86,576	360,019	85,758	371,713	85,925	331,697
Maui Electric	72,522	372,034	71,875	364,967	71,352	323,882
	465,466	\$ 2,517,035	463,089	\$ 2,526,207	462,225	\$ 2,247,595

* As of December 31.

Regulatory mechanisms. Base electric rates are set in rate cases, and each of the three utilities is currently on a triennial rate case cycle. The regulatory framework includes a number of mechanisms designed to provide utility financial stability during the transition toward the state’s 100% renewable energy goals. For example, under the sales decoupling mechanism, the utilities are allowed to recover from customers, target test year revenues, independent of the level of kilowatthour (kWh) sales, which have declined, with the exception of 2019, as privately-owned distributed energy resources have been added to the grid and energy efficiency measures have been put into place. A summary of these regulatory mechanisms is as follows:

Mechanism	Description
Sales decoupling	Provides predictable revenue stream by fixing net revenues at the level approved in last rate case (revenues not linked to kWh sales)
Revenue adjustment mechanism (RAM)	Annually adjusts revenue to recover general inflation of operations and maintenance expenses and baseline plant additions between rate cases
Major Projects Interim Recovery adjustment mechanism (MPIR)	Reduces regulatory lag and permits recovery in between rate cases through the revenue balancing account (RBA) of costs (net of benefits) for major capital projects including, but not restricted to, projects to advance renewable energy
Energy cost recovery clause (ECRC) and purchased power adjustment clause (PPAC)	Allows for timely recovery of fuel and purchased power costs to reduce earnings volatility. Symmetrical fossil fuel cost risk-sharing (98% customer/2% utility) mechanism established for Hawaiian Electric and Maui Electric capped at \$2.5 million and \$0.6 million, respectively. Hawaii Electric Light’s ECRC does not have cost risk-sharing mechanism
Pension and post-employment benefit trackers	Allow tracking of pension and post-employment benefit costs and contributions above or below the cost included in rates in a separate regulatory asset/liability account
Renewable energy infrastructure program	Permits recovery of renewable energy infrastructure projects through a surcharge

Seasonality. kWh sales of the Utilities follow a seasonal pattern, but they do not experience extreme seasonal variations experienced by some electric utilities on the U.S. mainland. In Hawaii, kWh sales tend to increase in the warmer, more humid months as a result of increased demand for air conditioning, and with cloudy and rainy weather due to lower production by

privately owned customer PV systems. In 2019, kWh sales increased over prior year due to warmer and more humid than average weather and this is the first time kWh sales have increased over prior year since 2007.

Significant customers. The Utilities derived approximately 11% of their operating revenues in 2019, 2018 and 2017 from the sale of electricity to various federal government agencies. Hawaiian Electric continues to work with various federal agencies to implement measures that will help them achieve their energy efficiency, resilience and clean energy objectives.

Selected consolidated electric utility operating statistics.

Years ended December 31	2019	2018	2017	2016	2015
kWh sales (millions)					
Residential	2,439.3	2,410.8	2,334.5	2,332.7	2,396.5
Commercial	2,793.0	2,810.8	2,867.9	2,911.5	2,977.8
Large light and power	3,467.2	3,425.1	3,443.3	3,555.1	3,532.9
Other	40.5	42.1	44.7	46.0	49.3
	8,740.0	8,688.8	8,690.4	8,845.3	8,956.5
kWh net generated and purchased (millions)					
Net generated	4,972.7	4,966.4	4,888.4	4,940.4	5,124.5
Purchased	4,168.6	4,139.3	4,247.1	4,349.1	4,308.3
	9,141.3	9,105.7	9,135.5	9,289.5	9,432.8
RPS (%)	28.4	26.7	26.8	25.8	23.2
Losses and system uses (%)	4.2	4.4	4.7	4.6	4.8
Energy supply (December 31)					
Net generating capability—MW	1,737	1,739	1,673	1,669	1,669
Firm and other purchased capability—MW ¹	517	517	551	551	555
	2,254	2,256	2,224	2,220	2,224
Net peak demand—MW ²	1,601	1,598	1,584	1,593	1,610
Btu per net kWh generated	10,860	10,826	10,812	10,710	10,632
Average fuel oil cost per MBtu (cents)	1,337.6	1,420.2	1,114.3	862.3	1,206.5
Customer accounts (December 31)					
Residential	409,689	407,505	406,241	402,818	400,655
Commercial	54,233	54,075	53,732	55,089	54,878
Large light and power	700	696	656	670	659
Other	844	813	1,596	1,585	1,608
	465,466	463,089	462,225	460,162	457,800
Electric revenues (thousands)					
Residential	\$ 791,398	\$ 788,028	\$ 691,857	\$ 638,776	\$ 709,886
Commercial	829,000	843,326	766,921	711,553	798,202
Large light and power	884,722	882,443	776,808	720,878	802,366
Other	11,915	12,410	12,009	11,306	13,356
	\$ 2,517,035	\$ 2,526,207	\$ 2,247,595	\$ 2,082,513	\$ 2,323,810
Average revenue per kWh sold (cents)					
	28.80	29.07	25.86	23.54	25.90
Residential	32.44	32.69	29.64	27.38	29.62
Commercial	29.68	30.00	26.74	24.44	26.81
Large light and power	25.52	25.76	22.56	20.28	22.71
Other	29.39	29.47	26.82	24.61	27.05
Residential statistics					
Average annual use per customer account (kWh)	5,967	5,923	5,779	5,806	5,996
Average annual revenue per customer account	\$ 1,936	\$ 1,936	\$ 1,713	\$ 1,590	\$ 1,776
Average number of customer accounts	408,768	407,044	403,983	401,796	399,674

¹ Since May 2018, Puna Geothermal Venture (PGV) has been offline due to lava flow on Hawaii Island; therefore, PGV's capability has not been incorporated into the utility's firm contract power capability as of December 31, 2019.

² Sum of the net peak demands on all islands served, noncoincident and nonintegrated.

Generation statistics. The following table contains certain generation statistics as of and for the year ended December 31, 2019. The net generating and firm purchased capability available for operation at any given time may be more or less than shown because of capability restrictions or temporary outages for inspection, maintenance, repairs or unforeseen circumstances.

	Hawaiian Electric	Hawaii Electric Light	Maui Electric			Total
	Island of Oahu	Island of Hawaii	Island of Maui	Island of Lanai	Island of Molokai	
Net generating and firm purchased capability (MW) as of December 31, 2019 ¹						
Conventional oil-fired steam units	999.5	50.1	35.9	—	—	1,085.5
Diesel	—	29.5	96.8	9.4	9.8	145.5
Combustion turbines (peaking units)	230.8	—	—	—	—	230.8
Other combustion turbines	—	46.3	—	—	2.2	48.5
Combined-cycle unit	—	56.3	113.6	—	—	169.9
Biodiesel	57.4	—	—	—	—	57.4
Firm contract power ²	456.5	60.0	—	—	—	516.5
	1,744.2	242.2	246.3	9.4	12.0	2,254.1
Net peak demand (MW) ³	1,193.0	192.1	204.3	6.1	6.0	1,601.5
Reserve margin	44.8%	26.1%	23.2%	54.1%	100.0%	40.7%
Annual load factor	65.4%	66.7%	62.5%	64.4%	61.7%	65.2%
kWh net generated and purchased (millions)	6,833.8	1,122.1	1,118.6	34.4	32.4	9,141.3

¹ Hawaiian Electric units at normal ratings; Hawaii Electric Light and Maui Electric units at reserve ratings.

² Nonutility generators - Hawaiian Electric: 208 MW (Kalaeloa Partners, L.P., oil-fired), 180 MW (AES Hawaii, Inc., coal-fired) and 68.5 MW (HPOWER, refuse-fired); Hawaii Electric Light: 60 MW (Hamakua Energy, LLC, oil-fired). Hawaii Electric Light also has a firm capacity PPA with PGV for 34.6 MW. However, since May 2018, PGV has been offline due to lava flow on Hawaii Island; therefore, PGV's capability has not been incorporated into the utility's firm contract power capability as of December 31, 2019.

³ Noncoincident and nonintegrated.

Generating reliability and reserve margin. Hawaiian Electric serves the island of Oahu and Hawaii Electric Light serves the island of Hawaii. Maui Electric has three separate electrical systems—one each on the islands of Maui, Molokai and Lanai. Hawaiian Electric, Hawaii Electric Light and Maui Electric have isolated electrical systems that are not currently interconnected to each other or to any other electrical grid and, thus, each maintains a higher level of reserve generation and cost structure than is typically carried by interconnected mainland U.S. utilities, which are able to share reserve capacity. These higher levels of reserve margins are required to meet peak electric demands, to provide for scheduled maintenance of generating units (including the units operated by IPPs relied upon for firm capacity) and to allow for the forced outage of the largest generating unit in the system.

Nonutility generation. The Utilities have supported state and federal energy policies which encourage the development of renewable energy sources that reduce the use of fuel oil as well as the development of qualifying facilities. The Utilities' renewable energy sources and potential sources range from wind, solar, photovoltaic, geothermal, wave and hydroelectric power to energy produced by municipal waste and other biofuels.

The rate schedules of the electric utilities contain ECRCs (changed from ECACs in 2019) and PPACs that allow them to recover costs of fuel and purchase power expenses.

In addition to the firm capacity PPAs described below, the electric utilities also purchase energy on an as-available basis directly from nonutility generators and through its Feed-In Tariff programs. The electric utilities also receive renewable energy from customers under its Net Energy Metering and Customer Grid Supply programs.

The PUC has allowed rate recovery for the firm capacity and purchased energy costs for the electric utilities' approved firm capacity and as-available energy PPAs.

Hawaiian Electric firm capacity PPAs. Hawaiian Electric currently has three major PPAs that provide a total of 456.5 MW of firm capacity, representing 26% of Hawaiian Electric's total net generating and firm purchased capacity on the Island of Oahu as of December 31, 2019.

In March 1988, Hawaiian Electric entered into a PPA with AES Hawaii, Inc. (AES Hawaii), a Hawaii-based, indirect subsidiary of The AES Corporation. The agreement with AES Hawaii, as amended, provides that, for a period of 30 years beginning September 1992, Hawaiian Electric will purchase 180 megawatts (MW) of firm capacity. The AES Hawaii coal-fired cogeneration plant utilizes a “clean coal” technology and is designed to sell sufficient steam to be a “Qualifying Facility” (QF) under the Public Utility Regulatory Policies Act of 1978 (PURPA). See “Commitments and contingencies—Power purchase agreements—AES Hawaii, Inc.” in Note 3 of the Consolidated Financial Statements for an update regarding this PPA.

Under a 1988 PPA, as amended, Hawaiian Electric is committed to purchase 208 MW of firm capacity from Kalaeloa Partners, L.P. (Kalaeloa). The Kalaeloa facility, which is a QF, is a combined-cycle operation, consisting of two oil-fired combustion turbines burning low sulfur fuel oil (LSFO) and a steam turbine that utilizes waste heat from the combustion turbines. Hawaiian Electric and Kalaeloa are currently in negotiations to address the PPA term that ended on May 23, 2016. The PPA automatically extends on a month-to-month basis as long as the parties are still negotiating in good faith, but would end 60 days after either party notifies the other in writing that negotiations have terminated. Hawaiian Electric and Kalaeloa have agreed that neither party will terminate the PPA prior to July 31, 2020. This agreement contemplates continued negotiations between the parties and accounts for time needed for PUC approval of a negotiated resolution.

Hawaiian Electric also entered into a PPA in March 1986 and a firm capacity amendment in April 1991 with the City and County of Honolulu with respect to a refuse-fired plant (HPOWER). Under the PPA, as amended and restated, Hawaiian Electric is committed to purchase 68.5 MW of firm capacity annually through April 2033.

Hawaii Electric Light firm capacity PPAs. Hawaii Electric Light has two major PPAs that provide a total of 94.6 MW of firm capacity, representing 34% of Hawaii Electric Light’s total net generating and firm purchased capacity on the Island of Hawaii as of December 31, 2019.

Hawaii Electric Light has a 35-year PPA, as amended, with Puna Geothermal Venture (PGV) for 34.6 MW of firm capacity from its geothermal steam facility, which will expire on December 31, 2027. Since May 2018, PGV facility has been offline due to lava flow on Hawaii Island. PGV is committed to restoring their facility to commercial operation. On December 31, 2019, Hawaii Electric Light entered into an Amended and Restated PPA with PGV to, among other things, extend the term by 25 years to 2052 and expand the firm capacity capable of being delivered to 46 MW, subject to PUC approval. See “New renewable PPAs” in the “Developments in renewable energy efforts” section in Electric Utility’s MD&A.

In October 1997, Hawaii Electric Light entered into an agreement with Encogen, which was succeeded by Hamakua Energy Partners, L. P. (HEP). The agreement requires Hawaii Electric Light to purchase up to 60 MW (net) of firm capacity for a period of 30 years, expiring on December 31, 2030. The dual-train combined-cycle facility consists of two oil-fired combustion turbines and a steam turbine that utilizes waste heat from the combustion turbines, which primarily burns naphtha (a mixture of liquid hydrocarbons) and small amounts of biodiesel beginning in November 2019. In November 2017, Hamakua Energy, LLC, an indirect subsidiary of HEI, purchased the plant from HEP.

In May 2012, Hawaii Electric Light signed a PPA with Hu Honua Bioenergy, LLC (Hu Honua) for 21.5 MW of renewable, dispatchable firm capacity fueled by locally grown biomass on the island of Hawaii. This PPA was approved by the PUC in December 2013, however, the approval was appealed. The Supreme Court issued a decision remanding the matter to the PUC for further proceedings. See “Commitments and contingencies—Power purchase agreements—Hu Honua Bioenergy, LLC” in Note 3 of the Consolidated Financial Statements for an update regarding this PPA.

Maui Electric firm capacity PPAs. Maui Electric has no firm capacity PPAs.

Fuel oil usage and supply. The rate schedules of the Utilities include ECRCs (changed from ECACs in 2019) under which electric rates (and consequently the revenues of the electric utility subsidiaries generally) are adjusted for changes in the weighted-average price paid for fuel oil and certain components of purchased power, and the relative amounts of company-generated power and purchased power. See discussion of rates and issues relating to the ECRC below under “Rates,” and “Electric utility—Material estimates and critical accounting policies—Revenues” in HEI’s MD&A.

Hawaiian Electric’s steam generating units consume low sulfur fuel oil (LSFO) and Hawaiian Electric’s combustion turbine peaking units consume diesel, including Hawaiian Electric’s Campbell Industrial Park generating facility which recently converted from B99 grade biodiesel to diesel. Hawaiian Electric’s Schofield Generating Station consumes mostly B99 grade biodiesel, but is permitted to also burn ultra low sulfur diesel (ULSD).

Hawaii Electric Light’s and Maui Electric’s steam generating units burn high sulfur fuel oil (HSFO) and Hawaii Electric Light’s and Maui Electric’s Maui combustion turbine generating units burn diesel. Hawaii Electric Light’s and Maui Electric’s Maui, Molokai, and Lanai diesel engine generating units burn ULSD.

See “Fuel contracts” in Electric utility’s MD&A.

The following table sets forth the average cost of fuel oil used by Hawaiian Electric, Hawaii Electric Light and Maui Electric to generate electricity in 2019, 2018 and 2017:

	Hawaiian Electric		Hawaii Electric Light		Maui Electric		Consolidated	
	\$/Barrel	¢/MBtu	\$/Barrel	¢/MBtu	\$/Barrel	¢/MBtu	\$/Barrel	¢/MBtu
2019	81.02	1,304.8	81.96	1,354.0	86.58	1,454.8	82.17	1,337.6
2018	86.11	1,371.8	89.81	1,489.5	93.60	1,573.6	87.90	1,420.2
2017	67.96	1,087.1	68.02	1,125.2	72.29	1,214.6	68.78	1,114.3

The average per-unit cost of fuel oil consumed to generate electricity for Hawaiian Electric, Hawaii Electric Light and Maui Electric reflects a different volume mix of fuel types and grades as follows:

	Hawaiian Electric		Hawaii Electric Light		Maui Electric	
	% LSFO	% Biodiesel/Diesel	% HSFO	% Diesel	% HSFO	% Diesel
2019	93	7	44	56	24	76
2018	96	4	39	61	23	77
2017	95	5	43	57	23	77

The prices that Hawaiian Electric, Hawaii Electric Light and Maui Electric pay for purchased energy from certain older nonutility generators are generally linked to the price of oil. The AES Hawaii energy prices vary primarily with an inflation index. The energy prices for Kalaeloa, which purchases LSFO from Par Hawaii Refining, LLC (PAR), vary primarily with the price of Asian crude oil. A portion of PGV energy prices are based on the electric utilities' respective short-run avoided energy cost rates (which vary with their composite fuel costs), subject to minimum floor rates specified in their approved PPA. Hamakua Energy energy prices vary primarily with the cost of naphtha.

The Utilities estimate that 64% of the net energy they generate will come from fossil fuel oil in 2020 compared to 66% in 2019. Hawaiian Electric generally maintains an average system fuel inventory level equivalent to 47 days of forward consumption. Hawaii Electric Light and Maui Electric generally maintain an average system fuel inventory level equivalent to approximately one month's supply of both HSFO and diesel. The PPAs with AES Hawaii and Hamakua Energy require that they maintain certain minimum fuel inventory levels.

Rates. Hawaiian Electric, Hawaii Electric Light and Maui Electric are subject to the regulatory jurisdiction of the PUC with respect to rates, issuance of securities, accounting and certain other matters. See "Regulation" below.

General rate increases require the prior approval of the PUC after public and contested case hearings. Rates for Hawaiian Electric and its subsidiaries include ECRCs (changed from ECACs in 2019), and PPACs. Under current law and practices, specific and separate PUC approval is not required for each rate change pursuant to automatic rate adjustment clauses previously approved by the PUC. PURPA requires the PUC to periodically review the adjustment clauses related to energy cost of electric and gas utilities in the state, and such clauses, as well as the rates charged by the utilities generally, are subject to change. PUC approval is also required for all surcharges and adjustments before they are reflected in rates.

See "Electric utility—Most recent rate proceedings," and "Electric utility—Material estimates and critical accounting policies—Revenues" in HEI's MD&A and "Interim increases" and "Utility projects" under "Commitments and contingencies" in Note 3 of the Consolidated Financial Statements.

Competition. See "Electric utility—Competition" in HEI's MD&A.

Regulation. The PUC regulates the rates, issuance of securities, accounting and certain other aspects of the operations of Hawaiian Electric and its electric utility subsidiaries. See the previous discussion under "Rates" and the discussions under "Electric utility—Results of operations—Most recent rate proceedings."

On September 15, 2014, the State of Hawaii and the U.S. Department of Energy executed a Memorandum of Understanding (MOU) recognizing that Hawaii is embarking on the next phase of its clean energy future. The MOU provides the framework for a comprehensive, sustained effort to better realize its vast renewable energy potential and allow Hawaii to push forward in three main areas: the power sector, transportation and energy efficiency. This next phase is focused on stimulating deployment of clean energy infrastructure as a catalyst for economic growth, energy system innovation and test bed investments.

Energy efficiency. The PUC issued an order on January 3, 2012 approving a framework for Energy Efficiency Portfolio Standards (EEPS) that set 2008 as the initial base year for evaluation and linearly allocated the 2030 goal to interim incremental reduction goals of 1,375 GWH by 2015 and 975 GWH by each of the years 2020, 2025 and 2030. Pursuant to the PUC's EEPS framework, the PUC has contracted with a public benefits fee administrator to operate and manage energy

efficiency programs, and any incentive and/or penalty mechanisms related to the achievement of the goals are at the discretion of the PUC.

The Division of Consumer Advocacy's 2018 Compliance Resolution Fund Report states that Hawaii continues to progress towards its 2020 Renewable Portfolio Standards and EEPS goals. The EEPS has contributed to lower kWh sales; however, the implementation of sales decoupling has delinked sales and revenues. See "Regulatory mechanisms" above.

Electrification of Transportation. In June 2018, the PUC initiated a proceeding to review the Utilities' Electrification of Transportation (EoT) Strategic Roadmap, which provided an economic analysis for light duty electric vehicles on the island of Oahu, Maui and Hawaii. In July 2019 the Utilities filed a study analyzing data regarding the critical backbone for electric vehicle charging needs in their service territories. In October 2019, the Utilities filed their EoT Workplan, establishing a schedule to continue implementation of the EoT roadmap with a focus on EV rate design and make-ready charging infrastructure in the near-term.

Renewable Portfolio Standards. In 2015, Hawaii's RPS law was amended to require electric utilities to meet an RPS of 15%, 30%, 40%, 70% and 100% by December 31, 2015, 2020, 2030, 2040 and 2045, respectively. Energy savings resulting from energy efficiency programs do not count toward the RPS since 2014 (only electrical generation using renewable energy as a source counts).

Affiliate transactions. Certain transactions between HEI's electric public utility subsidiaries (Hawaiian Electric, Hawaii Electric Light and Maui Electric) and HEI and affiliated interests (as defined by statute) are subject to regulation by the PUC.

In December 1996, the PUC issued an order in a docket to review the relationship between HEI and Hawaiian Electric and the effects of that relationship on the operations of Hawaiian Electric. The order required Hawaiian Electric to continue to provide the PUC with periodic status reports on its compliance with the PUC Agreement (pursuant to which HEI became the holding company of Hawaiian Electric). Hawaiian Electric files such status reports annually. In the order, the PUC also required the Utilities to present a comprehensive analysis of the impact that the holding company structure and investments in nonutility subsidiaries have on a case-by-case basis on the cost of capital to each utility in future rate cases and remove any such effects from the cost of capital. The Utilities have made presentations in their subsequent rate cases to support their positions that there was no evidence that would modify the PUC's finding that Hawaiian Electric's access to capital did not suffer as a result of HEI's involvement in nonutility activities and that HEI's diversification did not permanently raise or lower the cost of capital incorporated into the rates paid by Hawaiian Electric's utility customers.

In December 2018, the PUC established a set of requirements governing transactions and sharing of information between the Utilities and its affiliates (Affiliate Transaction Requirements, ATRs), which was subsequently modified and clarified in January 2019 following the Utilities' motion for reconsideration. The PUC stated the intent of the ATRs is to establish safeguards to avoid potential market power benefits and cross-subsidization between regulated and unregulated activities. The requirements include rules on interactions with affiliates, information handling, business development, political activities, promotional activities, sales of products and services, and employee sharing restrictions. The ATRs include implementing an internal code of conduct, a compliance plan, including policies and procedures to comply with the requirements, and having an audit conducted every three years that examines the compliance with the requirements. Penalties for non-compliance depend on the severity of the violation, and can range from daily fines to divestiture of the Utilities by the holding company.

Other regulations. The Utilities are not subject to regulation by the FERC under the Federal Power Act, except under Sections 210 through 212 (added by Title II of PURPA and amended by the Energy Policy Act of 1992), which permit the FERC to order electric utilities to interconnect with qualifying cogenerators and small power producers, and to wheel power to other electric utilities. Title I of PURPA, which relates to retail regulatory policies for electric utilities, and Title VII of the Energy Policy Act of 1992, which addresses transmission access, also apply to the Utilities. The Utilities are also required to file various operational reports with the FERC.

Because they are located in the State of Hawaii, Hawaiian Electric and its subsidiaries are exempt by statute from limitations set forth in the Powerplant and Industrial Fuel Use Act of 1978 on the use of petroleum as a primary energy source.

See also "HEI-Regulation" above.

Environmental regulation. Hawaiian Electric, Hawaii Electric Light and Maui Electric, like other utilities, are subject to periodic inspections by federal, state and, in some cases, local environmental regulatory agencies, including agencies responsible for the regulation of water quality, air quality, hazardous and other waste and hazardous materials. These inspections may result in the identification of items needing corrective or other action. Except as otherwise disclosed in this report (see "Risk Factors" in Item 1A, and Notes 1 and 3 of the Consolidated Financial Statements, which are incorporated herein by reference), the Utilities believe that each subsidiary has appropriately responded to environmental conditions

requiring action and that, as a result of such actions, such environmental conditions will not have a material adverse effect on the capital expenditures, earnings and competitive position of the Utilities.

Water quality controls. The generating stations, substations and other utility facilities operate under federal and state water quality regulations and permits, including, but not limited to, the Clean Water Act National Pollution Discharge Elimination System (governing point source discharges, including wastewater and storm water discharges) and the Safe Drinking Water Act Underground Injection Control (regulating disposal of wastewater into the subsurface). On February 1, 2018, the Ninth Circuit Court of Appeals ruled that under certain circumstances, where there may be a connection to surface water, discharges from underground injection control wells may require National Pollution Discharge Elimination System permits. This case was appealed to the U.S. Supreme Court who heard the matter in November of 2019. A final decision is expected in the first quarter of 2020.

Oil pollution controls. The Oil Pollution Act of 1990 (OPA) establishes programs that govern actual or threatened oil releases and imposes strict liability on responsible parties for clean-up costs and damages to natural resources and property. The federal Environmental Protection Agency (EPA) regulations under OPA require certain facilities that use or store oil to prepare and implement Spill Prevention, Control and Countermeasures (SPCC) Plans in order to prevent releases of oil to navigable waters of the U.S. Certain facilities are also required to prepare and implement Facility Response Plans (FRPs) to ensure prompt and proper response to releases of oil. The utility facilities that are subject to SPCC Plan and FRP requirements have prepared and implemented SPCC Plans and FRPs.

Air quality controls. The Clean Air Act (CAA) establishes permitting programs to reduce air pollution. The CAA amendments of 1990, established the federal Title V Operating Permit Program (in Hawaii known as the Covered Source Permit program) to ensure compliance with all applicable federal and state air pollution control requirements. The 1977 CAA Amendments established the New Source Review (NSR) permitting program, which affect new or modified generating units by requiring a permit to construct under the CAA and the controls necessary to meet the National Ambient Air Quality Standards.

Title V operating permits have been issued for all of the Utilities' affected generating units.

Hazardous waste and toxic substances controls. The operations of the electric utility are subject to EPA regulations that implement provisions of the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund), the Superfund Amendments and Reauthorization Act (SARA), and the Toxic Substances Control Act (TSCA).

RCRA underground storage tank (UST) regulations require all facilities that use USTs for storing petroleum products to comply with established leak detection, spill prevention, standards for tank design and retrofits, financial assurance, operator training, and tank decommissioning and closure requirements. All of the Utilities' USTs currently meet the applicable requirements.

The Emergency Planning and Community Right-to-Know Act under SARA Title III requires the Utilities to report potentially hazardous chemicals present in their facilities in order to provide the public with information so that emergency procedures can be established to protect the public in the event of hazardous chemical releases. Since January 1, 1998, the steam electric industry category has been subject to Toxics Release Inventory (TRI) reporting requirements.

The TSCA regulations specify procedures for the handling and disposal of polychlorinated biphenyls (PCBs), a compound found in some transformer and capacitor dielectric fluids. The TSCA regulations also apply to responses to releases of PCBs to the environment. The Utilities have instituted procedures to monitor compliance with these regulations and have implemented a program to identify and replace PCB transformers and capacitors in their systems. In April 2010, the EPA issued an Advance Notice of Proposed Rule Making announcing its intent to reassess PCB regulations. The EPA has ceased activity on the PCB reassessment.

Hawaii's Environmental Response Law (ERL), as amended, governs releases of hazardous substances, including oil, to the environment in areas within the state's jurisdiction. Responsible parties under the ERL are jointly, severally, and strictly liable for a release of a hazardous substance. Responsible parties include owners or operators of a facility where a hazardous substance is located and any person who at the time of disposal of the hazardous substance owned or operated any facility at which such hazardous substance was disposed.

The Utilities periodically discover leaking oil-containing equipment such as USTs, piping, and transformers. Each subsidiary reports releases from such equipment when and as required by applicable law and addresses the releases in compliance with applicable regulatory requirements.

Additional information. For additional information about Hawaiian Electric, see Hawaiian Electric’s MD&A, Hawaiian Electric’s “Quantitative and Qualitative Disclosures about Market Risk” and Hawaiian Electric’s Consolidated Financial Statements, including the Notes thereto.

Properties. As of December 31, 2019, the Utilities’ ownership in generating assets was as follows:

Property	Location (island)	Principal Fuel Type	Generating Capacity (MW)	Status
Hawaiian Electric:				
Waiiau ¹	Oahu	LSFO / Diesel	480.8	Active
Kahe ¹	Oahu	LSFO	620.5	Active
Campbell Industrial Park (CIP) ¹	Oahu	Diesel	129.0	Active
Honolulu Power Plant ¹	Oahu	N/A	—	Deactivated in 2014
Schofield Generating Station ²	Oahu	Biodiesel / ULSD	49.4	Active
West Loch PV Project ³	Oahu	Renewable (Solar)	20.0	Active
Hawaii Electric Light⁴:				
Shipman	Hawaii	N/A	—	Retired in 2015
Waimea	Hawaii	ULSD	7.5	Active
Keahole	Hawaii	Diesel / ULSD	77.6	Active
Puna	Hawaii	HSFO / Diesel	36.7	Active
Hill/Kanoiehua	Hawaii	HSFO / ULSD	55.4	Active
Distributed generators at substation sites	Hawaii	ULSD	5.0	Active
Maui Electric⁵:				
Kahului	Maui	HSFO	35.9	Active
Maalaea	Maui	Diesel / ULSD	210.4	Active
Miki Basin	Lanai	ULSD	9.4	Active
Palaau	Molokai	ULSD	12.0	Active

¹ The four plants are situated on Hawaiian Electric-owned land having a combined area of 542 acres.

² Hawaiian Electric has a 35-year land lease on 8.13 acres, effective September 1, 2016 (with an option to extend an additional 10 years), with the Department of the Army.

³ Hawaiian Electric has a 37-year land lease on 102 acres, effective July 1, 2017, with the Secretary of the Navy.

⁴ The plants are situated on Hawaii Electric Light-owned land having a combined area of approximately 44 acres. The distributed generators are located within Hawaii Electric Light-owned substation sites having a combined area of approximately four acres.

⁵ The four plants are situated on Maui Electric-owned land having a combined area of 60.7 acres.

As of December 31, 2019, the Utilities ownership in fuel storage facilities was as follows:

Facility	Location (island)	Fuel Type	Capacity (barrels in thousands)	Generation Served
Hawaiian Electric:				
Barbers Point Tank Farm	Oahu	LSFO	1,000	Kahe, Waiiau
Generation sites - various (in aggregate)	Oahu	LSFO	770	Various
Generation sites - various (in aggregate)	Oahu	Diesel	132	Various
Generation sites - various (in aggregate)	Oahu	Biodiesel	11	Various
Hawaii Electric Light¹:				
Generation sites - various (in aggregate)	Hawaii	HSFO	48	Various
Generation sites - various (in aggregate)	Hawaii	Diesel	82	Various
Maui Electric²:				
Generation sites - various (in aggregate)	Maui	HSFO	81	Various
Generation sites - various (in aggregate)	Maui	Diesel	95	Various

¹ There are an additional 19,200 barrels of diesel and 22,770 barrels of HSFO storage capacity for Hawaii Electric Light-owned fuel off-site at Island Energy Services, LLC (Island Energy)-owned terminalling facilities.

² There are an additional 56,358 barrels of diesel oil storage capacity off-site at Aloha Petroleum, Ltd. (Aloha Petroleum)-owned terminalling facilities.

Other properties. The Utilities own overhead transmission and distribution lines, underground cables, pole (some jointly) and metal high voltage towers. Electric lines are located over or under public and nonpublic properties.

Hawaiian Electric owns a total of 132 acres of land on which substations, transformer vaults, distribution baseyards and the Kalaeloa cogeneration facility are located. Hawaiian Electric also owns buildings and approximately 11.6 acres of land located in Honolulu, which house its operating and engineering departments. It also leases an office building and certain office spaces in Honolulu, land for office spaces and storage in Pearl City, and a warehousing center in Kapolei.

Hawaii Electric Light owns 6 acres of land in Kona, which is used for a baseyard, and one acre of land in Hilo, which houses its accounting, customer services and administrative offices. Hawaii Electric Light also leases 3.7 acres of land for its baseyard in Hilo under a lease expiring in 2030. In addition, Hawaii Electric Light owns a total of approximately 100 acres of land, and leases a total of approximately 8.5 acres of land, on which hydro facilities, substations and switching stations, microwave facilities and transmission lines are located. The deeds to the sites located in Hilo contain certain restrictions, but the restrictions do not materially interfere with the use of the sites for public utility purposes.

Maui Electric’s administrative offices, as well as its engineering and distribution departments, are situated on 9.1 acres of Maui Electric-owned land in Kahului. Maui Electric also owns approximately 18 acres of land which house some of its substations, leases approximately 3,600 square feet of land for its telecommunication and microwave facilities, leases approximately 6,000 square feet of land at Kahului Harbor for pipeline purposes, and leases 17,958 square feet of land at Puunene for the Puunene Substation. Maui Electric also owns approximately 89 acres of undeveloped land at Waena, Palaau, and Kahului. Fuel storage facilities are located on Maui Electric-owned properties at Kahului Baseyard, Kahului Power Plant, Maalaea Power Plant, Miki Basin, Palaau, and Hana. Two, 1-MW stand-by diesel generators are located within the Maui Electric-owned land at Hana Substation.

See “Hawaiian Electric and subsidiaries and service areas” above for a discussion of the nonexclusive franchises of Hawaiian Electric and subsidiaries.

See “Generation statistics” above and “Limited insurance” in HEI’s MD&A for a further discussion of some of the electric utility properties.

Bank

General. ASB is one of the largest financial institutions headquartered in the State of Hawaii with assets of \$7.2 billion and deposits of \$6.3 billion, as of December 31, 2019. ASB is a full-service community bank that serves both consumer and commercial customers and operates 49 branches on the islands of Oahu (34), Maui (6), Hawaii (5), Kauai (3), and Molokai (1). ASB was acquired by HEI in 1988, and prior to its acquisition, ASB was granted a federal savings bank charter in January 1987. Prior to that time, ASB had operated since 1925 as the Hawaii division of American Savings & Loan Association of Salt Lake City, Utah.

In 2019, ASB’s revenues and net income amounted to approximately 11% and 41% of HEI’s consolidated revenues and net income, respectively, compared to approximately 11% and 41% in 2018 and approximately 12% and 41% in 2017.

At the time of HEI’s acquisition of ASB, HEI agreed with the Office of Thrift Supervision (OTS), Department of Treasury’s predecessor regulatory agency, that ASB’s regulatory capital would be maintained at a level of at least 6% of ASB’s total liabilities, or at such greater amount as may be required from time to time by regulation. Under the agreement, HEI’s obligation to contribute additional capital to ensure that ASB would have the capital level required by the OTS was limited to a maximum aggregate amount of approximately \$65.1 million. As of December 31, 2019, as a result of certain HEI contributions of capital to ASB over the years, HEI’s maximum obligation under the agreement to contribute additional capital has been reduced to approximately \$28.3 million. ASB is subject to OCC regulations on dividends and other distributions and ASB must receive a letter from the FRB communicating the OCC’s and FRB’s non-objection to the payment of any dividend ASB proposes to declare and pay to ASB Hawaii and HEI.

The following table sets forth selected data for ASB (average balances calculated using the average daily balances):

Years ended December 31	2019	2018	2017
Equity to assets ratio			
Average equity divided by average total assets	9.30%	8.86%	9.10%
Return on assets			
Net income divided by average total assets	1.25	1.20	1.02
Return on equity			
Net income divided by average equity	13.48	13.51	11.20

Lending activities. See Note 4 of the Consolidated Financial Statements for the composition of ASB's loan portfolio.

Origination, purchase and sale of loans. Generally, residential and commercial real estate loans originated by ASB are collateralized by real estate located in Hawaii. For additional information, including information concerning the geographic distribution of ASB's mortgage-backed securities portfolio and the geographic concentration of credit risk, see Note 15 of the Consolidated Financial Statements. The demand for loans is primarily dependent on the Hawaii real estate market, business conditions, interest rates and loan refinancing activity.

Residential mortgage lending. ASB originates fixed rate and adjustable rate loans secured by single family residential property, including investor-owned properties, with maturities of up to 30 years. ASB's general policy is to require private mortgage insurance when the loan-to-value ratio of the property exceeds 80% of the lower of the appraised value or purchase price at origination. For non-owner-occupied residential property purchases, the loan-to-value ratio may not exceed 75% of the lower of the appraised value or purchase price at origination.

Construction and development lending. ASB provides fixed rate loans for the construction of one-to-four unit residential and commercial properties. Construction loan projects are typically short term in nature. Construction and development financing generally involves a higher degree of credit risk than long-term financing on improved, occupied real estate. Accordingly, construction and development loans are generally priced higher than loans collateralized by completed structures. ASB's underwriting, monitoring and disbursement practices with respect to construction and development financing are designed to ensure sufficient funds are available to complete construction projects. See "Bank—Loan portfolio risk elements" in HEI's MD&A and "Multifamily residential and commercial real estate lending" below.

Multifamily residential and commercial real estate lending. ASB provides permanent financing and construction and development financing collateralized by multifamily residential properties (including apartment buildings) and collateralized by commercial and industrial properties (including office buildings, shopping centers and warehouses) for its own portfolio as well as for participation with other lenders. Commercial real estate lending typically involves long lead times to originate and fund. As a result, production results can vary significantly from period to period.

Consumer lending. ASB offers a variety of secured and unsecured consumer loans. Loans collateralized by deposits are limited to 90% of the available account balance. ASB offers home equity lines of credit, clean energy loans, secured and unsecured VISA cards (through a third party issuer), checking account overdraft protection and other general purpose consumer loans.

Commercial lending. ASB provides both secured and unsecured commercial loans to business entities. This lending activity is designed to diversify ASB's asset structure, shorten maturities, improve rate sensitivity of the loan portfolio and attract commercial checking deposits. ASB offers commercial loans with terms up to ten years.

Loan origination fee and servicing income. In addition to interest earned on residential mortgage loans, ASB receives income from servicing loans, for late payments and from other related services. Servicing fees are received on loans originated and subsequently sold by ASB where ASB acts as collection agent on behalf of third-party purchasers.

ASB charges the borrower at loan settlement a loan origination fee. See "Loans" in Note 1 of the Consolidated Financial Statements.

Deposits and sources of funds. Deposits continue to be the largest source of funds for ASB for use in lending, meeting liquidity requirements and making investments, and are affected by market interest rates, competition and management's responses to these factors. Deposit retention and growth will remain challenging in the current environment due to competition for deposits and the low level of short-term interest rates. ASB borrows on a short-term basis to compensate for seasonal or other reductions in deposit flows. ASB may borrow on a longer-term basis to support expanded lending or investment activities. Advances from the FHLB of Des Moines and securities sold under agreements to repurchase continue to be additional sources of funds, but they are a higher cost source than deposits.

Competition. The banking industry in Hawaii is highly competitive. At December 31, 2019, there were 8 financial institutions insured by the FDIC headquartered in the State of Hawaii. While ASB is one of the largest financial institutions in Hawaii, based on total assets, ASB faces vigorous competition for deposits and loans from two larger banking institutions based in Hawaii and from smaller institutions that heavily promote their services in niche areas, such as providing financial services to small and medium-sized businesses, as well as national financial services organizations. Competition for loans and deposits comes primarily from other savings institutions, commercial banks, credit unions, securities brokerage firms, money market and mutual funds and other investment alternatives. ASB faces additional competition in seeking deposit funds from various types of corporate and government borrowers, including insurance companies. Competition for origination of mortgage loans comes primarily from mortgage banking and brokerage firms, commercial banks, other savings institutions, insurance companies and real estate investment trusts. See also "Bank—Executive overview and strategy" in HEI's MD&A.

To remain competitive and continue building core franchise value, ASB continues to develop and introduce new products and services to meet the needs of its consumer and commercial customers. Additionally, the banking industry is constantly changing and ASB is making the investment in its people and technology necessary to adapt and remain competitive.

The primary factors in ASB's competition for mortgage and other loans are the competitive interest rates and loan origination fees it charges, the wide variety of loan programs it offers and the quality and efficiency of the services it provides to borrowers and the business community. ASB believes that it is able to compete for such loans primarily through the competitive interest rates and loan fees it charges, the type of mortgage loan programs it offers and the efficiency and quality of the services it provides to individual borrowers and the business community.

The primary factors in competing for deposits are interest rates, the quality and range of services offered, marketing, convenience of locations, hours of operation, other non-branch channels such as online and mobile banking and perceptions of the institution's financial soundness and safety. To compete effectively, ASB offers a variety of savings and checking accounts at competitive rates, convenient business hours, convenient branch locations with interbranch deposit and withdrawal privileges at each branch, convenient automated teller machines and an upgrade of ASB's electronic banking platform. ASB also conducts advertising and promotional campaigns.

ASB has been diversifying its loan portfolio from single-family home mortgages to higher-spread, shorter-duration consumer, commercial and commercial real estate loans. The origination of consumer, commercial and commercial real estate loans involves risks and other considerations different from those associated with originating residential real estate loans. For example, the sources and level of competition may be different and credit risk is generally higher than for residential mortgage loans. These different risk factors are considered in the underwriting and pricing standards and in the allowance for loan losses established by ASB for its consumer, commercial and commercial real estate loans.

Regulation. ASB, a federally chartered saving bank, is subject to examination and comprehensive regulation by the Department of Treasury, OCC and the FDIC, and is subject to reserve requirements established by the Board of Governors of the Federal Reserve System. Regulation by these agencies focuses in large measure on the adequacy of ASB's capital and the results of periodic "safety and soundness" examinations conducted by the OCC. In addition, ASB's holding companies are subject to the regulatory supervision of the FRB. See "HEI Consolidated—Regulation" above.

Capital requirements. The OCC, ASB's principal regulator, administers two sets of capital standards — minimum regulatory capital requirements and prompt corrective action requirements. The FDIC also has prompt corrective action capital requirements. As of December 31, 2019, ASB was in compliance with OCC minimum regulatory capital requirements and was "well-capitalized" within the meaning of OCC prompt corrective action regulations and FDIC capital regulations, as follows:

- ASB met applicable minimum regulatory capital requirements (noted in parentheses) as of December 31, 2019 with a Tier 1 leverage ratio of 9.1% (4.0%), a common equity Tier 1 capital ratio of 13.2% (4.5%), a Tier 1 capital ratio of 13.2% (6.0%) and a total capital ratio of 14.3% (8.0%).
- ASB met the capital requirements to be generally considered "well-capitalized" (noted in parentheses) as of December 31, 2019 with a Tier 1 leverage ratio of 9.1% (5.0%), a common equity Tier 1 capital ratio of 13.2% (6.5%), a Tier 1 capital ratio of 13.2% (8.0%) and a total capital ratio of 14.3% (10.0%).

The purpose of the prompt corrective action capital requirements is to establish thresholds for varying degrees of oversight and intervention by regulators. Declines in levels of capital, depending on their severity, will result in increasingly stringent mandatory and discretionary regulatory consequences. Capital levels may decline for any number of reasons, including reductions that would result if there were losses from operations, deterioration in collateral values or the inability to dispose of real estate owned (typically acquired by foreclosure). The regulators have substantial discretion in the corrective actions they might direct and could include restrictions on dividends and other distributions that ASB may make to HEI (through ASB Hawaii) and the requirement that ASB develop and implement a plan to restore its capital. Under an agreement with regulators entered into by HEI when it acquired ASB, HEI currently could be required to contribute to ASB up to an additional \$28.3 million of capital, if necessary, to maintain ASB's capital position.

In order to avoid restrictions on capital distributions and discretionary bonus payments to executive officers, a financial institution must hold a buffer of common equity tier 1 capital above its minimum capital requirements in an amount greater than 2.5% of total risk-weighted assets (capital conservation buffer) which is phased-in through 2019. As of December 31, 2019, ASB met the applicable capital requirements, including the capital conservation buffer.

See "Bank—Legislation and regulation" in HEI's MD&A for the final capital rules under the Basel III regulatory capital framework.

Examinations. ASB is subject to periodic “safety and soundness” examinations and other examinations by the OCC. In conducting its examinations, the OCC utilizes the Uniform Financial Institutions Rating System adopted by the Federal Financial Institutions Examination Council, which system utilizes the “CAMELS” criteria for rating financial institutions. The six components in the rating system are: Capital adequacy, Asset quality, Management, Earnings, Liquidity and Sensitivity to market risk. The OCC examines and rates each CAMELS component. An overall CAMELS rating is also given, after taking into account all of the component ratings. A financial institution may be subject to formal regulatory or administrative direction or supervision such as a “memorandum of understanding” or a “cease and desist” order following an examination if its CAMELS rating is not satisfactory. An institution is prohibited from disclosing the OCC’s report of its safety and soundness examination or the component and overall CAMELS rating to any person or organization not officially connected with the institution as an officer, director, employee, attorney or auditor, except as provided by regulation. The OCC also regularly examines ASB’s information technology practices and its performance under Community Reinvestment Act measurement criteria.

The Federal Deposit Insurance Act, as amended, addresses the safety and soundness of the deposit insurance system, supervision of depository institutions and improvement of accounting standards. Pursuant to this Act, federal banking agencies have promulgated regulations that affect the operations of ASB and its holding companies (e.g., standards for safety and soundness, real estate lending, accounting and reporting, transactions with affiliates and loans to insiders).

Deposit insurance coverage. The Federal Deposit Insurance Act, as amended, and regulations promulgated by the FDIC, govern insurance coverage of deposit accounts. In July 2010, the Dodd-Frank Act permanently raised the current standard maximum deposit insurance amount to \$250,000. Generally, the amount of all deposits held by a depositor in the same capacity (even if held in separate accounts) is aggregated for purposes of applying the insurance limit.

See “Federal Deposit Insurance Corporation assessment” in Note 4 of the Consolidated Financial Statements for a discussion of FDIC deposit insurance assessment rates.

Recent legislation and issuances. See “Bank–Legislation and regulation” in HEI’s MD&A.

Affiliate transactions. Significant restrictions apply to certain transactions between ASB and its affiliates, including HEI and its direct and indirect subsidiaries. For example, ASB is prohibited from making any loan or other extension of credit to an entity affiliated with ASB unless the affiliate is engaged exclusively in activities which the FRB has determined to be permissible for bank holding companies. There are also various other restrictions which apply to certain transactions between ASB and certain executive officers, directors and insiders of ASB. ASB is also barred from making a purchase of or any investment in securities issued by an affiliate, other than with respect to shares of a subsidiary of ASB.

Financial derivatives and interest rate risk. ASB is subject to OCC rules relating to derivatives activities, such as interest rate swaps, interest rate lock commitments and forward commitments. See “Derivative financial instruments” in Note 4 of the Consolidated Financial Statements for a description of interest rate lock commitments and forward commitments used by ASB. Currently ASB does not use interest rate swaps to manage interest rate risk (IRR), but may do so in the future. Generally speaking, the OCC rules permit financial institutions to engage in transactions involving financial derivatives to the extent these transactions are otherwise authorized under applicable law and are safe and sound. The rules require ASB to have certain internal procedures for handling financial derivative transactions, including involvement of the ASB Board of Directors.

With the transfer of the regulatory jurisdiction from the OTS to the OCC, ASB has adopted terminology and IRR assessment, measurement and management practices consistent with OCC guidelines. Management believes ASB’s IRR processes are aligned with the Interagency Advisory on Interest Rate Risk Management and appropriate with earnings and capital levels, balance sheet complexity, business model and risk tolerance.

Liquidity. OCC regulations require ASB to maintain sufficient liquidity to ensure safe and sound operations. ASB’s principal sources of liquidity are customer deposits, borrowings, the maturity and repayment of portfolio loans and securities and the sale of loans into secondary market channels. ASB’s principal sources of borrowings are advances from the FHLB of Des Moines and securities sold under agreements to repurchase from broker/dealers. ASB is approved by the FHLB of Des Moines to borrow an amount of up to 35% of assets to the extent it provides qualifying collateral and holds sufficient FHLB of Des Moines stock. As of December 31, 2019, ASB’s unused FHLB of Des Moines borrowing capacity was approximately \$2.3 billion. ASB utilizes growth in deposits, advances from the FHLB of Des Moines and securities sold under agreements to repurchase to fund maturing and withdrawable deposits, repay maturing borrowings, fund existing and future loans and make investments. As of December 31, 2019, ASB had loan commitments, undisbursed loan funds and unused lines and letters of credit of \$1.9 billion. Management believes ASB’s current sources of funds will enable it to meet these obligations while maintaining liquidity at satisfactory levels.

Supervision. The Federal Deposit Insurance Corporation Improvement Act of 1991 (the FDICIA) establishes a statutory framework that is triggered by the capital level of a financial institution and subjects it to progressively more stringent

restrictions and supervision as capital levels decline. The OCC rules implement the system of prompt corrective action. In particular, the rules define the relevant capital measures for the categories of “well capitalized,” “adequately capitalized,” “undercapitalized,” “significantly undercapitalized” and “critically undercapitalized.” As of December 31, 2019, ASB was “well-capitalized.”

Interest rates. FDIC regulations restrict the ability of financial institutions that are undercapitalized to offer interest rates on deposits that are significantly higher than the rates offered by competing institutions. As of December 31, 2019, ASB was “well capitalized” and thus not subject to these interest rate restrictions.

Qualified thrift lender test. ASB is a “qualified thrift lender” (QTL) under its federal thrift charter and, in order to maintain this status, ASB is required to maintain at least 65% of its assets in “qualified thrift investments,” measured on a monthly average basis in 9 out of the previous 12 months, which include housing-related loans (including mortgage-backed securities) as well as certain small business loans, education loans, loans made through credit card accounts and a basket (not exceeding 20% of total assets) of other consumer loans and other assets. Institutions that fail to maintain QTL status are subject to various penalties, including limitations on their activities. In ASB’s case, the activities of HEI, ASB Hawaii and HEI’s other subsidiaries would also be subject to restrictions if ASB failed to maintain its QTL status, and a failure or inability to comply with those restrictions could effectively result in the required divestiture of ASB. As of December 31, 2019, and at all times during 2019, ASB was a qualified thrift lender.

Federal Home Loan Bank System. ASB is a member of the FHLB System, which consists of 11 regional FHLBs, and ASB’s regional bank is the FHLB of Des Moines. The FHLB System provides a central credit facility for member institutions. Historically, the FHLBs have served as the central liquidity facilities for savings associations and sources of long-term funds for financing housing. At such time as an advance is made to ASB or renewed, it must be collateralized by collateral from one of the following categories: (1) fully disbursed, whole first mortgages on improved residential property, or securities representing a whole interest in such mortgages; (2) securities issued, insured or guaranteed by the U.S. Government or any agency thereof; (3) FHLB deposits; and (4) other real estate-related collateral that has a readily ascertainable value and with respect to which a security interest can be perfected. The aggregate amount of outstanding advances collateralized by such other real estate-related collateral may not exceed 300% of ASB’s capital.

ASB’s required holding in the stock of the FHLB is both membership and activity-based. Membership is based on a percentage of total assets (0.12%) while the portion related to activity is based on a percentage of outstanding activity, mainly advances (4%). As of December 31, 2019, ASB was required and owned capital stock in the FHLB of Des Moines in the amount of \$8.4 million.

Community Reinvestment. The Community Reinvestment Act (CRA) requires financial institutions to help meet the credit needs of their communities, including low- and moderate-income areas, consistent with safe and sound lending practices. The OCC will consider ASB’s CRA record in evaluating an application for a new deposit facility, including the establishment of a branch, the relocation of a branch or office, or the acquisition of an interest in another bank. ASB currently holds a “satisfactory” CRA rating.

Other laws. ASB is subject to federal and state consumer protection laws which affect deposit and lending activities, such as the Truth in Lending Act (TILA), the Truth in Savings Act, the Equal Credit Opportunity Act, the Real Estate Settlement Procedures Act (RESPA), the Home Mortgage Disclosure Act and several federal and state financial privacy acts intended to protect consumers’ personal information and prevent identity theft, such as the Gramm Act and the Fair and Accurate Transactions Act. ASB is also subject to federal laws regulating certain of its lending practices, such as the Flood Disaster Protection Act, and laws requiring reports to regulators of certain customer transactions, such as the Currency and Foreign Transactions Reporting Act and the International Money Laundering Abatement and Anti-Terrorist Financing Act. ASB’s relationship with Cetera Investment Services LLC and Cetera Investment Advisers LLC is also governed by regulations adopted by the FRB under the Gramm Act, which regulate “networking” relationships under which a financial institution refers customers to a broker-dealer for securities services and employees of the financial institution are permitted to receive a nominal fee for the referrals. These laws may provide for substantial penalties in the event of noncompliance.

Proposed legislation. See the discussion of proposed legislation in “Bank–Legislation and regulation” in HEI’s MD&A.

Environmental regulation. ASB may be subject to the provisions of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Hawaii Environmental Response Law (ERL) and regulations promulgated thereunder, which impose liability for environmental cleanup costs on certain categories of responsible parties. CERCLA and ERL exempt persons whose ownership in a facility is held primarily to protect a security interest, provided that they do not participate in the management of the facility.

Additional information. For additional information about ASB, see the sections under “Bank” in HEI’s MD&A, HEI’s “Quantitative and Qualitative Disclosures about Market Risk” and HEI’s Consolidated Financial Statements, including Note 4 thereto.

Properties. ASB owns or leases several office buildings in downtown Honolulu and owns land on which a number of its branches are located.

The following table sets forth the number of bank branches owned and leased by ASB by island:

December 31, 2019	Number of branches		
	Owned	Leased	Total
Oahu	9	25	34
Maui	2	4	6
Hawaii	3	2	5
Kauai	2	1	3
Molokai	—	1	1
	16	33	49

As of December 31, 2019, the net book value (NBV) of branches and office facilities was \$182 million (\$175 million represents the NBV of the land and improvements for the branches and office facilities owned by ASB and \$7 million represents the NBV of ASB’s leasehold improvements). As of December 31, 2018, the NBV of branches and office facilities of \$190 million (\$184 million represents the NBV of the land and improvements for the branches and office facilities owned by ASB and \$6 million represents the NBV of ASB’s leasehold improvements). The leases expire on various dates through December 2040, but many of the leases have extension provisions.

As of December 31, 2019, ASB owned 111 automated teller machines.

New Headquarters. In 2019, ASB moved into its new headquarters, which it owns, in downtown Honolulu. The headquarters has approximately 370,000 square feet of space on eleven floors and consolidated five separate offices into one building where approximately 600 employees are working. In fourth quarter of 2019, ASB sold two office facilities as a result of the consolidation of employees into the new headquarters and recognized a pretax gain of \$10.8 million.

ITEM 1A. RISK FACTORS

The businesses of HEI and its subsidiaries involve numerous risks which, if realized, could have a material and adverse effect on the Company's financial statements. For additional information for certain risk factors enumerated below and other risks of the Company and its operations, see "Cautionary Note Regarding Forward-Looking Statements" above and HEI's MD&A, HEI's "Quantitative and Qualitative Disclosures about Market Risk," the Notes to the Consolidated Financial Statements, Hawaiian Electric's MD&A and Hawaiian Electric's "Quantitative and Qualitative Disclosures About Market Risk."

Holding company and company-wide risks.

HEI is a holding company that derives its income from its operating subsidiaries and depends on the ability of those subsidiaries to pay dividends or make other distributions to HEI and on its own ability to raise capital. HEI is a legal entity separate and distinct from its various subsidiaries. As a holding company with no significant operations of its own, HEI's cash flows and consequent ability to service its obligations and pay dividends on its common stock is dependent upon its receipt of dividends or other distributions from its operating subsidiaries and its ability to issue common stock or other equity securities and to incur additional debt. The ability of HEI's subsidiaries to pay dividends or make other distributions to HEI, in turn, is subject to the risks associated with their operations and to contractual and regulatory restrictions, including:

- the provisions of an HEI agreement with the PUC, which could limit the ability of HEI's principal electric public utility subsidiary, Hawaiian Electric, to pay dividends to HEI in the event that the consolidated common stock equity of the Utilities falls below 35% of total capitalization of the electric utilities;
- the provisions of an HEI agreement entered into with federal bank regulators in connection with its acquisition of its bank subsidiary, ASB, which require HEI to contribute additional capital to ASB (up to a maximum amount of additional capital of \$28.3 million as of December 31, 2019 under the Regulatory Capital Maintenance/Dividend Agreement dated May 26, 1988, between HEI, HEIDI (HEI Diversified Inc.) and the Federal Savings and Loan Insurance Corporation) upon request of the regulators in order to maintain ASB's regulatory capital at the level required by regulation;
- the minimum capital and capital distribution regulations of the OCC that are applicable to ASB and capital regulations that become applicable to HEI and ASB Hawaii;
- the receipt of a letter from the FRB communicating the OCC's and FRB's non-objection to the payment of any dividend ASB proposes to declare and pay to ASB Hawaii and HEI; and
- the provisions of preferred stock resolutions and debt instruments of HEI and its subsidiaries.

The Company, and its credit rating, is subject to risks associated with the Hawaii economy (in the aggregate and on an individual island basis), volatile U.S. capital markets and changes in the interest rate and credit market environment that have or could result in higher retirement benefit plan funding requirements, declines in ASB's interest rate margins and investment values, higher delinquencies and charge-offs in ASB's loan portfolio and restrictions on the ability of HEI or its subsidiaries to borrow money or issue securities. The two largest components of Hawaii's economy are tourism and the federal government (including the military). Because the core businesses of HEI's subsidiaries are providing local public electric utility services (through Hawaiian Electric and its subsidiaries) and banking services (through ASB) in Hawaii, the Company's operating results are significantly influenced by Hawaii's economy, which in turn is influenced by economic conditions in the mainland U.S. (particularly California) and Asia (particularly Japan) as a result of the impact of those conditions on tourism, by the impact of interest rates on the construction and real estate industries and by the impact of federal government spending in Hawaii, which can be affected by world conditions and, from time to time, the expiration of federal government appropriations bills. In addition, the Hawaii economy could be directly or indirectly affected by implications and potential impacts of U.S. and foreign capital and credit market conditions and federal, state and international responses to those conditions and the potential impacts of global and local developments (including economic conditions and uncertainties; unrest, terrorist acts, wars, conflicts, political protests, deadly virus epidemic, potential pandemics, or other crisis; the effects of changes that have or may occur in U.S. policy, such as with respect to immigration and trade).

The recent outbreak of the coronavirus, COVID-19, first identified in Wuhan, Hubei Province, China, has the potential to impact economic conditions in Hawaii, for example, through a reduction of tourism and business travel to Hawaii. Further, a prolonged outbreak could potentially impact the ability of the Company's customers, contractors, suppliers, IPPs, and other business partners to perform or fulfill their obligations, which could adversely affect the Company's businesses. For instance, restrictions on business activities due to COVID-19 may disrupt the global renewable energy supply chain that relies on Chinese manufacturing capacity for key components (such as solar modules, inverters, wind turbine components) creating project delays or material price increases for Hawaii renewable projects and procurement processes, which could potentially jeopardize the Company's ability to achieve its RPS goals. While the Company has not been materially impacted by COVID-19 to date, the extent of the outbreak and its future impact on the Company's businesses and its business partners is uncertain and cannot be reasonably estimated at this time.

HEI's and Hawaiian Electric's securities ratings only reflect the view, at the time the ratings are issued, of the applicable rating agency. There is no assurance that any such credit rating will remain in effect for any given period of time or that such rating will not be lowered, suspended or withdrawn entirely by the applicable rating agency if, in such rating agency's judgment, circumstances, such as current, past or future effects or events so warrant. Any such lowering, suspension or withdrawal of any rating may have an adverse effect on the availability of capital to the Company or the market price or marketability of HEI's and/or Hawaiian Electric's securities, which could increase the cost of capital of HEI and Hawaiian Electric, and such increased costs, including interest charges, under HEI's and/or Hawaiian Electric's debt securities and credit facilities, would result in reductions in HEI's consolidated net income in future periods. Further, if HEI's or Hawaiian Electric's commercial paper ratings were to be downgraded, HEI and Hawaiian Electric might not be able to sell commercial paper and might be required to draw on more expensive bank lines of credit or to defer capital or other expenditures. Neither HEI nor Hawaiian Electric management can predict future rating agency actions or their effects on the future cost of capital of HEI or Hawaiian Electric. Such ratings are not recommendations to buy, sell or hold any securities; such ratings may be subject to revision or withdrawal at any time by the rating agencies; and each rating should be evaluated independently of any other rating.

Changes in the U.S. capital markets can also have significant effects on the Company. For example, pension funding requirements are affected by the market performance of the assets in the master pension trust maintained for pension plans, and by the discount rate used to estimate the service and interest cost components of net periodic pension cost and value obligations. The Utilities' pension tracking mechanisms help moderate pension expense; however, the significant decline in 2008 in the value of the Company's defined benefit pension plan assets resulted in a substantial gap between the projected benefit obligations under the plans and the value of plan assets, resulting in increases in funding requirements. The increases have moderated in recent years as investment performance has improved.

Because the earnings of ASB depend primarily on net interest income, interest rate risk is a significant risk of ASB's operations. HEI and the Utilities are also exposed to interest rate risk primarily due to their periodic borrowing requirements, the discount rate used to determine pension funding requirements and the possible effect of interest rates on the electric utilities' rates of return. Interest rates are sensitive to many factors, including general economic conditions and the policies of government and regulatory authorities. HEI cannot predict future changes in interest rates, nor be certain that interest rate risk management strategies it or its subsidiaries have implemented will be successful in managing interest rate risk.

Interest rate risk also represents a market risk factor affecting the fair value of ASB's investment securities. Increases and decreases in prevailing interest rates generally translate into decreases and increases in the fair values of those instruments, respectively. Disruptions in the credit markets, a liquidity crisis in the banking industry or increased levels of residential mortgage delinquencies and defaults may result in decreases in the fair value of ASB's investment securities and an impairment that is other-than-temporary, requiring ASB to write down its investment securities. As of December 31, 2019, ASB's investment in U.S. Treasury, federal agency obligations, and mortgage-backed securities have an implicit guarantee from the U.S. government.

HEI and Hawaiian Electric and their subsidiaries may incur higher retirement benefits expenses and have and will likely continue to recognize substantial liabilities for retirement benefits. Retirement benefits expenses and cash funding requirements could increase in future years depending on numerous factors, including, but not limited to, the performance of the U.S. equity markets, trends in interest rates and health care costs, plan amendments, mortality improvements, new laws relating to pension funding and changes in accounting principles. For the Utilities, however, retirement benefits expenses, as adjusted by the pension and postretirement benefits other than pensions (OPEB) tracking mechanisms, have been an allowable expense for rate-making purposes.

The Company is subject to the risks associated with the geographic concentration of its businesses and current lack of interconnections that could result in service interruptions at the Utilities or higher default rates on loans held by ASB. The business of the Utilities is concentrated on the individual islands they serve in the State of Hawaii. Their operations are more vulnerable to service interruptions than are many U.S. mainland utilities because none of the systems of the Utilities are interconnected with the systems on the other islands they serve. Because of this lack of interconnections, it is necessary to maintain higher generation reserve margins than are typical for U.S. mainland utilities to help ensure reliable service. Service interruptions, including in particular extended interruptions that could result from a natural disaster or terrorist activity, could adversely impact the revenues and costs of some or all of the Utilities.

Substantially all of ASB's consumer loan customers are Hawaii residents. A significant portion of the commercial loan customers are located in Hawaii. While a majority of customers are on Oahu, ASB also has customers on the neighbor islands (whose economies have been weaker than Oahu during the last economic downturn). Substantially all of the real estate underlying ASB's residential and commercial real estate loans are located in Hawaii. These assets may be subject to a greater risk of default than other comparable assets held by financial institutions with other geographic concentrations in the event of

adverse economic, political or business developments or natural disasters affecting Hawaii and affect the ability of ASB's customers to make payments of principal and interest on their loans.

Increasing competition and technological advances could cause HEI's businesses to lose customers or render their operations obsolete. The banking industry in Hawaii, and certain aspects of the electric utility industry, are competitive. The success of HEI's subsidiaries in meeting competition and responding to technological advances will continue to have a direct impact on HEI's consolidated financial performance. For example:

- ASB, one of the largest financial institutions in the state, is in direct competition for deposits and loans not only with two larger institutions that have substantial capital, technology and marketing resources, but also with smaller Hawaii institutions and other U.S. institutions, including credit unions, mutual funds, mortgage brokers, finance companies and investment banking firms. Larger financial institutions may have greater access to capital at lower costs, which could impair ASB's ability to compete effectively. New or significant advances in technology (e.g., significant advances in internet banking) could render the operations of ASB less competitive or obsolete.
- The Utilities face competition from IPPs; customer self-generation, with or without cogeneration; customer energy storage; and the potential formation of community-based, cooperative ownership or municipality structures for electrical service on all islands it serves. With the exception of certain identified projects, the Utilities are required to use competitive bidding to acquire a future generation resource unless the PUC finds competitive bidding to be unsuitable. The PUC sets policies for distributed generation (DG) interconnection agreements and standby rates. The results of competitive bidding, competition from IPPs, customer self-generation, and potential cooperative ownership or municipality structures for electric utility service, and the rate at which technological developments facilitating nonutility generation of electricity, combined heat and power technology, off-grid microgrids, and customer energy storage may render the operations of the Utilities less competitive or outdated and adversely affect the Utilities and the results of their operations.

The Company may be subject to information technology and operational system failures, network disruptions, cyber attacks and breaches in data security that could adversely affect its businesses and reputation. The Company and its subsidiaries rely on information technology systems, some of which are managed or hosted by third party service providers, to manage its business data, communications, and other business processes. Such information technology systems may be vulnerable to cyberattacks or other security incidents, which could result in unauthorized access to confidential data or disruptions to operations. If the Company is unable to prevent or adequately respond to and resolve an incident, it may have a material impact on the Company's operations or business reputation.

Utilities. The Utilities rely on evolving and increasingly complex operational and information systems, networks and other technologies, which are interconnected with the systems and network infrastructure owned by third parties to support a variety of business processes and activities, including procurement and supply chain, invoicing and collection of payments, customer relationship management, human resource management, the acquisition, generation and delivery of electrical service to customers, and to process financial information and results of operations for internal reporting purposes and to comply with regulatory financial reporting and legal and tax requirements. The Utilities use their systems and infrastructure to create, collect, store, and process sensitive information, including personal information regarding customers, employees and their dependents, retirees, and other individuals. Despite the Utilities security measures, all of their systems are vulnerable to disability, failures or unauthorized access caused by natural disasters, cybersecurity incidents, security breaches, user error, unintentional defects created by system changes, military or terrorist actions, power or communication failures or similar events. Any such failure could have a material adverse impact on the Utilities' ability to process transactions and provide service, as well the Utilities' financial condition and results of operations. Further, a data breach involving theft, improper disclosure, or other unauthorized access to or acquisition of confidential information could subject the Utilities to penalties for violation of applicable privacy laws, claims by third parties, and enforcement actions by government agencies. A data breach could also reduce the value of proprietary information, and harm the reputation of the Utilities.

As noted by the U.S. Department of Homeland Security, the utility industry is continuing to experience an increase in the frequency and sophistication of cybersecurity incidents. The Utilities' systems have been, and will likely continue to be, a target of attacks. Further, the Utilities' operational networks may be subject to new cybersecurity risks due to modernizing and interconnecting existing infrastructure with new technologies and control systems, including those owned by third parties. Although the Utilities have not experienced a material cybersecurity breach to date, such incidents may occur and may have a material adverse effect on the Utilities and the Company in the future. In order to address cybersecurity risks to their information systems, the Utilities maintain security measures designed to protect their information technology systems, network infrastructure and other assets. The Utilities actively monitor developments in the area of cybersecurity and are involved in various related government and industry groups, and brief the Company's Board quarterly on relevant cybersecurity issues. Although the Utilities continue to make investments in their cybersecurity program, including personnel, technologies, cyber insurance and training of Utilities personnel, there can be no assurance that these systems or their expected functionality will be implemented, maintained, or expanded effectively; nor can security measures completely eliminate the possibility of a

cybersecurity breach. The Utility maintains cyber liability insurance that covers certain damages caused by cyber incidents. However, there is no guarantee that adequate insurance will continue to be available at rates the Utility believes are reasonable or that the costs of responding to and recovering from a cyber incident will be covered by insurance or recoverable in rates. If the Utilities' cybersecurity measures were to be breached, the Utilities could suffer financial loss, business disruptions, liability to customers, regulatory intervention or damage to their reputation.

Due to the size, scope and complexity of the Utilities' business, the development and maintenance of information technology systems to process and track information is critical and challenging. The Utilities often rely on third-party vendors to host, maintain, modify, and update its systems and these third-party vendors could cease to exist, fail to establish adequate processes to protect the Utilities systems and information, or experience internal or external security incidents. In addition, the Utilities are pursuing complex business transformation initiatives, which include establishing common processes across Hawaiian Electric, Hawaii Electric Light and Maui Electric and the upgrade or replacement of existing systems. Significant system changes increase the risk of system interruptions. Although the Utilities maintain change control processes to mitigate this risk, system interruptions may occur. Further, delay or failure to complete the integration of information systems and processes may result in delays in regulatory cost recovery, increased service interruptions of aging legacy systems, or the failure to realize the cost savings anticipated to be derived from these initiatives.

In the fourth quarter of 2018, the Utilities' new ERP/EAM system was placed into service. One of the conditions imposed by the PUC's approval of the system is the requirement that the Utilities achieve cost savings consistent with a minimum of \$246 million in ERP/EAM project-related benefits to be delivered to customers over the system's 12-year service life. If the Utilities are not able to achieve such minimum savings, the PUC could impose financial penalties, such as a reduction of revenue requirements that could have a material adverse impact the Utilities' and Company's results of operations and financial condition.

The Utilities have disaster recovery plans in place to protect their businesses from information technology service interruptions. The disaster recovery plans, however, may not be successful in preventing the loss of customer data, service interruptions and disruptions to operations or damage to important facilities. If any of these systems fail to operate properly or becomes disabled and the Utilities' disaster recovery plans do not effectively resolve the issues in a timely manner, the Utilities could suffer financial loss, business disruptions, liability to customers, regulatory intervention or damage to their reputations, any of which could have a material adverse effect on the Utilities' and the Company's financial condition and results of operations.

ASB. ASB is highly dependent on its ability to process, on a daily basis, a large number of transactions and relies heavily on communication and information systems, including those of third-party vendors and other service providers. Communication and information system failures can result from a variety of risks including, but not limited to, events that are wholly or partially out of ASB's control, such as communication line integrity, weather, terrorist acts, natural disasters, accidental disasters, unauthorized breaches of security systems, energy delivery systems, cyberattacks and other events.

ASB is under continuous threat of loss due to cyberattacks, especially as ASB continues to expand customer capabilities to utilize the Internet and other remote channels to transact business. Two of the most significant cyberattack risks that ASB faces are e-fraud and loss of sensitive customer data. Loss from e-fraud occurs when cybercriminals extract funds directly from customers' or ASB's accounts using fraudulent schemes that may include Internet-based funds transfers. ASB has been subject to e-fraud incidents historically. Loss of sensitive customer data are attempts to steal sensitive customer data, such as account numbers and social security numbers, through unauthorized access to computer systems, including computer hacking. Such attacks are less frequent, but could present significant reputational, legal and regulatory costs if successful. Intrusion detection and prevention systems, anti-virus software, firewalls and other general information technology controls have been put in place to detect and prevent cyberattacks or information system breaches. A disaster recovery plan has been developed in the event of a natural disaster, security breach, military or terrorist action, power or communication failure or similar event. The disaster recovery plan, however, may not be successful in preventing the loss of customer data, service interruptions, disruptions to operations or damage to important facilities. Although ASB devotes significant resources to maintain and regularly upgrade its systems and processes that are designed to protect the security of ASB's computer systems, software, networks and other technology assets and the confidentiality, integrity and availability of information belonging to ASB and its customers, there can be no assurance that such failures, interruptions or security breaches will not occur or, if they do occur, that they will be adequately corrected by ASB or its vendors.

If any of these systems fail to operate properly or become disabled even for a brief period of time, ASB could suffer financial loss, business disruptions, liability to customers, regulatory intervention or damage to its reputation, any of which could have a material adverse effect on ASB's and the Company's financial condition and results of operations.

HEI's businesses could suffer losses that are uninsured due to a lack of affordable insurance coverage, unavailability of insurance coverage or limitations on the insurance coverage the Company does have. In the ordinary course of business, HEI

and its subsidiaries purchase insurance coverages (e.g., property and liability coverages) to protect against loss of, or damage to, their properties and against claims made by third parties and employees for property damage or personal injuries. However, the protection provided by such insurance is limited in significant respects and, in some instances, there is no coverage. Some of the insurance coverages have substantial deductibles or has limits on the maximum amounts that may be recovered. In common with other companies in its line of business, the Utilities' overhead and underground transmission and distribution systems (with the exception of substation buildings and contents), which have a replacement value roughly estimated at \$8 billion, are largely not insured against loss or damage because the amount of transmission and distribution system insurance capacity is limited and the premiums are cost prohibitive. Similarly, the Utilities have no business interruption insurance as the premiums for such insurance would be cost prohibitive, particularly since the Utilities are not interconnected to other systems. If a hurricane or other uninsured catastrophic natural disaster were to occur, and if the PUC did not allow the affected Utilities to recover from ratepayers restoration costs and revenues lost from business interruption, the lost revenues and repair expenses could result in a significant decrease in HEI's consolidated net income or in significant net losses for the affected periods.

ASB generally does not obtain credit enhancements, such as mortgagor bankruptcy insurance, but does require standard hazard and hurricane insurance and may require flood insurance for certain properties. ASB is subject to the risks of borrower defaults and bankruptcies, special hazard losses not covered by the required insurance and the insurance company's inability to pay claims on existing policies.

Increased federal and state environmental regulation will require an increasing commitment of resources and funds and could result in construction delays or penalties and fines for non-compliance. HEI and its subsidiaries are subject to federal, state and local environmental laws and regulations relating to air quality, water quality, hazardous substances, waste management, natural resources and health and safety, which regulate, among other matters, the operation of existing facilities, the construction and operation of new facilities and the proper cleanup and disposal of hazardous and toxic wastes and substances. These laws and regulations could result in increased capital, operating, and other costs. HEI or its subsidiaries are currently involved in investigatory or remedial actions at current, former or third-party sites and there is no assurance that the Company will not incur material costs relating to these sites. In addition, compliance with these legal requirements requires the Utilities to commit significant resources and funds toward, among other things, environmental monitoring, installation of pollution control equipment and payment of emission fees. These laws and regulations, among other things, require that certain environmental permits be obtained in order to construct or operate certain facilities, and obtaining such permits can entail significant expense and cause substantial construction delays. Also, these laws and regulations may be amended from time to time, including amendments that increase the burden and cost of compliance. For example, emission and/or discharge limits may be tightened, more extensive permitting requirements may be imposed and additional substances may become regulated. In addition, significant regulatory uncertainty exists regarding the impact of federal or state greenhouse gas emission limits and reductions.

If HEI or its subsidiaries fail to comply with environmental laws and regulations, even if caused by factors beyond their control, that failure may result in civil or criminal penalties and fines or the cessation of operations that could have a material adverse on the Company's financial condition or results of operations.

Adverse tax rulings or developments or changes in tax legislation could result in significant increases in tax payments and/or expense. Governmental taxing authorities could challenge a tax return position taken by HEI or its subsidiaries and, if the taxing authorities prevail, HEI's consolidated tax payments and/or expense, including applicable penalties and interest, could increase significantly. Additionally, changes in tax legislation or IRS interpretations could increase the Company's tax burden and adversely affect the Company's financial position, results of operations, and cash flows.

The Company could be subject to the risk of uninsured losses in excess of its accruals for litigation matters. HEI and its subsidiaries are involved in routine litigation in the ordinary course of their businesses, most of which is covered by insurance (subject to policy limits and deductibles). However, other litigation may arise that is not routine or involves claims that may not be covered by insurance. Because of the uncertainties associated with litigation, there is a risk that litigation against HEI or its subsidiaries, even if vigorously defended, could result in costs of defense and judgment or settlement amounts not covered by insurance and in excess of reserves established in HEI's consolidated financial statements.

Changes in accounting principles and estimates could affect the reported amounts of the Company's assets and liabilities or revenues and expenses. HEI's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the U.S. Changes in accounting principles (including the possible adoption of International Financial Reporting Standards or new U.S. accounting standards), or changes in the Company's application of existing accounting principles, could materially affect the financial statement presentation of HEI's or the Utilities' consolidated results of operations and/or financial condition. Further, in preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ significantly from those estimates.

Material estimates that are particularly susceptible to significant change include the amounts reported for electric utility revenues; allowance for loan losses; income taxes; investment securities, property, plant and equipment; regulatory assets and liabilities; derivatives; goodwill; pension and other postretirement benefit obligations; and contingencies and litigation.

The Utilities' financial statements reflect assets and costs based on cost-based rate-making regulations. Continued accounting in this manner requires that certain criteria relating to the recoverability of such costs through rates be met. If events or circumstances should change such that the criteria are no longer satisfied, the Utilities' expect that their regulatory assets (amounting to \$715 million as of December 31, 2019), net of regulatory liabilities (amounting to \$972 million as of December 31, 2019), would be charged to the statement of income in the period of discontinuance.

Changes in accounting principles can also impact HEI's consolidated financial statements. For example, if management determines that a PPA requires the consolidation of the IPP in the financial statements, the consolidation could have a material effect on Hawaiian Electric's and HEI's consolidated financial statements, including the recognition of a significant amount of assets and liabilities and, if such a consolidated IPP were operating at a loss and had insufficient equity, the potential recognition of such losses.

Changes in the accounting principles for expected credit losses were issued by the FASB to replace existing impairment models, including replacing an "incurred loss" model for loans with a "current expected credit loss" model based on historical experience, current conditions and reasonable and supportable forecasts. The changes also require enhanced disclosures to help financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization's portfolio. The Company will adopt the new accounting principle using an effective date of January 1, 2020, and is in the process of finalizing its analysis. The Company estimates that the increase in the allowance for credit losses as of the adoption date will be between \$18 million to \$22 million.

Electric utility risks.

The following risks are generally specific to Hawaiian Electric, but could have a material adverse effect on the Company's consolidated results of operations, financial condition and liquidity.

Actions of the PUC are outside the control of the Utilities and could result in inadequate or untimely rate increases, in rate reductions or refunds or in unanticipated delays, expenses or writedowns in connection with the construction of new projects. The rates the Utilities are allowed to charge for their services and the timeliness of permitted rate increases are among the most important items influencing the Utilities' results of operations, financial condition and liquidity. The PUC has broad discretion over the rates that the Utilities charge their customers. As part of the decoupling mechanism that the Utilities have implemented, each of the Utilities will file a rate case once every three years. Any adverse decision by the PUC concerning the level or method of determining electric utility rates, the items and amounts that may be included in rate base, the returns on equity or rate base found to be reasonable, the potential consequences of exceeding or not meeting such returns, or any prolonged delay in rendering a decision in a rate or other proceeding could have a material adverse effect on Hawaiian Electric's consolidated results of operations, financial condition and liquidity.

To improve the timing and certainty of the recovery of their costs, the Utilities have proposed and/or received approval of various cost recovery mechanisms including an ECRC (changed from ECAC in 2019), a PPAC, and pension and OPEB tracking mechanisms, as well as a decoupling mechanism, a major project interim recovery (MPIR) adjustment mechanism, and a renewable energy infrastructure program (REIP) surcharge. A change in, or the elimination of, any of these cost recovery mechanisms, could have a material adverse effect on the Utilities. See "Regulatory mechanisms" in Electric Utility's Business.

On April 18, 2018, the PUC issued an order, instituting a proceeding to investigate performance-based regulation (PBR). The PUC's implementation of performance-based ratemaking for the Utilities pursuant to Act 005, Session Laws 2018, could include, but is not limited to, the potential addition of new performance incentive mechanisms, the adoption of third-party proposals by the PUC in its implementation of PBR, and penalties for not achieving performance incentive goals. The impacts of the implementation of PBR cannot be predicted and these impacts could have a material adverse effect on the Utilities. See "Performance-based regulation proceeding" in Note 3 of the Consolidated Financial Statements.

The Utilities could be required to refund to their customers, with interest, revenues that have been or may be received under interim rate orders in their rate case proceedings and other proceedings, if and to the extent they exceed the amounts allowed in final orders.

Many public utility projects require PUC approval and various permits (e.g., environmental and land use permits) from other governmental agencies. Difficulties in obtaining, or the inability to obtain, the necessary approvals or permits, or any adverse decision or policy made or adopted, or any prolonged delay in rendering a decision, by an agency with respect to such approvals and permits, can result in significantly increased project costs or even cancellation of projects. In the event a project does not proceed, or if the PUC disallows cost recovery for all or part of a project, or if project costs exceed caps imposed by

the PUC in its approval of the project, project costs may need to be written off in amounts that could result in significant reductions in Hawaiian Electric's consolidated net income.

Energy cost recovery clauses. The rate schedules of each of the Utilities include ECRCs (changed from ECACs in 2019—see below) under which electric rates charged to customers are automatically adjusted for changes in the weighted-average price paid for fuel oil and certain components of purchased power, and the relative amounts of company-generated power and purchased power.

ECRCs are subject to periodic review by the PUC. In recent rate cases, the PUC has approved an additional trigger that would allow a re-establishment of fuel usage efficiency targets under certain conditions and annual automatic adjustments of fuel usage efficiency targets for all Utilities. In the most recent rate cases for the Utilities, the PUC approved revised ECRCs for the Utilities, which transferred the remaining fuel and purchased energy expenses recovery from base rates to the ECRCs. Effective January 1, 2019, ECRC for Hawaiian Electric provides for a 98/2% risk-sharing split between ratepayers and Hawaiian Electric, of fossil fuel prices above or below a baseline price and the fuel usage efficiency pass-through within a range, with an annual maximum exposure cap of \$2.5 million. Effective September 1, 2019, the ECRC for Maui Electric reflects 98/2% risk-sharing split between ratepayers and Maui Electric, with an annual maximum exposure cap of \$0.6 million. Hawaii Electric Light's ECRC does not have a risk-sharing split. See "Most recent rate proceedings" in Note 3 of the Consolidated Financial Statements.

A change in, or the elimination of, the ECRC could have a material adverse effect on the Utilities.

Electric utility operations are significantly influenced by weather conditions. The Utilities' results of operations can be affected by the weather and natural disasters. Weather conditions, particularly temperature and humidity, directly influence the demand for electricity. In addition, severe weather and natural disasters, such as hurricanes, earthquakes, tsunamis, lava flows and lightning storms, some of which may become more severe or frequent as a result of global climate changes, can cause outages and property damage and require the Utilities to incur significant additional expenses that may not be recoverable.

Electric utility operations may be significantly influenced by climate change. While the timing, extent and ultimate effects of climate change cannot be determined with any certainty, climate change is predicted to result in sea level rise, which could potentially impact coastal and other low-lying areas (where much of the Utilities' electric infrastructure is sited), and could cause erosion of beaches, saltwater intrusion into aquifers and surface ecosystems, higher water tables and increased flooding and storm damage due to heavy rainfall. The effects of climate change on the weather (for example, floods, hurricanes, heat waves or drought conditions, the latter of which could increase wildfire risk), sea levels, and water availability and quality, all have the potential to materially adversely affect the results of operations, financial condition and liquidity of the Utilities. For example, severe weather and its related impacts could cause significant harm to the Utilities' physical facilities.

Electric utility operations depend heavily on third-party suppliers of fuel and purchased power. The Utilities rely on fuel suppliers and shippers, and IPPs to deliver fuel and power, respectively, in accordance with contractual agreements. Approximately 72% of the net energy generated or purchased by the Utilities in 2019 was generated from the burning of fossil fuel oil, and purchases of power by the Utilities provided about 46% of their total net energy generated and purchased for the same period. Failure or delay by fuel suppliers and shippers to provide fuel pursuant to existing contracts, or failure by a major IPP to deliver the firm capacity anticipated in its PPA, could disrupt the ability of the Utilities to deliver electricity and require the Utilities to incur additional expenses to meet the needs of their customers that may not be recoverable. In addition, as the IPP contracts near the end of their terms, there may be less economic incentive for the IPPs to make investments in their units to ensure the availability of their units. Also, as these contractual agreements end, the Utilities may not be able to purchase fuel and power on terms equivalent to the current contractual agreements.

The capacity provided by the Utilities' generating resources and third-party purchased power may not be sufficient to meet customers' energy requirements. The Utilities rely upon their generating resources and purchased power from third parties to meet their customers' energy requirements. The Utilities update their generation capacity evaluation each year to determine the Utilities' ability to meet reasonably expected demands for service and provide reasonable reserves for emergencies. These evaluations are impacted by a variety of factors, including customer energy demand, energy conservation and efficiency initiatives, economic conditions, and weather patterns. If the capacity provided by the Utilities' generating resources and third-party purchased power is not adequate relative to customer demand, the Utilities may have to contract to buy more power from third parties, invest in additional generating facilities over the long-term, or extend the operating life of existing utility units. Any failure to meet customer energy requirements could negatively impact the satisfaction of the Utilities' customers, which could have an adverse impact on the Utilities' business and results of operations.

Electric utility and third-party purchased power projects may be significantly impacted by stakeholder activism. The potential impact of stakeholder activism could increase total utility project costs, and delay the permitting, construction and overall timing or preclude the completion of third-party or utility projects that are required to meet electricity demand,

resilience and reliability objectives, and RPS goals. If a utility project cannot be completed, the project costs may need to be written off in amounts that could result in significant reductions in Hawaiian Electric's consolidated net income.

Electric utility generating facilities are subject to operational risks that could result in unscheduled plant outages, unanticipated and/or increased operation and maintenance expenses and increased power purchase costs. Operation of electric generating facilities involves certain risks which can adversely affect energy output and efficiency levels. Included among these risks are facility shutdowns or power interruptions due to insufficient generation or a breakdown or failure of equipment or processes. In addition, operations could be negatively impacted by interruptions in fuel supply, inability to negotiate satisfactory collective bargaining agreements when existing agreements expire or other labor disputes, inability to comply with regulatory or permit requirements, disruptions in delivery of electricity, operator error and catastrophic events such as earthquakes, tsunamis, hurricanes, fires, explosions, floods or other similar occurrences affecting the Utilities' generating facilities or transmission and distribution systems.

The Utilities may be adversely affected by new legislation or administrative actions. Congress, the Hawaii legislature and governmental agencies periodically consider legislation and other initiatives that could have uncertain or negative effects on the Utilities and their customers. Congress, the Hawaii legislature and governmental agencies have adopted, or are considering adopting, a number of measures that will significantly affect the Utilities, as described below.

Renewable Portfolio Standards law. In 2015, Hawaii's RPS law was amended to require electric utilities to meet an RPS of 15%, 30%, 40%, 70% and 100% by December 31, 2015, 2020, 2030, 2040 and 2045 respectively. Energy savings resulting from energy efficiency programs do not count toward the RPS after 2014. The Utilities are committed to achieving these goals and met the 2015 RPS; however, due to the exclusion of energy savings in calculating RPS after 2014 and risks such as potential delays in IPPs being able to deliver contracted renewable energy, it is possible the Utilities may not attain the required renewable percentages in the future, and management cannot predict the future consequences of failure to do so (including potential penalties to be assessed by the PUC). On December 19, 2008, the PUC approved a penalty of \$20 for every MWh that an electric utility is deficient under Hawaii's RPS law. The PUC noted, however, that this penalty may be reduced, in the PUC's discretion, due to events or circumstances that are outside an electric utility's reasonable control, to the extent the event or circumstance could not be reasonably foreseen and ameliorated, as described in the RPS law and in an RPS framework adopted by the PUC. In addition, the PUC ordered that the Utilities will be prohibited from recovering any RPS penalty costs through rates.

Renewable energy. In 2007, a measure was passed by the Hawaii legislature stating that the PUC may consider the need for increased renewable energy in rendering decisions on utility matters. Due to this measure, it is possible that, if energy from a renewable source is more expensive than energy from fossil fuel, the PUC may still approve the purchase of energy from the renewable source, resulting in higher costs.

Global climate change and greenhouse gas emissions reduction. National and international concern about climate change and the contribution of GHG emissions (including carbon dioxide emissions from the combustion of fossil fuels) to climate change have led to federal legislative and regulatory proposals and action by the state of Hawaii to reduce GHG emissions.

In July 2007, the State Legislature passed Act 234, which requires a statewide reduction of GHG emissions by January 1, 2020 to levels at or below the statewide GHG emission levels in 1990. On June 20, 2014, the Governor signed the final rules required to implement Act 234 and these rules went into effect on June 30, 2014. In general, Act 234 and the GHG rule require affected sources that have the potential to emit GHGs in excess of established thresholds to reduce their GHG emissions by 16% below 2010 emission levels by 2020. In accordance with State requirements, the Utilities submitted an Emissions Reduction Plan (ERP) to the DOH on June 30, 2015. The Utilities submitted a revised ERP on October 17, 2018 and subsequent revisions on May 15, 2019 and July 26, 2019, to reflect the partnership established between the Utilities and several IPPs. In this plan, the partnership has committed to a 16% reduction in GHG emissions in accordance with the rule. As of December 31, 2019, the permits that were pending that would have incorporated the ERP have not been approved, and are subject to additional public review and potential challenge. Additionally, the loss of the PGV facility on Hawaii Island, unseasonable weather and the delay of additional renewable projects will make these goals more challenging in the immediate future. It is expected that with the advent of additional renewable projects and the application to the PUC with respect to the PGV project, the goals should be attainable.

The Utilities have taken, and continue to identify opportunities to take, direct action to reduce GHG emissions from their operations, including, but not limited to, supporting demand-side management programs that foster energy efficiency, using renewable resources for energy production and purchasing power from IPPs generated by renewable resources, and burning renewable biodiesel at selected Hawaiian Electric and Maui Electric generating units.

Performance-based regulation legislation. On April 24, 2018, Act 005, Session Laws 2018 was signed into law, which establishes performance metrics that the PUC shall consider while establishing performance incentives and penalty mechanisms under a performance-based ratemaking model. The law requires that the PUC establish these performance-based ratemaking mechanisms on or before January 1, 2020. The PUC opened a proceeding on April 18, 2018 to investigate performance-based regulation for the Utilities. See “Performance-based regulation proceedings” in Note 3 of the Consolidated Financial Statements.

The foregoing legislation or legislation that now is, or may in the future be, proposed present risks and uncertainties for the Utilities.

The Utilities may be subject to increased operational challenges and their results of operations, financial condition and liquidity may be adversely impacted in meeting the commitments and objectives of clean energy initiatives and Renewable Portfolio Standards (RPS). The far-reaching nature of the Utilities’ renewable energy commitments and the RPS goals present risks to the Company. Among such risks are: (1) the dependence on third-party suppliers of renewable purchased energy, which if the Utilities are unsuccessful in negotiating purchased power agreements with such IPPs or if a major IPP fails to deliver the anticipated capacity and/or energy in its purchased power agreement, could impact the Utilities’ achievement of their commitments to RPS goals and/or the Utilities’ ability to deliver reliable service; (2) delays in acquiring or unavailability of non-fossil fuel supplies for renewable generation; (3) the impact of intermittent power to the electrical grid and reliability of service if appropriate supporting infrastructure is not installed or does not operate effectively; (4) the likelihood that the Utilities may need to make substantial investments in related infrastructure, which could result in increased borrowings and, therefore, materially impact the financial condition and liquidity of the Utilities; and (5) the commitment to support a variety of initiatives, which, if approved by the PUC, may have a material impact on the results of operations and financial condition of the Utilities depending on their design and implementation. These initiatives include, but are not limited to, programs to enable more customer-sited generation. The implementation of these or other programs may adversely impact the results of operations, financial condition and liquidity of the Utilities.

Bank risks.

The following risks are generally specific to ASB, but could have a material adverse effect on the Company’s consolidated results of operations, financial condition and liquidity.

Fluctuations in interest rates could result in lower net interest income, impair ASB’s ability to originate new loans or impair the ability of ASB’s adjustable-rate borrowers to make increased payments or cause such borrowers to repay their adjustable-rate loans. Interest rate risk is a significant risk of ASB’s operations. ASB’s net interest income consists primarily of interest income received on fixed-rate and adjustable-rate loans, mortgage-backed securities and investments, less interest expense consisting primarily of interest paid on deposits and other borrowings. Interest rate risk arises when earning assets mature or when their interest rates change in a time frame different from that of the costing liabilities. Changes in market interest rates, including changes in the relationship between short-term and long-term market interest rates (e.g., a flat or an inverted yield curve) or between different interest rate indices, and the duration and severity of the changes in market interest rates can impact ASB’s net interest margin. See “Quantitative and Qualitative Disclosures about Market Risk.”

Although ASB pursues an asset-liability management strategy designed to mitigate its risk from changes in market interest rates, unfavorable movements in interest rates could result in lower net interest income. Residential 1-4 family fixed-rate mortgage loans comprised about 40% of ASB’s loan portfolio as of December 31, 2019 and do not re-price with movements in interest rates. ASB continues to face a challenging interest rate environment. Increases in market interest rates could have an adverse impact on ASB’s cost of funds. Higher market interest rates could lead to higher interest rates paid on deposits and other borrowings. Significant increases in market interest rates, or the perception that an increase may occur, could adversely affect ASB’s ability to originate new loans and grow. An increase in market interest rates, especially a sudden increase, could also adversely affect the ability of ASB’s adjustable-rate borrowers to meet their higher payment obligations. If this occurred, it could cause an increase in nonperforming assets and charge-offs. Conversely, a decrease in interest rates or a mismatching of maturities of interest sensitive financial instruments could result in an acceleration in the prepayment of loans and mortgage-backed securities and impact ASB’s ability to reinvest its liquidity in similar yielding assets.

Changes in the method for determining London Interbank Offered Rate (LIBOR) and the potential replacement of LIBOR may affect our loan portfolio and interest income on loans. On July 27, 2017, the United Kingdom’s Financial Conduct Authority, which regulates LIBOR, announced that it intends to phase out LIBOR by the end of 2021. It is unclear whether or not LIBOR will cease to exist at that time or if new methods of calculating LIBOR will be established such that it continues to exist after 2021. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, a steering committee composed of large U.S. financial institutions, announced replacement of U.S. dollar LIBOR with a new index calculated by short-term repurchase agreements, backed by U.S. Treasury securities called the Secured Overnight Financing

Rate (SOFR). The potential effect of the elimination of LIBOR on ASB's LIBOR-indexed loan portfolio and interest income on loans cannot yet be determined.

ASB's operations are affected by factors that are beyond its control, that could result in lower revenues, higher expenses or decreased demand for its products and services. ASB's results of operations depend primarily on the income generated by the supply of, and demand for, its products and services, which primarily consist of loans and deposit services. ASB's revenues and expenses may be adversely affected by various factors, including:

- local, regional, national and other economic and political conditions that could result in declines in employment and real estate values, which in turn could adversely affect the ability of borrowers to make loan payments and the ability of ASB to recover the full amounts owing to it under defaulted loans;
- the ability of borrowers to obtain insurance and the ability of ASB to place insurance where borrowers fail to do so, particularly in the event of catastrophic damage to collateral securing loans made by ASB;
- faster than expected loan prepayments that can cause an acceleration of the amortization of premiums on loans and investments and the impairment of mortgage servicing assets of ASB;
- changes in ASB's loan portfolio credit profiles and asset quality, which may increase or decrease the required level of allowance for loan losses;
- technological disruptions affecting ASB's operations or financial or operational difficulties experienced by any outside vendor on whom ASB relies to provide key components of its business operations, such as business processing, network access or internet connections;
- events of default and foreclosure of loans whereby ASB becomes the owner of a mortgage properties that presents environmental risk or potential clean up liability;
- the impact of legislative and regulatory changes, including changes affecting capital requirements, increasing oversight of and reporting by banks, or affecting the lending programs or other business activities of ASB;
- additional legislative changes regulating the assessment of overdraft, interchange and credit card fees, which can have a negative impact on noninterest income;
- public opinion about ASB and financial institutions in general, which, if negative, could impact the public's trust and confidence in ASB and adversely affect ASB's ability to attract and retain customers and expose ASB to adverse legal and regulatory consequences;
- increases in operating costs (including employee compensation expense and benefits and regulatory compliance costs), inflation and other factors, that exceed increases in ASB's net interest, fee and other income; and
- the ability of ASB to maintain or increase the level of deposits, ASB's lowest costing funds.

Banking and related regulations could result in significant restrictions being imposed on ASB's business or in a requirement that HEI divest ASB. ASB is subject to examination and comprehensive regulation by the Department of Treasury, the OCC and the FDIC, and is subject to reserve requirements established by the Board of Governors of the Federal Reserve System. In addition, the FRB is responsible for regulating ASB's holding companies, HEI and ASB Hawaii. The regulatory authorities have extensive discretion in connection with their supervisory and enforcement activities and examination policies to address not only ASB's compliance with applicable banking laws and regulations, but also capital adequacy, asset quality, management ability and performance, earnings, liquidity and various other factors.

Under certain circumstances, including any determination that ASB's relationship with HEI results in an unsafe and unsound banking practice, these regulatory authorities have the authority to restrict the ability of ASB to transfer assets and to make distributions to its shareholders (including payment of dividends to HEI), or they could seek to require HEI to sever its relationship with or divest its ownership of ASB. Payment by ASB of dividends to HEI may also be restricted by the OCC and FRB under its prompt corrective action regulations or its capital distribution regulations if ASB's capital position deteriorates. In order to maintain its status as a QTL, ASB is required to maintain at least 65% of its assets in "qualified thrift investments." Institutions that fail to maintain QTL status are subject to various penalties, including limitations on their activities. In ASB's case, the activities of HEI and HEI's other subsidiaries would also be subject to restrictions, and a failure or inability to comply with those restrictions could effectively result in the required divestiture of ASB. Federal legislation has also been proposed in the past that could operate to eliminate the thrift charter or the grandfathered status of HEI as a unitary thrift holding company, which in turn would result in a required divestiture of ASB. In the event of a required divestiture, federal law substantially limits the types of entities that could potentially acquire ASB.

Recent legislative and regulatory initiatives could have an adverse effect on ASB's business. The Dodd-Frank Act, which became law in July 2010, has had a substantial impact on the financial services industry. The Dodd-Frank Act establishes a framework through which regulatory reform will be written and changes to statutes, regulations or regulatory policies could affect HEI and ASB in substantial and unpredictable ways. A major component of the Dodd-Frank Act is the creation of the Consumer Financial Protection Bureau that has the responsibility for setting and enforcing clear, consistent rules relating to consumer financial products and services and has the authority to prohibit practices it finds to be unfair, deceptive or abusive.

Compliance with any such directives could have adverse effects on ASB's revenues or operating costs. Failure to comply with laws, regulations or policies could result in sanctions by regulatory agencies, civil money penalties and/or reputation damage, which could have a material adverse effect on ASB's business, results of operations, financial condition and liquidity.

A large percentage of ASB's loans and securities are collateralized by real estate, and adverse changes in the real estate market and/or general economic or other conditions may result in loan losses and adversely affect the Company's profitability. As of December 31, 2019 approximately 82% of ASB's loan portfolio was comprised of loans primarily collateralized by real estate, most of which was concentrated in the State of Hawaii. During 2019, ASB's HELOC and residential 1-4 family portfolios grew by 12% and 2%, respectively, and now comprise 78% of total real estate loans. ASB's financial results may be adversely affected by changes in prevailing economic conditions, either nationally or in the state of Hawaii, including decreases in real estate values, adverse employment conditions, the monetary and fiscal policies of the federal and state government and other significant external events. Adverse changes in the economy may have a negative effect on the ability of borrowers to make timely repayments of their loans. A deterioration of the economic environment in Hawaii, including a material decline in the real estate market, further declines in home resales, a material external shock, or any environmental clean-up obligation, may also significantly impair the value of ASB's collateral and ASB's ability to sell the collateral upon foreclosure. In the event of a default, amounts received upon sale of the collateral may be insufficient to recover outstanding principal and interest. In addition, if poor economic conditions result in decreased demand for real estate loans, ASB's profits may decrease if its alternative investments earn less income than real estate loans.

Expanding commercial, commercial real estate and consumer lending activities may result in higher costs and greater credit risk than residential lending activities due to the unique characteristics of these markets. ASB had been pursuing a strategy that included expanding its commercial, commercial real estate and consumer lines of business. Commercial and commercial real estate loans have a higher risk profile than residential loans. Though both commercial and commercial real estate loans have shorter terms and earn higher spreads than residential mortgage loans, these loan types generally entail higher underwriting and other service costs and present greater credit risks than traditional residential mortgages. Commercial loans are secured by the assets of the business and, upon default, any collateral repossessed may not be sufficient to repay the outstanding loan balance. In addition, loan collections are dependent on the borrower's continuing financial stability and, thus, are more likely to be affected by current economic conditions and adverse business developments. Commercial real estate properties tend to be unique and are more difficult to value than residential real estate properties. Commercial real estate loans may not be fully amortizing, meaning that they have a significant principal balance or "balloon" payment due at maturity. In addition, commercial real estate properties, particularly industrial and warehouse properties, are generally subject to relatively greater environmental risks than noncommercial properties and to the corresponding burdens and costs of compliance with environmental laws and regulations. Also, there may be costs and delays involved in enforcing rights of a property owner against tenants in default under terms of leases with respect to commercial properties. For example, a tenant may seek protection under bankruptcy laws, which could result in termination of the tenant's lease.

ASB also has a national syndicated lending portfolio where ASB is a participant in credit facilities agented by established and reputable national lenders. Management selectively chooses each deal based on conservative credit criteria to ensure a high-quality, well diversified portfolio. In the event the borrower encounters financial difficulties and ASB is unable to sell its participation interest in the loan in the secondary market, ASB is typically reliant on the originating lender for managing any loan workout or foreclosure proceedings that may become necessary. Accordingly, ASB has less control over such proceedings than loans it originates and may be required to accommodate the interests of other participating lenders in resolving delinquencies or defaults on participated loans, which could result in outcomes that are not fully consistent with ASB's preferred strategies. In addition, a significant proportion of ASB's syndicated loans are originated in states other than Hawaii and are subject to the local regional and regulatory risks specific to those states.

Similar to the national syndicated lending portfolio, ASB does not service commercial loans in which it has participation interests rather than being the lead or agent lender and is subject to the policies and practices of the agent lender, who is the loan servicer, in resolving delinquencies or defaults on participated loans.

The consumer loan portfolio primarily consists of personal unsecured loans with risk-based pricing. Repayment is based on the borrower's financial stability as these loans have no collateral and there is less assurance that ASB will be able to collect all payments due under these loans or have sufficient collateral to cover all outstanding loan balances.

ASB's allowance for loan losses may not cover actual loan losses. ASB's allowance for loan losses is ASB's estimate of probable losses inherent in its loan portfolio and is based on a continuing assessment of:

- existing risks in the loan portfolio;
- historical loss experience with ASB's loans;
- changes in collateral value; and
- current conditions (for example, economic conditions, real estate market conditions and interest rate environment).

If ASB's actual loan losses exceed its allowance for loan losses, it may incur losses, its financial condition may be materially and adversely affected, and additional capital may be required to enhance its capital position. In addition, various regulatory agencies, as an integral part of their examination process, regularly review the adequacy of ASB's allowance. These agencies may require ASB to establish additional allowances based on their judgment of the information available at the time of their examinations. No assurance can be given that ASB will not sustain loan losses in excess of present or future levels of its allowance for loan losses.

ITEM 1B. UNRESOLVED STAFF COMMENTS

HEI: None.

Hawaiian Electric: Not applicable.

ITEM 2. PROPERTIES

HEI and Hawaiian Electric: See the "Properties" sections under "HEI," "Electric utility" and "Bank" in Item 1. Business above.

ITEM 3. LEGAL PROCEEDINGS

HEI and Hawaiian Electric: HEI and Hawaiian Electric (including their direct and indirect subsidiaries) may be involved in ordinary routine PUC proceedings, environmental proceedings and/or litigation incidental to their respective businesses. See the descriptions of legal proceedings (including judicial proceedings and proceedings before the PUC and environmental and other administrative agencies) in "Item 1. Business," in HEI's MD&A and in the Notes 3 and 4 of the Consolidated Financial Statements. The outcomes of litigation and administrative proceedings are necessarily uncertain and there is a risk that the outcome of such matters could have a material adverse effect on the financial position, results of operations or liquidity of HEI or one or more of its subsidiaries for a particular period in the future.

ITEM 4. MINE SAFETY DISCLOSURES

HEI and Hawaiian Electric: Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS (HEI)

The executive officers of HEI are listed below. Messrs. Seu and Wacker are officers of HEI subsidiaries rather than of HEI, but are deemed to be executive officers of HEI under SEC Rule 3b-7 promulgated under the 1934 Exchange Act. HEI executive officers serve from the date of their initial appointment and are reappointed annually by the HEI Board (or annually by the applicable HEI subsidiary board), and thereafter are appointed for one-year terms or until their successors have been duly appointed and qualified or until their earlier resignation or removal. HEI executive officers may also hold offices with HEI subsidiaries and affiliates in addition to their current positions listed below.

Name	Age	Business experience for last 5 years and prior positions with the Company
Constance H. Lau	67	HEI President and Chief Executive Officer since 5/06 HEI Director, 6/01 to 12/04 and since 5/06 Hawaiian Electric Chairman of the Board, 5/06 to 5/19 ASB Hawaii Director since 5/06 ASB Chairman of the Board since 5/06, Risk Committee member since 2012 and Director since 1999 <ul style="list-style-type: none">· ASB Chief Executive Officer, 6/01 to 11/10, and President, 6/01 to 1/08· ASB Senior Executive Vice President and Chief Operating Officer and Director, 12/99 to 5/01· HEI Power Corp. Financial Vice President and Treasurer, 5/97 to 8/99· HEI Treasurer, 4/89 to 10/99, and HEI Assistant Treasurer, 12/87 to 4/89· Hawaiian Electric Treasurer 12/87 to 4/89 and Assistant Corporate Counsel, 9/84 to 12/87
Gregory C. Hazelton	55	HEI Executive Vice President and Chief Financial Officer since 4/17 HEI Treasurer, 3/18 to 11/19 HEI Senior Vice President, Finance, 10/16 to 4/17 <ul style="list-style-type: none">· Prior to rejoining the Company in 2016: Northwest Natural Gas Company, Senior Vice President, Chief Financial Officer and Treasurer, 2/16 to 9/16, and Northwest Natural Gas Company, Senior Vice President and Chief Financial Officer, 6/15 to 2/16· HEI Vice President, Finance, Treasurer and Controller, 8/13 to 6/15<ul style="list-style-type: none">· Prior to joining the Company in 2013: UBS Investment Bank, Managing Director, Global Power & Utilities Group 3/11 to 5/13
Scott W. H. Seu	54	Hawaiian Electric President and Chief Executive Officer since 2/20 Hawaiian Electric Director since 2/20 <ul style="list-style-type: none">· Hawaiian Electric Senior Vice President, Public Affairs, 1/17 to 2/20· Hawaiian Electric Vice President, System Operation, 5/14 to 1/17· Hawaiian Electric Vice President, Energy Resources and Operations, 1/13 to 5/14· Hawaiian Electric Vice President, Energy Resources, 8/10 to 12/12· Hawaiian Electric Manager, Resource Acquisition Department, 3/09 to 8/10· Hawaiian Electric Manager, Energy Projects Department, 5/04 to 3/09· Hawaiian Electric Manager, Customer Installations Department, 1/03 to 5/04· Hawaiian Electric Manager, Environmental Department, 4/98 to 12/02· Hawaiian Electric Principal Environmental Scientist, 1/97 to 4/98· Hawaiian Electric Senior Environmental Scientist, 5/96 to 12/96· Hawaiian Electric Environmental Scientist, 8/93 to 5/96
Richard F. Wacker	57	ASB President and Chief Executive Officer since 11/10 ASB Director since 11/10

Family relationships; executive arrangements

There are no family relationships between any HEI executive officer and any other HEI executive officer or any HEI director or director nominee. There are no arrangements or understandings between any HEI executive officer and any other person pursuant to which such executive officer was selected.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

HEI:

Certain of the information required by this item is incorporated herein by reference to Note 14, "Regulatory restrictions on net assets" and Note 17, "Quarterly information (unaudited)" of the Consolidated Financial Statements and "Item 6. Selected Financial Data" and "Equity compensation plan information" under "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" of this Form 10-K.

HEI's common stock is traded on the New York Stock Exchange under the ticker symbol "HE." The total number of holders of record of HEI common stock (i.e., registered holders) as of February 13, 2020, was 5,564. On February 11, 2020, the HEI Board of Directors approved a 1 cent increase in the quarterly dividend from \$0.32 per share to \$0.33 per share, starting with the dividend in the first quarter of 2020. HEI currently expects to maintain the dividend at its present level; however, the HEI Board of Directors evaluates the dividend quarterly and considers many factors in the evaluation including, but not limited to, the Company's results of operations, the long-term prospects for the Company, and the current and expected future economic conditions.

Purchases of HEI common shares were made during the fourth quarter to satisfy the requirements of certain plans as follows:

ISSUER PURCHASES OF EQUITY SECURITIES

Period*	Total Number of Shares Purchased **	Average Price Paid per Share **	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
October 1 to 31, 2019	23,372	\$ 44.80	—	NA
November 1 to 30, 2019	11,248	\$ 43.55	—	NA
December 1 to 31, 2019	148,516	\$ 44.48	—	NA
Total	<u>183,136</u>	\$ 44.47	—	NA

NA Not applicable.

* Trades (total number of shares purchased) are reflected in the month in which the order is placed.

** The purchases were made to satisfy the requirements of the DRIP, the HEIRSP and the ASB 401(k) Plan for shares purchased for cash or by the reinvestment of dividends by participants under those plans and none of the purchases were made under publicly announced repurchase plans or programs. Average prices per share are calculated exclusive of any commissions payable to the brokers making the purchases for the DRIP, the HEIRSP and the ASB 401(k) Plan. Of the "Total number of shares purchased," 154,786 of the 183,136 shares were purchased for the DRIP; 23,287 of the 183,136 shares were purchased for the HEIRSP; and the remaining of the 183,136 shares were purchased for the ASB 401(k) Plan. The repurchased shares were issued for the accounts of the participants under registration statements registering the shares issued under these plans.

Hawaiian Electric:

Since a corporate restructuring on July 1, 1983, all the common stock of Hawaiian Electric has been held solely by its parent, HEI, and is not publicly traded. Accordingly, information required with respect to "Market information" and "holders" is not applicable to Hawaiian Electric.

The dividends declared and paid on Hawaiian Electric's common stock for the quarters of 2019 and 2018 were as follows:

Quarters ended (in thousands)	2019	2018
March 31	\$ 25,313	\$ 25,826
June 30	25,313	25,826
September 30	25,313	25,827
December 31	25,313	25,826

Also, see "Liquidity and capital resources" in HEI's MD&A.

See the discussion of regulatory and other restrictions on dividends or other distributions in Note 14 of the Consolidated Financial Statements.

ITEM 6. SELECTED FINANCIAL DATA

HEI:

Selected Financial Data

Hawaiian Electric Industries, Inc. and Subsidiaries

Years ended December 31	2019	2018	2017	2016	2015
(dollars in thousands, except per share amounts)					
Results of operations					
Revenues	\$ 2,874,601	\$ 2,860,849	\$ 2,555,625	\$ 2,380,654	\$ 2,602,982
Net income for common stock	217,882	201,774	165,297	248,256	159,877
Basic earnings per common share	2.00	1.85	1.52	2.30	1.50
Diluted earnings per common share	1.99	1.85	1.52	2.29	1.50
Return on average common equity	9.8%	9.5%	7.9%	12.4%	8.6%
Financial position *					
Total assets	\$ 13,745,251	\$ 13,104,051	\$ 12,534,160	\$ 11,881,981	\$ 11,275,931
Deposit liabilities	6,271,902	6,158,852	5,890,597	5,548,929	5,025,254
Other bank borrowings	115,110	110,040	190,859	192,618	328,582
Long-term debt, net—other than bank	1,964,365	1,879,641	1,683,797	1,619,019	1,578,368
Preferred stock of subsidiaries – not subject to mandatory redemption	34,293	34,293	34,293	34,293	34,293
Common stock equity	2,280,260	2,162,280	2,097,386	2,066,753	1,927,640
Common equity ratio	51%	52%	53%	56%	53%
Common stock					
Book value per common share *	\$ 20.92	\$ 19.86	\$ 19.28	\$ 19.03	\$ 17.94
Dividends declared per common share	1.28	1.24	1.24	1.24	1.24
Dividend payout ratio	64%	67%	82%	54%	82%
Market price to book value per common share *	224%	184%	188%	174%	161%
Price earnings ratio **	23.5x	19.8x	23.8x	14.4x	19.3x
Common shares outstanding (thousands) *	108,973	108,879	108,788	108,583	107,460
Weighted-average-basic (thousands)	108,949	108,855	108,749	108,102	106,418
Shareholders ***	24,766	25,369	26,064	26,831	27,927
Employees *	3,841	3,898	3,880	3,796	3,918

* At December 31.

** Calculated using December 31 market price per common share divided by basic earnings per common share.

*** At December 31. Represents registered shareholders plus participants in the HEI Dividend Reinvestment and Stock Purchase Plan (DRIP) who are not registered shareholders. As of February 13, 2020, HEI had 5,564 registered shareholders (i.e., holders of record of HEI common stock), 22,060 DRIP participants and total shareholders of 24,651.

2019 results includes \$10.8 million of gains (\$7.9 million after-tax at ASB's statutory tax rate of 26.8%) on sales of real estate associated with ASB's transition to its new campus. The gains were partially offset by \$3.2 million (\$2.4 million after-tax at ASB's statutory tax rate of 26.8%) of exit costs associated with the move to the new campus. 2018 and 2019 results include the impact of the lower federal corporate tax rate as a result of the Tax Act. 2018 also reflects certain tax return adjustments relating to the benefit associated with additional tax deductions taken in the Company's 2017 tax returns in conjunction with the rate differential provided in the Tax Act. The lower tax rate in 2018 and 2019 was partially offset by other Tax Act changes, including the non-deductibility of excess executive compensation and various fringe benefit costs. 2017 results include a \$14 million adjustment, primarily to reduce deferred tax net asset balances (not accounted for under Utility regulatory ratemaking) to reflect the lower rates enacted by the Tax Act and \$20 million (\$11 million, net of tax impacts) lower in RAM revenues than prior year due to the expiration of the 2013 settlement agreement that allowed the accrual of RAM revenues on January 1 (vs. June 1) for years 2015 to 2016 at Hawaiian Electric. Results for 2016 and 2015 include merger- and spin-off-related income/(expenses), net of tax impacts, of \$60 million and (\$16 million), respectively.

Hawaiian Electric:

Selected Financial Data

Hawaiian Electric Company, Inc. and Subsidiaries

Years ended December 31 (in thousands)	2019	2018	2017	2016	2015
Results of operations					
Revenues	\$ 2,545,942	\$ 2,546,525	\$ 2,257,566	\$ 2,094,368	\$ 2,335,166
Net income for common stock	156,840	143,653	119,951	142,317	135,714
Financial position *					
Utility plant	\$ 7,485,178	\$ 7,092,483	\$ 6,717,311	\$ 6,327,102	\$ 6,037,712
Accumulated depreciation	(2,690,157)	(2,577,342)	(2,476,352)	(2,369,282)	(2,266,004)
Net utility plant	\$ 4,795,021	\$ 4,515,141	\$ 4,240,959	\$ 3,957,820	\$ 3,771,708
Total assets	\$ 6,388,682	\$ 5,967,503	\$ 5,630,613	\$ 5,431,903	\$ 5,166,123
Current portion of long-term debt	\$ 95,953	\$ —	\$ 49,963	\$ —	\$ —
Short-term borrowings from non-affiliates	88,987	25,000	4,999	—	—
Long-term debt, net	1,401,714	1,418,802	1,318,516	1,319,260	1,278,702
Common stock equity	2,047,352	1,957,641	1,845,283	1,799,787	1,728,325
Cumulative preferred stock-not subject to mandatory redemption	34,293	34,293	34,293	34,293	34,293
Capital structure	\$ 3,668,299	\$ 3,435,736	\$ 3,253,054	\$ 3,153,340	\$ 3,041,320
Capital structure ratios (%)					
Debt (short-term borrowings, and long-term debt, net, including current portion)	43.3	42.0	42.2	41.8	42.1
Cumulative preferred stock	0.9	1.0	1.1	1.1	1.1
Common stock equity	55.8	57.0	56.7	57.1	56.8

* At December 31.

HEI owns all of Hawaiian Electric's common stock. Therefore, per share data is not meaningful.

2018 and 2019 results include the impact of the lower federal corporate tax rate as a result of the Tax Act, the benefits of which were returned to customers through a reduction in revenue requirements. 2018 also reflects certain tax return adjustments relating to the benefit associated with additional tax deductions taken in the Company's 2017 tax returns in conjunction with the rate differential provided in the Tax Act. The lower tax rate in 2018 and 2019 was partially offset by other Tax Act changes, including the non-deductibility of excess executive compensation and various fringe benefit costs. 2017 results include \$20 million (\$11 million, net of tax impacts) lower in RAM revenues than prior year due to: 1) the expiration of the 2013 settlement agreement that allowed the accrual of RAM revenues on January 1 (vs. June 1) for years 2015 to 2016 at Hawaiian Electric, and 2) a \$9 million adjustment, primarily to reduce deferred tax net asset balances (not accounted for under regulatory ratemaking) to reflect the lower rates enacted by Tax Act.

See "Cautionary Note Regarding Forward-Looking Statements" above, the "electric utility" sections and all information related to, or including, Hawaiian Electric and its subsidiaries in HEI's MD&A and "Commitments and contingencies" in Note 3 of the Consolidated Financial Statements for discussions of certain contingencies that could adversely affect future results of operations, financial condition and cash flows.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

HEI and Hawaiian Electric (in the case of Hawaiian Electric, only the information related to Hawaiian Electric and its subsidiaries):

The following discussion should be read in conjunction with the Consolidated Financial Statements and the related Notes that appear in Item 8 of this report. For information on factors that may cause HEI's and Hawaiian Electric's actual future results to differ from those currently contemplated by the relevant forward-looking statements, see "Cautionary Note Regarding Forward-Looking Statements" at the front of this report and "Risk Factors" in Item 1A. The general discussion of HEI's consolidated results should be read in conjunction with the Electric utility and Bank segment discussions that follow.

HEI Consolidated

Executive overview and strategy. HEI is a holding company with operations primarily focused on Hawaii's electric utility and banking sectors. In 2017, HEI formed Pacific Current to make investments in non-regulated renewable energy and sustainable infrastructure projects. HEI has three reportable segments—Electric utility, Bank, and Other.

Electric utility. Hawaiian Electric, Hawaii Electric Light and Maui Electric (Utilities) are regulated operating electric public utilities engaged in the production, purchase, transmission, distribution and sale of electricity on the islands of Oahu; Hawaii; and Maui, Lanai and Molokai, respectively.

Bank. ASB is a full-service community bank serving both consumer and commercial customers in the State of Hawaii and has 49 branches on the islands of Oahu (34), Maui (6), Hawaii (5), Kauai (3), and Molokai (1).

Other. The Other segment comprises HEI's corporate-level operating, general and administrative expenses and the results of Pacific Current.

A major focus of HEI's financial strategy is to grow core earnings/profitability of its Utilities and Bank in a controlled risk manner and improve operating, capital and tax efficiencies in order to support its dividend and deliver shareholder value. Together, HEI's unique combination of power and financial services companies provides the Company with a strong balance sheet and the financial resources to invest in the strategic growth of its subsidiaries, while providing an attractive dividend for investors.

Environmental, social and governance risks and opportunities. Environmental, social and governance (ESG) considerations have long been an integral part of HEI's strategy to be a "catalyst for a better Hawaii" for the benefit of all stakeholders. The Company firmly believes that effective management of its ESG risks and opportunities creates a strategic business advantage; improves the lives of our employees, through focus on employee health, wellness, safety, empowerment and increased engagement; improves the sustainability, well-being and resilience of our communities, the state and the environment; and ultimately leads to sustained long-term value creation for our investors.

The HEI Board of Directors is responsible for the oversight of the Company's enterprise risk management (ERM) programs, which are designed to address all material risks and opportunities, including ESG considerations. The Board of Directors has delegated the day-to-day responsibility to execute on these action plans to management. The Company believes ESG considerations are embedded in our daily actions and drive how we engage with our employees, communities, and shareholders.

The Company intends to leverage the frameworks developed by the Task Force on Climate-related Financial Disclosure (TCFD) and the Sustainability Accounting Standards Board (SASB) to communicate our approach and progress on ESG matters in future filings.

We are committed to achieving a renewable, sustainable energy future, providing leadership in corporate social responsibility, and adhering to governance best practices.

To learn more about our ESG initiatives please visit www.hawaiianelectric.com/clean-energy-hawaii/sustainability-report and www.asbhawaii.com/corporate-social-responsibility. Later this year, HEI will be issuing a consolidated sustainability report, which will be posted on our website at www.hei.com. Our Internet website and the information contained therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K.

HEI consolidated results of operations.

(dollars in millions, except per share amounts)	2019	% change	2018	% change	2017
Revenues	\$ 2,875	—	\$ 2,861	12	\$ 2,556
Operating income	349	5	333	(4)	346
Net income for common stock	218	8	202	22	165
Net income (loss) by segment:					
Electric utility	\$ 157	9	\$ 144	20	\$ 120
Bank	89	8	83	23	67
Other	(28)	(15)	(24)	(13)	(22)
Net income for common stock	\$ 218	8	\$ 202	22	\$ 165
Basic earnings per share	\$ 2.00	8	\$ 1.85	22	\$ 1.52
Diluted earnings per share	\$ 1.99	8	\$ 1.85	22	\$ 1.52
Dividends per share	\$ 1.28	3	\$ 1.24	—	\$ 1.24
Weighted-average number of common shares outstanding (millions)	108.9	—	108.9	—	108.7
Dividend payout ratio	64%		67%		82%

In 2019, net income for HEI common stock increased 8% to \$218 million (\$1.99 diluted earnings per share), compared to \$202 million (\$1.85 diluted earnings per share) in 2018, due to \$13 million and \$6 million higher net income at the Utilities and ASB, respectively, partially offset by \$4 million higher net loss at the “other” segment. The increase in the Utilities’ 2019 net income compared to 2018 was principally due to higher RAM and rate increases and higher MPIR revenues, partially offset by higher O&M expenses and depreciation. The increase in ASB’s net income was primarily due to gains on sale of properties exited in connection with ASB’s move to its new campus and higher net interest income as a result of an increase in earning asset balances and yields, partially offset by higher provision for loan losses and higher compensation and occupancy expenses. See “Electric utility,” “Bank,” and “HEI Consolidated—Other segment” sections below for additional information on year-to-year fluctuations.

The Company’s effective tax rate (combined federal and state income tax rates) was lower at 19% in 2019, compared to 20% in 2018, primarily due to tax benefits of bank owned life insurance and increases in tax credit investments.

For a discussion of 2017 results, please refer to the “HEI consolidated results of operations” section in Item 7, “Management Discussion and Analysis of Financial Condition and Results of Operations—HEI Consolidated,” in the Company’s 2018 Form 10-K.

Other segment. The “other” business segment (loss)/income includes results of the stand-alone corporate operations of HEI, ASB Hawaii, Inc. (ASB Hawaii), and Pacific Current, LLC.

(in millions)	2019	2018	Increase (decrease)	Primary reason(s)
Operating loss ¹	\$ (17)	\$ (16)	\$ (1)	Lower Pacific Current operating income (\$3 million in 2019 vs \$4 million in 2018) due to higher Pacific Current administrative and general expenses. HEI corporate expenses were comparable year-over-year (\$19 million in 2019 and 2018).
Interest expense & other	(21)	(16)	(5)	Increase due to higher average borrowings and higher average interest rates. Average borrowings increased due primarily to \$100 million tranche B private placement drawn in December 2018 to fund a contribution of utility equity.
Income tax benefit	10	8	2	Higher tax benefit due to an increase in pretax losses
Net loss	<u>\$ (28)</u>	<u>\$ (24)</u>	<u>\$ (4)</u>	

¹ Hamakua Energy’s sales to Hawaii Electric Light (a regulated affiliate) are eliminated in consolidation.

Economic conditions. The statistical data in this section is from public third-party sources that management believes to be reliable (e.g., Department of Business, Economic Development and Tourism (DBEDT), University of Hawaii Economic Research Organization, U.S. Bureau of Labor Statistics, Department of Labor and Industrial Relations (DLIR), Hawaii Tourism Authority (HTA), Honolulu Board of REALTORS® and national and local newspapers).

Hawaii’s tourism industry, a significant driver of Hawaii’s economy, ended 2019 with growth in both visitor spending and arrivals. Visitor expenditures increased 1.4% and arrivals increased 5.4% compared to 2018, although the average length of

stay decreased by -2.3% over 2018. The Hawaii Tourism Authority reported an increase in total trans-Pacific air seat capacity of 2.9% in 2019 compared 2018.

Hawaii's unemployment rate remained steady at 2.6% in December 2019, which was the same as the 2.6% rate a year ago in December 2018 and lower than the national unemployment rate of 3.5%.

Hawaii real estate activity, as indicated by the home resale market, experienced growth in median sales prices for condominiums and decrease in median sale prices for single family homes in 2019. Median sales prices for single family residential homes were lower by 0.1% and were higher by 1.2% for condominiums on Oahu through December 2019 over the same time period in 2018. The number of closed sales for single family residential homes was up by 3.9% and for condominiums was down 4.8% through December of 2019 compared to same time period of 2018.

Hawaii's petroleum product prices reflect supply and demand in the Asia-Pacific region and the price of crude oil in international markets. Following price increases throughout the first half of 2019, the price of crude oil has dropped slightly and remained fairly stable in the second half of 2019.

At its December 2019 meeting, the Federal Open Market Committee (FOMC) decided to maintain the federal funds rate target range of 1.5% to 1.75% to encourage maximum employment and price stability. The FOMC will continue to will continue to monitor the implications of incoming information for the economic outlook, including global developments and muted inflation pressures.

Hawaii's economy slowed toward the end of 2019 as the population continued to decline, which impacted nonfarm payroll growth. However, the construction industry continues to perform well and visitor arrivals continue to increase, which is expected to help support the economy in maintaining a positive, but subdued, growth path. It is unknown at this time what effects, if any, the coronavirus COVID-19 will have on Hawaii's visitor industry or its economy.

Liquidity and capital resources. As a result of the Tax Act, utility property is no longer eligible for bonus depreciation. Consequently, the initial cash requirement for future capital projects will generally increase approximately 10% because of the loss of the immediate tax benefit from bonus depreciation. The Company believes that its ability to generate cash, both internally from electric utility and banking operations and externally from issuances of equity and debt securities, commercial paper and bank borrowings, is adequate to maintain sufficient liquidity to fund its contractual obligations and commercial commitments, its forecasted capital expenditures and investments, its expected retirement benefit plan contributions and other cash requirements for the foreseeable future.

The consolidated capital structure of HEI (excluding deposit liabilities and other bank borrowings) was as follows:

December 31	2019		2018	
(dollars in millions)				
Short-term borrowings—other than bank	\$ 186	4%	\$ 74	2%
Long-term debt, net—other than bank	1,964	44	1,880	45
Preferred stock of subsidiaries	34	1	34	1
Common stock equity	2,280	51	2,162	52
	\$ 4,464	100%	\$ 4,150	100%

HEI's commercial paper borrowings and line of credit facility were as follows:

(in millions)	Year ended December 31, 2019		
	Average balance	End-of-period balance	December 31, 2018
Commercial paper	\$ 41	\$ 97	\$ 49
Line of credit draws	—	—	—
Undrawn capacity under HEI's line of credit facility	—	150	150

Note: This table does not include Hawaiian Electric's separate commercial paper issuances and line of credit facilities and draws, which are disclosed below under "Electric utility—Liquidity and capital resources" below. The maximum amount of HEI's short-term borrowings in 2019 was \$102 million.

HEI utilizes short-term debt, typically commercial paper, to support normal operations, to refinance commercial paper, to retire long-term debt, to pay dividends and for other temporary requirements, including short-term financing needs of its subsidiaries. HEI also periodically makes short-term loans to Hawaiian Electric to meet Hawaiian Electric's cash requirements, including the funding of loans by Hawaiian Electric to Hawaii Electric Light and Maui Electric, but no such short-term loans to Hawaiian Electric were outstanding as of December 31, 2019. HEI periodically utilizes long-term debt, historically unsecured

indebtedness, to fund investments in and loans to its subsidiaries to support their capital improvement or other requirements, to repay long-term and short-term indebtedness and for other corporate purposes. See Notes 5 and 6 of the Consolidated Financial Statements for a brief description of the Company’s loans.

HEI has a \$150 million line of credit facility with no amounts outstanding as of December 31, 2019. See Note 5 of the Consolidated Financial Statements.

The rating of HEI’s commercial paper and debt securities could significantly impact the ability of HEI to sell its commercial paper and issue debt securities and/or the cost of such debt. As of February 20, 2020, the Fitch, Moody’s and S&P ratings of HEI were as follows:

	Fitch	Moody’s	S&P**
Long-term issuer default, long-term and issuer credit, respectively	BBB	WR*	BBB-
Commercial paper	F3	P-3	A-3
Outlook	Stable	Positive	Positive

* Moody’s long-term debt rating was withdrawn because HEI does not currently have any outstanding, publicly traded debt. Moody’s continues to rate Hawaiian Electric’s long-term debt. See ‘Electric utility–Liquidity and capital resources’ below.

** On February 20, 2020, S&P revised HEI’s outlook to positive and affirmed HEI’s issuer credit and commercial paper ratings.

Note: The above ratings reflect only the view, at the time the ratings are issued or affirmed, of the applicable rating agency, from whom an explanation of the significance of such ratings may be obtained. Such ratings are not recommendations to buy, sell or hold any securities; such ratings may be subject to revision or withdrawal at any time by the rating agencies; and each rating should be evaluated independently of any other rating.

There were no new issuances of common stock through the Hawaiian Electric Industries, Inc. Dividend Reinvestment and Stock Purchase Plan (DRIP), Hawaiian Electric Industries Retirement Savings Plan (HEIRSP) or the ASB 401(k) Plan in 2019, 2018, or 2017 and HEI satisfied the share purchase requirements of the DRIP, HEIRSP and ASB 401(k) Plan through open market purchases of its common stock.

Operating activities provided net cash of \$512 million in 2019 and \$499 million in 2018. Investing activities used net cash of \$542 million in 2019 and \$792 million in 2018. In 2019, net cash used in investing activities was primarily due to capital expenditures, net increase in loans held for investment, purchases of available-for-sale and held-to-maturity investment securities and stock from Federal Home Loan Bank and contributions to low-income housing investments, partly offset by receipt of repayments from available-for-sale and held-to-maturity investment securities, redemption of stock from Federal Home Loan Bank and proceeds from sale of available-for-sale investment securities and real estate held for sale. In 2018, net cash used in investing activities was primarily due to capital expenditures, purchases of available-for-sale investment securities, net increase in loans held for investment, purchases of held-to-maturity investment securities, purchase of stock from Federal Home Loan Bank and contributions to low-income housing investments, partly offset by receipt of repayments from available-for-sale investment securities, proceeds from the sale of commercial loans, redemption of stock from Federal Home Loan Bank and repayments from held-to-maturity investment securities.

Financing activities provided net cash of \$88 million in 2019 and \$200 million in 2018. In 2019, net cash provided by financing activities included proceeds from issuance of long-term debt and short-term debt, net increases in deposits and short-term borrowings, partly offset by payment of common and preferred stock dividends, repayment of long-term debt and funds transferred for redemption of long-term debt and repayment of short-term debt. In 2018, net cash provided by financing activities included proceeds from issuance of long-term debt, net increases in deposits and retail repurchase agreements, partly offset by payment of common and preferred stock dividends, long-term debt maturities and net decreases in short-term debt and other bank borrowings.

For a discussion of 2017 operating, investing and financing activities, please refer to the “Liquidity and capital resources” section in Item 7, “Management Discussion and Analysis of Financial Condition and Results of Operations—HEI Consolidated,” in the Company’s 2018 Form 10-K.

Other than capital contributions from their parent company, intercompany services (and related intercompany payables and receivables), Hawaiian Electric’s periodic short-term borrowings from HEI (and related interest) and the payment of dividends to HEI, the electric utility and bank segments are largely autonomous in their operating, investing and financing activities. (See the electric utility and bank segments’ discussions of their cash flows in their respective “Liquidity and capital resources” sections below.) During 2019, Hawaiian Electric and ASB (through ASB Hawaii) paid cash dividends to HEI of \$101 million and \$56 million, respectively.

A portion of the net assets of Hawaiian Electric and ASB is not available for transfer to HEI in the form of dividends, loans or advances without regulatory approval. In the absence of an unexpected material adverse change in the financial condition of the electric utilities or ASB, such restrictions are not expected to significantly affect the operations of HEI, its ability to pay

dividends on its common stock or its ability to meet its debt or other cash obligations. See Note 14 of the Consolidated Financial Statements.

Forecasted HEI consolidated “net cash used in investing activities” (excluding “investing” cash flows from ASB) for 2020 through 2022 consists primarily of the net capital expenditures of the Utilities, estimated to range from \$1.1 billion to \$1.3 billion over the next three years. In addition to the funds required for the Utilities’ construction programs and debt maturities (see “Electric utility—Liquidity and capital resources” below), approximately \$50 million will be required in 2021 and \$150 million in 2022 to repay HEI-issued private placement notes maturing in March 2021 and November 2022, which are expected to be repaid with the proceeds from the issuance of commercial paper, bank borrowings, other medium- or long-term debt, common stock and/or dividends from subsidiaries. Additional debt and/or equity financing may be utilized to invest in the Utilities, bank or Pacific Current; to pay down commercial paper or other short-term borrowings; or to fund unanticipated expenditures not included in the 2020 through 2022 forecast, such as increases in the costs of, or an acceleration of, the construction of capital projects of the Utilities or unanticipated utility capital expenditures. In addition, existing debt may be refinanced prior to maturity with additional debt or equity financing (or both).

Selected contractual obligations and commitments. Information about payments under the specified contractual obligations and commercial commitments of HEI and its subsidiaries was as follows:

December 31, 2019

(in millions)	Less than 1 year	1-3 years	3-5 years	More than 5 years	Total
Contractual obligations					
Investment in qualifying affordable housing projects	\$ 13	\$ 9	\$ —	\$ 1	\$ 23
Time certificates	503	200	64	3	770
Short-term borrowings	186	—	—	—	186
Other bank borrowings	115	—	—	—	115
Long-term debt	102	267	159	1,446	1,974
Interest on CDs, other bank borrowings, short-term loan and long-term debt	86	158	130	718	1,092
Operating leases					
PPAs classified as leases	63	105	—	—	168
Other operating leases	12	16	9	9	46
Service bureau contract, maintenance agreements and other	20	18	4	1	43
Hawaiian Electric open purchase order obligations ¹	54	19	1	—	74
Hawaiian Electric fuel oil purchase obligations (estimate based on fuel oil price at December 31)	7	15	—	—	22
Hawaiian Electric power purchase—minimum fixed capacity charges not classified as leases	51	76	76	241	444
Total (estimated)	\$ 1,212	\$ 885	\$ 443	\$ 2,419	\$ 4,959

¹ Includes contractual obligations and commitments for capital expenditures and expense amounts.

The table above does not include other categories of obligations and commitments, such as deferred taxes, trade payables, amounts that will become payable in future periods under collective bargaining and other employment agreements and employee benefit plans, and potential refunds of amounts collected from ratepayers (e.g., under the earnings sharing mechanism). As of December 31, 2019, the fair value of the assets held in trusts to satisfy the obligations of the Company’s retirement benefit plans did not exceed the retirement benefit plans’ benefit obligation. Minimum funding requirements for retirement benefit plans have not been included in the tables above; however, see Note 10 of the Consolidated Financial Statements for 2020 estimated contributions. There were no material uncertain tax positions as of December 31, 2019.

See Note 3 of the Consolidated Financial Statements for a discussion of fuel and power purchase commitments. See Note 4 of the Consolidated Financial Statements for a further discussion of ASB’s commitments.

The Company adopted ASU No. 2016-02 on January 1, 2019, which had a material effect on its balance sheet as of January 1, 2019 due to the recognition of lease liabilities and right-of-use assets. See Note 1, “Summary of Significant Accounting Policies—Recent accounting pronouncements—Leases,” and Note 8, “Leases,” of the Consolidated Financial Statements.

Off-balance sheet arrangements. Although the Company and the Utilities have off-balance sheet arrangements, management has determined that it has no off-balance sheet arrangements that either have, or are reasonably likely to have, a current or future effect on the Company’s and the Utilities’ financial condition, changes in financial condition, revenues or expenses,

results of operations, liquidity, capital expenditures or capital resources that are material to investors, including the following types of off-balance sheet arrangements:

1. obligations under guarantee contracts,
2. retained or contingent interests in assets transferred to an unconsolidated entity or similar arrangements that serve as credit, liquidity or market risk support to that entity for such assets,
3. obligations under derivative instruments, and
4. obligations under a material variable interest held by the Company or the Utilities in an unconsolidated entity that provides financing, liquidity, market risk or credit risk support to the Company or the Utilities, or engages in leasing, hedging or research and development services with the Company or the Utilities.

Material estimates and critical accounting policies. In preparing financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ significantly from those estimates.

Material estimates that are particularly susceptible to significant change include the amounts reported for pension and other postretirement benefit obligations; contingencies and litigation; income taxes; regulatory assets and liabilities; electric utility unbilled revenues; allowance for loan losses; fair value; and asset retirement obligations. Management considers an accounting estimate to be material if it requires assumptions to be made that were uncertain at the time the estimate was made and changes in the assumptions selected could have a material impact on the estimate and on the Company’s results of operations or financial condition.

In accordance with SEC Release No. 33-8040, “Cautionary Advice Regarding Disclosure About Critical Accounting Policies,” management has identified the accounting policies it believes to be the most critical to the Company’s financial statements—that is, management believes that the policies discussed below are both the most important to the portrayal of the Company’s results of operations and financial condition, and currently require management’s most difficult, subjective or complex judgments. The policies affecting both of the Company’s two principal segments are discussed below and the policies affecting just one segment are discussed in the respective segment’s section of “Material estimates and critical accounting policies.” Management has reviewed the material estimates and critical accounting policies with the HEI Audit & Risk Committee and, as applicable, the Hawaiian Electric Audit & Risk Committee.

For additional discussion of the Company’s accounting policies, see Note 1 of the Consolidated Financial Statements and for additional discussion of material estimates and critical accounting policies, see the electric utility and bank segment discussions below under the same heading.

Pension and other postretirement benefits obligations. The Company’s reported costs of providing retirement benefits are dependent upon numerous factors resulting from actual plan experience and assumptions about future experience. For example, retirement benefits costs are impacted by actual employee demographics (including age and compensation levels), the level of contributions to the plans, earnings and realized and unrealized gains and losses on plan assets, and changes made to the provisions of the plans. Costs may also be significantly affected by changes in key actuarial assumptions, including the expected return on plan assets, the discount rate and mortality. The Company’s accounting for retirement benefits under the plans in which the employees of the Utilities participate is also adjusted to account for the impact of decisions by the PUC. Changes in obligations associated with the factors noted above may not be immediately recognized as costs on the income statement, but generally are recognized in future years over the remaining average service period of plan participants.

Based on various assumptions in Note 10 of the Consolidated Financial Statements, sensitivities of the projected benefit obligation (PBO) and accumulated postretirement benefit obligation (APBO) as of December 31, 2019, associated with a change in certain actuarial assumptions, were as follows and constitute “forward-looking statements”:

Actuarial assumption	Change in assumption in basis points	Impact on HEI Consolidated PBO or APBO	Impact on Consolidated Hawaiian Electric PBO or APBO
(dollars in millions)			
Pension benefits			
Discount rate	+/- 50	\$(177)/\$202	\$(167)/\$190
Other benefits			
Discount rate	+/- 50	\$(14)/\$15	\$(13)/\$15

Also, see Notes 1 and 10 of the Consolidated Financial Statements.

Contingencies and litigation. The Company is subject to proceedings (including PUC proceedings), lawsuits and other claims. Management assesses the likelihood of any adverse judgments in or outcomes of these matters as well as potential ranges of probable losses, including costs of investigation. A determination of the amount of reserves required, if any, for these contingencies is based on an analysis of each individual case or proceeding often with the assistance of outside counsel. The required reserves may change in the future due to new developments in each matter or changes in approach in dealing with these matters, such as a change in settlement strategy.

In general, environmental contamination treatment costs are charged to expense, unless it is probable that the PUC would allow such costs to be recovered through future rates, in which case such costs would be capitalized as regulatory assets. Also, environmental costs are capitalized if the costs extend the life, increase the capacity, or improve the safety or efficiency of property; the costs mitigate or prevent future environmental contamination; or the costs are incurred in preparing the property for sale.

See Notes 1, 3 and 4 of the Consolidated Financial Statements.

Income taxes. Deferred income tax assets and liabilities are established for the temporary differences between the financial reporting bases and the tax bases of the Company's assets and liabilities using tax rates expected to be in effect when such deferred tax assets or liabilities are realized or settled. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible.

Management evaluates its potential exposures from tax positions taken that have or could be challenged by taxing authorities. These potential exposures result because taxing authorities may take positions that differ from those taken by management in the interpretation and application of statutes, regulations and rules. Management considers the possibility of alternative outcomes based upon past experience, previous actions by taxing authorities (e.g., actions taken in other jurisdictions) and advice from its tax advisors. Management believes that the Company's provision for tax contingencies is reasonable. However, the ultimate resolution of tax treatments disputed by governmental authorities may adversely affect the Company's current and deferred income tax amounts.

See Note 12 of the Consolidated Financial Statements.

Following are discussions of the electric utility and bank segments. Additional segment information is shown in Note 2 of the Consolidated Financial Statements. The discussion concerning Hawaiian Electric should be read in conjunction with its consolidated financial statements and accompanying notes.

Electric utility

Executive overview and strategy. The Utilities provide electricity on all the principal islands in the state, other than Kauai, to approximately 95% of the state's population, and operate five separate grids. The Utilities' mission is to provide innovative energy leadership for Hawaii, to meet the needs and expectations of customers and communities, and to empower them with affordable, reliable and clean energy. The goal is to create a modern, resilient, flexible, and dynamic electric grid that enables an optimal mix of distributed energy resources, such as private rooftop solar, demand response, and grid-scale resources to enable the creation of smart, sustainable, resilient communities and achieve the statutory goal of 100% renewable energy by 2045.

Transition to renewable energy. The Utilities are fully committed to a 100 percent renewable energy future for Hawaii and are partnering with the State of Hawaii in achieving its Renewable Portfolio Standard goal of 100% renewable energy by 2045. Hawaii's RPS law requires electric utilities to meet an RPS of 30%, 40%, 70% and 100% by December 31, 2020, 2030, 2040 and 2045, respectively.

The Utilities have made significant progress on the path to clean energy and have been successful in adding significant amounts of renewable energy resources to their electric systems and exceeded the 2015 RPS goal two years early. The Utilities' RPS for 2019 was approximately 28% and the Utilities are on track to achieve the 2020 RPS goal of 30%. The Utilities will continue to actively procure additional renewable energy post-2020 and expect to meet or exceed the next statutory RPS goal of 40% in advance of the 2030 compliance year. (See "Developments in renewable energy efforts" below). Also, since the Hawaii Clean Energy initiative was launched in 2008, the Utilities have continued to reduce the fuel to produce electricity. The fuel consumption in 2019 was approximately 82.5 million gallons less than that consumed in 2008. The combination of replacing fossil fuel generation with renewables, customer conservation efforts, and energy efficiency actions has allowed the Utilities to achieve its 2020 greenhouse gas emissions reduction target of 16% (compared to a 2010 baseline) ahead of schedule in 2014. As of the end of 2019, the Utilities have achieved a 18% decrease in greenhouse gas emissions compared to 2010.

If the Utilities are not successful in meeting the RPS targets as mandated by law, the PUC could assess a penalty of \$20 for every MWh that an electric utility is deficient. Based on the level of electricity sales in 2019, a 1% shortfall in meeting the 2020 RPS requirement of 30% would translate into a penalty of approximately \$1.75 million. The PUC has the discretion to reduce the penalty due to events or circumstances that are outside an electric utility's reasonable control, to the extent the event or circumstance could not be reasonably foreseen and ameliorated. In addition to penalties under the RPS law, failure to meet the

mandated RPS targets would be expected to result in a higher proportion of fossil fuel-based generation than if the RPS target had been achieved, which in turn would be expected to subject Hawaiian Electric and Maui Electric to limited commodity fossil fuel price exposure under a fuel cost risk-sharing mechanism. Currently, the fuel cost risk-sharing mechanism apportions 2% of the fuel cost risk to the two utilities (and 98% to ratepayers) and has a maximum exposure (or benefit) of \$3.1 million.

The Utilities are fully aligned with, and supportive of, state policy to achieve a 100% renewable energy future and have made significant progress in its transformation. This alignment with state policy is reflected in management compensation programs and the Utilities' long-range plans, which include aspirational targets in order to catalyze action and accelerate the transition away from fossil fuels at a pace more rapid than dictated by current law. The long-range plans, including aspirational targets, serve as guiding principles in the Utilities' continued transformation, and are updated regularly to adapt to changing technology, costs and other factors. While there is no financial penalty for failure to achieve the Utilities' long-range aspirational objectives, the Utilities recognize that there is an environmental and social cost from the continued use of fossil fuels.

The state's policy is supported by the regulatory framework and includes a number of mechanisms designed to provide utility financial stability during the transition toward the state's 100% renewable energy future. Under the sales decoupling mechanism, the Utilities are allowed to recover from customers, target test year revenues, independent of the level of kWh sales, which have generally declined (with the exception of 2019), as privately-owned distributed energy resources have been added to the grid and energy efficiency measures have been put into place. Other regulatory mechanisms reduce regulatory lag, such as the rate adjustment mechanism to provide revenues for escalation in certain O&M expenses and rate base changes between rate cases, and the major project interim recovery mechanism, which allow the Utilities to recover and earn on certain approved major capital projects placed into service in between rate cases. See "Decoupling" in Note 3 of the Consolidated Financial Statements.

Integrated Grid Planning. Achieving 100% renewable energy will require modernizing the grid through coordinated energy system planning in partnership with local communities and stakeholders. To accomplish this, the Utilities filed its Integrated Grid Planning (IGP) Report with the PUC on March 1, 2018, which provides an innovative systems approach to energy planning intended to yield the most cost-effective renewable energy pathways that incorporates customer and stakeholder input.

The PUC opened a docket to review the IGP process that the Utilities had proposed, and the resulting plans. In March 2019, the PUC accepted the Utilities' IGP Work plan submitted on December 14, 2018, which describes the timing and scope of major activities that will occur in the IGP process. The IGP utilizes an inclusive and transparent Stakeholder Engagement model to provide an avenue for interested parties to engage with the Companies and contribute meaningful input throughout the IGP process. The IGP Stakeholder Council, Technical Advisor Panel and Working groups have been established and meet regularly to provide feedback and input on specific issues and process steps in the IGP.

Demand response programs. Pursuant to PUC orders, the Utilities are developing an integrated Demand Response (DR) Portfolio Plan that will enhance system operations and reduce costs to customers. The reduction in cost for the customer will take the form of either rates or incentive-based programs that will compensate customers for their participation individually, or by way of engagements with turnkey service providers that contract with the Utilities to aggregate and deliver various grid services on behalf of participating customers and their distributed assets.

In October 2017, the PUC approved the Utilities' request made in December 2015 to defer and recover certain computer software and software development costs for a DR Management System in an amount not to exceed \$3.9 million, exclusive of allowance for funds used during construction, through the Renewable Energy Infrastructure Program (REIP) Surcharge. The Utilities placed the DR Management System in service in the first quarter of 2019. On October 30, 2019, the Utilities filed the final cost report, reflecting total project costs of \$3.7 million. On February 27, 2020, the PUC approved the Utilities' request to recover deferred and other related costs of DR Management System through REIP Surcharge effective March 1, 2020 until such costs are included in determining base rates.

On January 25, 2018, the PUC approved the Utilities' revised DR Portfolio tariff structure. The PUC supported the approach of working with aggregators to implement the DR portfolio. In 2019, the Utilities signed a multi-year Grid Services Purchase Agreement with a third party aggregator. These contracts pay service providers to aggregate grid-supporting capabilities from customer-sited Distributed Energy Resources. The first of these five-year contracts in a not-to exceed amount of \$22 million has been executed (PUC approval obtained on August 9, 2019) and is expected to not only deliver benefit through efficient grid operations but also avoided fuel costs over that 5-year period. The Utilities will select the next set of aggregators in the first quarter of 2020. As the PUC considers Performance-based Regulation, demonstrated savings resulting from these contracts could result in shared savings for the Utilities. This complements the Utilities' transformation and supports customer choice.

Grid modernization. The overall goal of the Grid Modernization Strategy is to deploy modern grid investments at an appropriate priority, sequence and pace to cost-effectively maximize flexibility, minimize the risk of redundancy and

obsolescence, deliver customer benefits and enable greater DER and renewable energy integration. Under the Grid Modernization Strategy, new technology will help triple private rooftop solar and make use of rapidly evolving products, including storage and advanced inverters. The Utilities have begun work to implement the Grid Modernization Strategy Phase 1, which received PUC approval on March 25, 2019. The estimated cost for this initial phase is approximately \$86 million and is expected to be incurred over five years. The Utilities filed an application with the PUC on September 30, 2019 for an Advanced Distribution Management System as part of the second phase of their Grid Modernization implementation. The estimated cost for the implementation over five years of the Advanced Distribution Management System, which includes capital, deferred and O&M costs, is \$46 million. Additional applications will be filed later to implement subsequent phases of the strategy. On December 30, 2019, the PUC suspended the Utilities' application for the Advanced Distribution Management System pending the Utilities' filing of a supplemental application for the broad deployment of field devices.

Community-based renewable energy. In December 2017, the PUC adopted a community-based renewable energy (CBRE) program framework which allows customers who cannot, or chose not to, take advantage of private rooftop solar to receive the benefits of renewable energy to help offset their monthly electric bills and support clean energy for Hawaii. The program has two phases.

The first phase, which commenced in July 2018, totals 8 MW of solar photovoltaic (PV) only with one credit rate for each island. The Utilities' role is limited to administrative only during the first phase. As administrators, the Utilities will work with subscriber organizations to allocate capacity, answer general program questions, verify subscriber eligibility and process bill credits for subscribers. The Utilities are in the process of verifying the projects and awarding the capacity to interested subscriber organizations.

The second phase will commence after review of the first full year of the first phase. The second phase is contemplated to be a larger capacity and include multiple credit rates (e.g., time of day) and various technologies. The Utilities will have the opportunity to develop self-build projects; however 50% of utility capacity will be reserved for low to moderate income customers.

The PUC held an informal technical conference on July 5, 2019 to review progress and status to the first phase and to solicit recommendations for the second phase. On August 19, 2019, the Utilities and the Joint Parties submitted their comments and recommendations for the second phase.

Microgrid services tariff proceeding. In July 2018, the PUC issued an order instituting a proceeding to investigate establishment of a microgrid services tariff, pursuant to Act 200 of 2018. The PUC granted motions to intervene in the docket by eight parties (there are currently six parties) and completed its initial procedural schedule in March 2019. In August 2019, the PUC issued an order stating that the focus for the remainder of the docket is to facilitate the ability of microgrids to disconnect from the grid and provide backup power to customers and critical energy uses during contingency events.

The PUC also required the parties to form two Working Groups: (1) a Market Facilitation Working Group to recommend draft tariff language for the Microgrid Services Tariff; and (2) an Interconnection Standards Working Group to develop a new section of Rule 14H specific to interconnection and islanding/reconnection of microgrids. The Utilities are to file a Draft Microgrid Services Tariff and Rule 14H Updates by March 30, 2020.

Decoupling. See "Decoupling" in Note 3 of the Consolidated Financial Statements for a discussion of decoupling.

As part of decoupling, the Utilities also track their rate-making ROACEs as calculated under the earnings sharing mechanism, which includes only items considered in establishing rates. At year-end, each utility's rate-making ROACE is compared against its ROACE allowed by the PUC to determine whether earnings sharing has been triggered. Annual earnings of a utility over and above the ROACE allowed by the PUC are shared between the utility and its ratepayers on a tiered basis. Earnings sharing credits are included in the annual decoupling filing for the following year. Results for 2019, 2018 and 2017 did not trigger the earnings sharing mechanism for the Utilities.

Regulated returns. Actual and PUC-allowed returns, as of December 31, 2019, were as follows:

%	Rate-making Return on rate base (RORB)*			ROACE**			Rate-making ROACE***		
	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Hawaiian Electric	Hawaii Electric Light	Maui Electric
Year ended December 31, 2019									
Utility returns	6.90	5.97	6.37	8.02	7.00	7.79	8.80	6.72	7.95
PUC-allowed returns	7.57	7.52	7.43	9.50	9.50	9.50	9.50	9.50	9.50
Difference	(0.67)	(1.55)	(1.06)	(1.48)	(2.50)	(1.71)	(0.70)	(2.78)	(1.55)

* Based on recorded operating income and average rate base, both adjusted for items not included in determining electric rates.

** Recorded net income divided by average common equity.

*** ROACE adjusted to remove items not included by the PUC in establishing rates, such as incentive compensation.

The gap between PUC-allowed ROACEs and the ROACEs actually achieved is primarily due to: the consistent exclusion of certain expenses from rates (for example, incentive compensation and charitable contributions), the recognition of annual RAM revenues on June 1 annually rather than on January 1, and O&M increases and return on capital additions since the last rate case in excess of indexed escalations.

Results of operations.

2019 vs. 2018

2019	2018	Increase (decrease)	(dollars in millions, except per barrel amounts)
\$ 2,546	\$ 2,547	\$ (1)	Revenues. Net decrease largely due to:
		\$ (45)	net of lower fuel prices and higher kWh generated ¹
		(6)	net of lower purchased power energy costs and higher kWh purchased ²
		26	higher electric rates
		16	MPIR for Schofield Generating Station
		3	higher PIM award due to low-cost variable renewable procurement, better reliability and call center performance
		2	billing to a third party for mutual assistance work reimbursement
		2	higher state refundable credit due to reduction in amortization period
		1	pole attachment revenues
721	761	(40)	Fuel oil expense. ¹ Net decrease due to lower fuel oil prices offset in part by higher kWh generated
633	639	(6)	Purchased power expense. ^{1,2} Net decrease largely due to lower purchased power energy price offset in part by higher kWh purchased
482	461	21	Operation and maintenance expense. Increase largely due to:
		7	higher outside services for system support (Asset management, Energy Management, Enterprise Resources and Grid Modernization systems)
		7	higher generation overhaul costs
		3	reset of pension costs included in rates as part of rate case decisions
		2	higher preventive/corrective maintenance expense for generation facilities
		2	higher medical premium costs
456	444	12	Other expenses. Increase due to higher depreciation expense for plant investments in 2018
254	242	12	Operating income. Increase due to higher electric rates, offset in part by higher operation and maintenance, and depreciation expenses
197	180	17	Income before income taxes. Increase due to higher electric rates, lower interest expense related to the hybrid securities redemption replaced with lower cost debt and refinancing of revenue bonds and higher AFUDC, offset in part by higher operation and maintenance and depreciation expense
157	144	13	Net income for common stock. Increase due to higher electric rates and MPIR revenues, offset in part by higher operating expenses
7.8%	7.6%	0.2%	Return on average common equity
82.17	87.90	(5.73)	Average fuel oil cost per barrel
8,740	8,689	51	Kilowatthour sales (millions) ³
2,670	2,704	(34)	Number of employees (at December 31)

¹ The rate schedules of the electric utilities currently contain ECRCs (changed from ECACs in 2019) through which changes in fuel oil prices and certain components of purchased energy costs are passed on to customers.

² The rate schedules of the electric utilities currently contain PPACs through which changes in purchase power expenses (except purchased energy costs) are passed on to customers.

³ kWh sales were higher in 2019 when compared to the prior year due largely to warmer humid weather in 2019 than 2018.

Hawaiian Electric's effective tax rate (combined federal and state income tax rates) in 2019 and 2018 was comparable at 19%. Income tax expense for 2019 reflects higher amortization in 2019 versus 2018 of the Utilities' regulatory liability related to certain excess deferred income taxes resulting from the Tax Act's decrease in federal income tax rate, while 2018 income tax expense reflects certain tax return adjustments recorded in 2018 relating to the benefit associated with additional tax deductions taken in the Company's 2017 tax returns in conjunction with the rate differential provided in the Tax Act.

For a discussion of 2017 results, please refer to the "Results of operations" section in Item 7, "Management Discussion and Analysis of Financial Condition and Results of Operations—Electric utility," in the Company's 2018 Form 10-K.

The net book value (cost less accumulated depreciation) of utility property, plant and equipment (PPE) as of December 31, 2019 amounted to \$4 billion, of which approximately 29% related to generation PPE, 62% related to transmission and distribution PPE, and 9% related to other PPE. Approximately 9% of the total net book value relates to generation PPE that has been deactivated or that the Utilities plan to deactivate or decommission.

Most recent rate proceedings. Unless otherwise agreed or ordered, each electric utility is currently required by PUC order to initiate a rate proceeding every third year (on a staggered basis) to allow the PUC and the Consumer Advocate to regularly evaluate decoupling and to allow the utility to request electric rate increases to cover rising operating costs and the cost of plant and equipment, including the cost of new capital projects to maintain and improve service reliability and integrate more renewable energy. The PUC may grant an interim increase within 10 to 11 months following the filing of an application, but there is no guarantee of such an interim increase and interim amounts collected are refundable, with interest, to the extent they exceed the amount approved in the PUC’s final decision and order (D&O). The timing and amount of any final increase is determined at the discretion of the PUC. The adoption of revenue, expense, rate base and cost of capital amounts (including the ROACE and RORB) for purposes of an interim rate increase does not commit the PUC to accept any such amounts in its final D&O.

Hawaiian Electric filed for a rate increase based on a 2020 test year in August 2019. Hawaii Electric Light filed its 2019 test year rate case in December 2018. Interim rates for Hawaii Electric Light’s 2019 rate case became effective on January 1, 2020, based on an interim order issued in November 2019 maintaining revenues at current effective rates. Final rates for Maui Electric’s 2018 rate case were effective on June 1, 2019 based on ruling in a D&O issued on March 18, 2019. Rates resulting from the March 2019 D&O were lower than what had been allowed in the interim order and Maui Electric refunded approximately \$0.5 million to customers in June and July 2019.

Test year (dollars in millions)	Date (filed/ implemented)	Amount	% over rates in effect	ROACE (%)	RORB (%)	Rate base	Common equity %	Stipulated agreement reached with Consumer Advocate
Hawaiian Electric								
2017¹								
Request	12/16/16	\$ 106.4	6.9	10.60	8.28	\$ 2,002	57.36	Yes
Interim increase	2/16/18	36.0	2.3	9.50	7.57	1,980	57.10	
Interim increase with Tax Act	4/13/18	(0.6)	—	9.50	7.57	1,993	57.10	
Final increase	9/1/18	(0.6)	—	9.50	7.57	1,993	57.10	
2020								
Request	8/21/19	\$ 77.6	4.1	10.50	7.97	\$ 2,477	57.15	
Hawaii Electric Light								
2016²								
Request	9/19/16	\$ 19.3	6.5	10.60	8.44	\$ 479	57.12	Yes
Interim increase	8/31/17	9.9	3.4	9.50	7.80	482	56.69	
Interim increase with Tax Act	5/1/18	1.5	0.5	9.50	7.80	481	56.69	
Final increase	10/1/18	—	—	9.50	7.80	481	56.69	
2019³								
Request	12/14/18	\$ 13.4	3.4	10.50	8.30	\$ 537	56.91	
Interim increase	1/1/20	0.0	0.0	9.50	7.52	534	56.83	
Maui Electric								
2018⁴								
Request	10/12/17	\$ 30.1	9.3	10.60	8.05	\$ 473	56.94	Yes
Interim increase	8/23/18	12.5	3.8	9.50	7.43	462	57.02	
Final increase	6/1/19	12.2	3.7	9.50	7.43	454	57.02	

Note: The “Request” date reflects the application filing date for the rate proceeding. The “Interim increase” and “Final increase” date reflects the effective date of the revised schedules and tariffs as a result of the PUC-approved increase.

¹ Final D&O was issued on June 22, 2018.

² Final D&O was issued on June 29, 2018.

³ The Interim D&O issued on November 13, 2019 approved an adjustment to base rates to maintain revenues at current effective rates.

⁴ A D&O issued on May 16, 2019 approved Maui Electric’s revised revenue requirements filed based on the March 2019 D&O and final rates which took effect on June 1, 2019.

See also “Most recent rate proceedings” in Note 3 of the Consolidated Financial Statements.

The effects of the Tax Act on the Utilities’ regulated operations accrued to the benefit of customers from the effective date of January 1, 2018 and were addressed in the Utilities’ rate cases summarized above. Generally, the lower corporate income tax rate lowers the Utilities’ revenue requirements through lower income tax expense and through the amortization of a regulatory liability for excess accumulated deferred income taxes (ADIT) resulting from the recording of ADIT in prior years at the higher income tax rate. The revenues collected in the first and a portion of the second quarters of 2018 reflected income taxes at the old 35% rate and consequently, the Utilities reduced revenues to the extent the income taxes collected revenue exceeded the taxes accrued at the new 21% rate. This reduction was recorded to a regulatory liability and electric rates were adjusted in the second quarter of 2018 to initiate the return of the 2018 excess to customers over various amortization periods. In addition, rates were adjusted in 2018 to begin returning the excess ADIT that was accumulated as of December 31, 2017. The Tax Act also excludes the Utilities’ asset additions from qualifying for bonus depreciation (except for certain grandfathered utility property), which has the offsetting effect of increasing revenue requirement by lowering ADIT and thereby increasing rate base on a prospective basis.

Performance-based regulation. See “Performance incentive mechanisms” and “Performance-based regulation proceeding” in Note 3 of the Consolidated Financial Statements.

Developments in renewable energy efforts. Developments in the Utilities’ efforts to further their renewable energy strategy include renewable energy projects discussed in Note 3 of the Consolidated Financial Statements and the following:

New renewable PPAs.

- In December 2014, the PUC approved a PPA for Renewable As-Available Energy dated October 3, 2013 between Hawaiian Electric and Na Pua Makani Power Partners, LLC (NPM) for a proposed 24-MW wind farm on Oahu. The NPM wind farm was expected to be placed into service by August 31, 2019, but has been delayed due to an appeal of the decision in the Habitat Conservation Permit contested case. NPM has now received its Habitat Conservation Permit and is constructing the project. Life of the Land (LOL) filed a Motion for Relief to argue the PPA approval was invalid and should be revised. The Utilities and the Consumer Advocate filed an opposition to this motion for relief. A hearing on the motion for relief was held on November 22, 2019. The PUC has not yet ruled.
- In July 2017, the PUC approved, with certain modifications and conditions, three PPAs for solar energy on Oahu with Waipio PV, LLC for 45.9 MW, Lanikuhana Solar, LLC for 14.7 MW and Kawaiiloa Solar, LLC for 49.0 MW. The three projects are now owned by Clearway Energy Group LLC, whose controlling investor is Global Infrastructure Partners. On September 19, 2019, Lanikuhana Solar and Waipio PV projects achieved commercial operations. On November 20, 2019, Kawaiiloa Solar, LLC achieved commercial operations.
- In July 2018, the PUC approved Maui Electric’s PPA with Molokai New Energy Partners to purchase solar energy from a PV plus battery storage project. The 4.88 MW project will deliver no more than 2.64 MW at any time to the Molokai system. The project is expected to be in service in 2020.
- In November 2018, Hawaiian Electric filed with the PUC a PPA for Renewable As-Available Energy dated October 22, 2018 between Hawaiian Electric and EE Ewa, LLC (Palehua) for a proposed 46.8 MW wind farm on Oahu, subject to PUC approval. On September 6, 2019, the PUC issued an order dismissing without prejudice Hawaiian Electric’s application for a waiver of the proposed Palehua wind project from the PUC’s framework for competitive bidding and approval of the PPA. Due to the foregoing, the PPA has been declared null and void.
- On December 31, 2019, Hawaii Electric Light and PGV entered into an Amended and Restated Power Purchase Agreement (ARPPA), subject to approval by the PUC. The ARPPA extends the term of the existing PPA by 25 years to 2052, expands the firm capacity of the facility to 46 MW and delinks the pricing for energy delivered from the facility from fossil fuel prices to reduce cost to customers. The existing PPA (except for lower-tiered pricing for certain energy dispatched above 30 MW) will remain in effect until it is superseded by the ARPPA when the expanded capacity is in commercial operation.

Tariffed renewable resources.

- As of December 31, 2019, there were approximately 471 MW, 104 MW and 118 MW of installed distributed renewable energy technologies (mainly PV) at Hawaiian Electric, Hawaii Electric Light and Maui Electric, respectively, for tariff-based private customer generation programs, namely Standard Interconnection Agreement, Net Energy Metering, Net Energy Metering Plus, Customer Grid Supply, Customer Self Supply, Customer Grid Supply Plus and Interim Smart Export. As of December 31, 2019, an estimated 29% of single-family homes on the islands of Oahu, Hawaii and Maui have installed private rooftop solar systems, and approximately 18% of the Utilities' total customers have solar systems.
- The Utilities began accepting energy from feed-in tariff projects in 2011. As of December 31, 2019, there were 34 MW, 3 MW and 5 MW of installed feed-in tariff capacity from renewable energy technologies at Hawaiian Electric, Hawaii Electric Light and Maui Electric, respectively.

Biofuel sources.

- In July 2018, the PUC approved Hawaiian Electric's 3-year biodiesel supply contract with Pacific Biodiesel Technologies, LLC (PBT) to supply 2 million to 4 million gallons of biodiesel at Hawaiian Electric's Schofield Generating Station and the Honolulu International Airport Emergency Power Facility (HIA Facility) and any other generating unit on Oahu, as necessary. The PBT contract became effective on November 1, 2018. Hawaiian Electric also has a spot buy contract with PBT to purchase additional quantities of biodiesel at or below the price of diesel. Some purchases of "at parity" biodiesel have been made under the spot purchase contract, which was recently extended through June 2021.
- Hawaiian Electric has a contingency supply contract with REG Marketing & Logistics Group, LLC to also supply biodiesel to any generating unit on Oahu in the event PBT is not able to supply necessary quantities. This contingency contract has been extended to November 2020, and will continue with no volume purchase requirements.

Requests for renewable proposals, expressions of interest, and information.

- Under a request for proposal process governed by the PUC and monitored by independent observers, in February 2018, the Utilities issued RFPs for 220 MW of renewable generation on Oahu, 50 MW of renewable generation on Hawaii Island, and 60 MW of renewable generation on Maui. The Utilities selected a final award group for Hawaii Island in August 2018 and for Maui and Oahu in September 2018.

In December 2018, the Utilities executed a total of seven renewable generation PPAs utilizing photovoltaic technology paired with a battery storage system for a total of 262MW, of which six PPAs were approved by the PUC in March 2019 and one PPA for Maui Electric is still under PUC review. In February 2019, Hawaiian Electric filed an additional PPA for a proposed 12.5 MW PV plus battery storage project, which was approved by the PUC on August 20, 2019. Summarized information for a total of 8 PPAs, including one for Maui Electric that is pending PUC approval, is as follows:

Utilities	Number of contracts	Total photovoltaic size (MW)	BESS Size (MW/MWh)	Guaranteed commercial operation dates	Contract term (years)	Total projected annual payment (in millions)
Hawaiian Electric	4	139.5	139.5/558	9/30/21 & 12/31/21	20 & 25	\$ 30.9
Hawaii Electric Light	2	60	60/240	7/20/21 & 6/30/22	25	14.1
Maui Electric	2	75	75/300	7/20/21 & 6/30/22	25	17.6
Total	8	274.5	274.5 /1,098			\$ 62.6

In March 2019 and August 2019, the Utilities received PUC approval to recover the total projected annual payment of \$57.8 million for 7 PPAs through the PPAC to the extent such costs are not included in base rates. The remaining \$4.8 million of total projected annual payments for the remaining PPA is pending PUC approval.

- In continuation of its February 2018 request for proposal process, the Utilities issued its Stage 2 Renewable RFPs for Oahu, Maui and Hawaii Island and Grid Services RFP on August 22, 2019. This procurement plan sought approximately 900 MW of renewable energy, including 594 MW on Oahu, 135 MW on Maui and a range between 32 to 203 MW on Hawaii Island. This second phase, as approved by the PUC, was open to all renewable and storage resources, including efforts to add more renewable generation, renewable plus storage, standalone storage and grid services. The scope of these RFPs has been expanded to accelerate renewable energy procurements beyond the remainder of the 2022 targets identified in Stage 1 to include the energy requirement associated with the planned retirement of the Kahului Power Plant on Maui and the upcoming expiration of the agreement for the AES Hawaii facility on Oahu. For the Grid Services RFP, the targets had been expanded in alignment with the Renewable RFPs.

Utility proposals were submitted on November 4, 2019. Proposals from third parties for these RFPs were submitted on November 5, 2019. Final awards for the renewable projects are scheduled to be made in May 2020. Final awards for the grid services projects were made starting in January 2020.

- On November 27, 2019, the Utilities issued RFPs for renewable generation paired with energy storage on the islands of Lanai and Molokai. Projects may come online as early as 2022. The Utilities are seeking PV paired with storage or small wind (specified as 100 kW turbines or smaller) on Molokai and PV paired with storage on Lanai. Proposals for the Molokai RFP were received on February 14, 2020, and are currently being evaluated by the Utilities. The Lanai RFP has been temporarily postponed, while the Utilities reevaluate the system needs. The Utilities expect to issue an update to the Lanai RFP no later than March 10, 2020.

Legislation and regulation. Congress and the Hawaii legislature periodically consider legislation that could have positive or negative effects on the Utilities and their customers. Also see “Environmental regulation” in “Item 1. Business” and Note 3, and “Major tax developments” in Note 12 of the Consolidated Financial Statements.

Impact of lava flows. In May 2018, a lava eruption occurred within the Leilani Estates subdivision and resulted in the shutdown of independent power producer PGV’s geothermal facilities. The financial impact to Hawaii Electric Light has not been material. In March 2019, Hawaii Electric Light and PGV entered into a Rebuild Agreement, which sets forth the parties’ respective responsibilities associated with restoration of facilities and reconnection of the PGV facility to the electric grid.

In June 2019, Hawaii Electric Light filed an application requesting approval to reconstruct the necessary transmission lines. In December 2019, Hawaii Electric Light filed an application for approval of an amended and restated PPA with PGV. See “New renewable PPAs” in the “Developments in renewable energy efforts” section above for additional information on the amended and restated PPA.

Army privatization. On September 27, 2019, Hawaiian Electric was awarded a 50-year contract to own, operate and maintain the electric distribution system serving the U.S. Army’s 12 installations on Oahu, including Schofield Barracks, Wheeler Army Airfield, Tripler Army Medical Center, Fort Shafter, and Army housing areas. Hawaiian Electric will acquire, subject to PUC approval, the Army’s existing distribution system for a purchase price of \$16.3 million and will pay the Army in the form of a monthly credit against the monthly utility services charge over the 50-year term of the contract. Hawaiian Electric filed an application with the PUC for approval of the Army privatization contract on October 25, 2019.

If approved by the PUC in 2020, Hawaiian Electric would take ownership and all responsibilities for operation and maintenance of the system in late 2021 for a 50-year term, which would start after the mutually agreed upon one-year transition period. Under the contract, Hawaiian Electric will make initial capital upgrades over the first six years of the contract and replacements of aging infrastructure over the 50-year term. In addition to its regular monthly electricity bill, the Army will pay Hawaiian Electric a monthly utility services charge to cover operations and maintenance expenses and provide recovery for capital upgrades, capital replacements, and the existing distribution system based on a rate of return determined by the PUC for regulated utility investments, as well as depreciation expense. A preliminary assessment estimated the capital needs of approximately \$40 million in the first six years of the contract. The annual impact on Hawaiian Electric’s earnings is not expected to be material and will depend on a number of factors, including the amount and timing of capital upgrades and capital replacement.

Fuel contracts. The fuel contract entered into in January 2019, by the Utilities and PAR Hawaii Refining, LLC (PAR Hawaii), for the Utilities’ low sulfur fuel oil (LSFO), high sulfur fuel oil (HSFO), No. 2 diesel, and ultra-low sulfur diesel (ULSD) requirements was approved by the PUC, and became effective on April 28, 2019 and terminates on December 31, 2022. This contract is a requirement contract with no minimum purchases. If PAR is unable to provide LSFO, HSFO, diesel and/or ULSD the contract allows the Utilities to purchase LSFO, HSFO, diesel and/or ULSD from another supplier. The contract will automatically renew upon the conclusion of the original term for successive terms of 1 year beginning on January 1, 2023 unless a party gives written termination notice at least 120 days before the beginning of an extension.

The previous fuel contracts with Island Energy Services, LLC, terminated on April 27, 2019, as agreed with IES under a mutual termination and release agreement entered into in November 2018.

The costs incurred under the contract with PAR Hawaii are recovered in the Utilities’ respective ECRCs.

Liquidity and capital resources. Management believes that Hawaiian Electric’s ability, and that of its subsidiaries, to generate cash, both internally from operations and externally from issuances of equity and debt securities and commercial paper and draws on lines of credit, is adequate to maintain sufficient liquidity to fund their respective capital expenditures, investments, debt repayments, retirement benefit plan contributions and other cash requirements in the foreseeable future.

Hawaiian Electric’s consolidated capital structure was as follows:

December 31	2019		2018	
(dollars in millions)				
Short-term borrowings ¹	\$ 89	2%	\$ 25	1%
Long-term debt, net	1,498	41	1,419	41
Preferred stock	34	1	34	1
Common stock equity	2,047	56	1,958	57
	\$ 3,668	100%	\$ 3,436	100%

¹ Short-term borrowings as of December 31, 2019 reflect the impact of funding for a senior note of \$82 million included in long-term debt, net, which was paid off on January 1, 2020 (see Note 6 of the Consolidated Financial Statements).

Information about Hawaiian Electric’s commercial paper borrowings, borrowings from HEI, and line of credit facility were as follows:

(in millions)	Year ended December 31, 2019		December 31, 2018
	Average balance	End-of-period balance	
Short-term borrowings ¹			
Commercial paper	\$ 44	\$ 39	\$ —
Line of credit draws	—	—	—
Borrowings from HEI	—	—	—
Undrawn capacity under line of credit facility	—	200	200

¹ The maximum amount of external short-term borrowings by Hawaiian Electric during 2019 was \$158 million. At December 31, 2019, Hawaiian Electric had short-term borrowings from Hawaii Electric Light of \$8 million and Maui Electric had short-term borrowings from Hawaiian Electric of \$27.7 million, which intercompany borrowings are eliminated in consolidation. In addition to the short-term borrowings above, Hawaiian Electric drew \$50 million on December 23, 2019 on a 364-day term loan facility (see Note 5 of the Consolidated Financial Statements).

Hawaiian Electric utilizes short-term debt, typically commercial paper, to support normal operations, to refinance short-term debt and for other temporary requirements. Hawaiian Electric also borrows short-term from HEI for itself and on behalf of Hawaii Electric Light and Maui Electric, and Hawaiian Electric may borrow from or loan to Hawaii Electric Light and Maui Electric on a short-term basis. The intercompany borrowings among the Utilities, but not the borrowings from HEI, are eliminated in the consolidation of Hawaiian Electric’s financial statements. The Utilities periodically utilize long-term debt, borrowings of the proceeds of special purpose revenue bonds (SPRBs) issued by the DBF and the issuance of privately placed unsecured senior notes bearing taxable interest, to finance the Utilities’ capital improvement projects, or to repay short-term borrowings used to finance such projects. The PUC must approve issuances, if any, of equity and long-term debt securities by the Utilities.

Hawaiian Electric has a \$200 million line of credit facility with no amounts outstanding at December 31, 2019. See Note 5 of the Consolidated Financial Statements.

Credit ratings. Moody’s and S&P (Rating Agencies) revised Hawaiian Electric’s rating outlook to “positive” from “stable” on October 21, 2019 and February 20, 2020, respectively. The revision to the rating outlook was primarily based on the progress of regulatory reform for the Utilities. The Rating Agencies indicated that future upgrades or downgrades in ratings action are dependent on a variety of factors, including changes in its cash flow from operations ratios and improvements in the regulatory environment, specifically, a credit-supportive decision in the performance-based regulation proceeding. See “Performance-based regulation proceeding” in Note 3 of the Consolidated Financial Statements.

As of February 20, 2020, the Fitch, Moody's and S&P ratings of Hawaiian Electric were as follows:

	Fitch	Moody's	S&P**
Long-term issuer default, long-term and issuer credit, respectively	BBB+	Baa2	BBB-
Commercial paper	F2	P-2	A-3
Senior unsecured debt/special purpose revenue bonds	A-	Baa2	BBB-
Cumulative preferred stock (selected series)	*	Ba1	*
Outlook	Stable	Positive	Positive

* Not rated.

** On February 20, 2020, S&P revised Utilities' outlook to positive and affirmed Utilities' issuer credit and commercial paper ratings.

Note: The above ratings reflect only the view, at the time the ratings are issued or affirmed, of the applicable rating agency, from whom an explanation of the significance of such ratings may be obtained. Such ratings are not recommendations to buy, sell or hold any securities; such ratings may be subject to revision or withdrawal at any time by the rating agencies; and each rating should be evaluated independently of any other rating.

SPRBs. SPRBs have been issued by the DBF to finance (and refinance) capital improvement projects of Hawaiian Electric and its subsidiaries, but the sources of their repayment are the non-collateralized obligations of Hawaiian Electric and its subsidiaries under loan agreements and notes issued to the DBF, including Hawaiian Electric's guarantees of its subsidiaries' obligations.

On February 26, 2019, the PUC approved Hawaiian Electric and Hawaii Electric Light's request to issue refunding SPRBs prior to December 31, 2020 to refinance their outstanding Series 2009 SPRBs in the amount of up to \$90 million and \$60 million, respectively. Pursuant to this approval, on July 18, 2019, the Department of Budget and Finance of the State of Hawaii (DBF) issued, at par, Refunding Series 2019 SPRBs in the aggregate principal amount of \$150 million with a maturity of July 1, 2039. See Note 6 of the Consolidated Financial Statements.

On May 24, 2019, the PUC approved the Utilities' request to issue SPRBs in the amounts of up to \$70 million, \$2.5 million and \$7.5 million for Hawaiian Electric, Hawaii Electric Light and Maui Electric, respectively, prior to June 30, 2020, to finance the Utilities' capital improvement programs. Pursuant to this approval, on October 10, 2019, the DBF issued, at par, Series 2019 SPRBs in the aggregate principal amount of \$80 million with a maturity of October 1, 2049. As of December 31, 2019, Hawaiian Electric and Hawaii Electric Light had \$30.8 million and \$0.1 million of undrawn funds remaining with the trustee, respectively. Maui Electric received all bond proceeds at closing and had no undrawn funds as of December 31, 2019. See Note 6 of the Consolidated Financial Statements.

On June 10, 2019, the Hawaii legislature authorized the issuance of up to \$700 million of SPRBs (\$400 million for Hawaiian Electric, \$150 million for Hawaii Electric Light and \$150 million for Maui Electric), with PUC approval, prior to June 30, 2024, to finance the Utilities' multi-project capital improvement programs.

Bank loans. On December 23, 2019, Hawaiian Electric entered into a 364-day, \$100 million term loan credit agreement that matures on December 21, 2020. Hawaiian Electric drew the first \$50 million on December 23, 2019 and has until March 23, 2020 to draw the remaining \$50 million, if needed.

Taxable debt. On January 31, 2019, the Utilities received PUC approval (January 2019 Approval) to issue the remaining authorized amounts under the PUC approval received in April 2018 (April 2018 Approval) in 2019 through 2020 (Hawaiian Electric up to \$205 million and Hawaii Electric Light up to \$15 million of taxable debt), as well as a supplemental increase to authorize the issuance of additional taxable debt to finance capital expenditures, repay long-term and/or short term debt used to finance or refinance capital expenditures, and/or to reimburse funds used for payment of capital expenditures, and to refinance the Utilities' 2004 junior subordinated deferrable interest debentures (QUIDS) prior to maturity. In addition, the January 2019 Approval authorized the Utilities to extend the period to issue additional taxable debt from December 31, 2021 to December 31, 2022. The new total "up to" amounts of taxable debt requested to be issued through December 31, 2022 are \$410 million, \$150 million and \$130 million for Hawaiian Electric, Hawaii Electric Light and Maui Electric, respectively.

Pursuant to the January 2019 Approval, on May 13, 2019, the Utilities issued through a private placement, \$50 million of unsecured senior notes bearing taxable interest (\$30 million for Hawaiian Electric, \$10 million for Hawaii Electric Light and \$10 million for Maui Electric) to refinance the Utilities' 2004 QUIDS. See Note 6 of the Consolidated Financial Statements. See summary table below.

(in millions)	Hawaiian Electric	Hawaii Electric Light	Maui Electric
Total "up to" amounts of taxable debt authorized through 2022	\$ 410	\$ 150	\$ 130
Less:			
Taxable debt authorized and issued in 2018 under April 2018 Approval	75	15	10
Taxable debt issuance to refinance the 2004 QUIDS	30	10	10
Remaining authorized amounts	\$ 305	\$ 125	\$ 110

Equity. In October 2018, the Utilities received PUC approval for the supplemental increase to issue and sell additional common stock in the amounts of up to \$280 million for Hawaiian Electric and up to \$100 million each for Hawaii Electric Light and Maui Electric, with the new total "up to" amounts of \$430 million for Hawaiian Electric and \$110 million each for Hawaii Electric Light and Maui Electric, and to extend the period authorized by the PUC to issue and sell common stock from December 31, 2021 to December 31, 2022. In December 2019, Hawaiian Electric sold \$35.5 million of its common stock to HEI and Maui Electric sold \$4.9 million of its common stock to Hawaiian Electric. Hawaii Electric Light did not issue common stock in 2019. See summary table below.

(in millions)	Hawaiian Electric	Hawaii Electric Light	Maui Electric
Total "up to" amounts of common stock authorized to issue and sell through 2021	\$ 150.0	\$ 10.0	\$ 10.0
Supplemental increase authorized	280.0	100.0	100.0
Total "up to" amounts of common stock authorized to issue and sell through 2022	430.0	110.0	110.0
Common stock authorized and issued in 2017, 2018 and 2019	120.2	—	11.2
Remaining authorized amounts	\$ 309.8	\$ 110.0	\$ 98.8

Cash flows.

(in thousands)	Years ended December 31		
	2019	2018	Change
Net cash provided by operating activities	\$ 423,956	\$ 393,613	\$ 30,343
Net cash used in investing activities	(408,524)	(405,182)	(3,342)
Net cash provided by (used in) financing activities	(9,415)	34,929	(44,344)

2019 Cash Flows Compared to 2018:

Net cash provided by operating activities: The increase in net cash provided by operating activities was primarily driven by higher cash receipts from customers due to higher electric rates.

Net cash used in investing activities: The increase in net cash used in investing activities was primarily driven by an increase in capital expenditures related to construction activities.

Net cash provided by financing activities: The decrease in net cash provided by financing activities was primarily driven by lower proceeds from common stock issuance.

For a discussion of 2017 operating, investing and financing activities, please refer to the "Liquidity and capital resources" section in Item 7, "Management Discussion and Analysis of Financial Condition and Results of Operations—Electric utility," in the Company's 2018 Form 10-K.

Forecast capital expenditures. For the three-year period 2020 through 2022, the Utilities forecast up to \$1.3 billion of net capital expenditures, which could change over time based upon external factors such as the timing and scope of environmental regulations, unforeseen delays in permitting and timing of PUC decisions. Proceeds from the issuance of equity and long-term debt, cash flows from operating activities, temporary increases in short-term borrowings and existing cash and cash equivalents are expected to provide the funds needed for the net capital expenditures, to pay down commercial paper or other short-term borrowings, as well as to fund any unanticipated expenditures not included in the 2020 to 2022 forecast (such as increases in the costs or acceleration of capital projects, or unanticipated capital expenditures that may be required by new environmental laws and regulations).

Management periodically reviews capital expenditure estimates and the timing of construction projects. These estimates may change significantly as a result of many considerations, including changes in economic conditions, changes in forecasts of kWh sales and peak load, the availability of purchased power and changes in expectations concerning the construction and ownership of future generation units, the availability of generating sites and transmission and distribution corridors, the need for fuel infrastructure investments, the ability to obtain adequate and timely rate increases, escalation in construction costs, the effects of opposition to proposed construction projects and requirements of environmental and other regulatory and permitting authorities.

Selected contractual obligations and commitments. The following table presents aggregated information about total payments due from the Utilities during the indicated periods under the specified contractual obligations and commitments:

December 31, 2019 (in millions)	Payments due by period				
	Less than 1 year	1-3 years	3-5 years	More than 5 years	Total
Short-term borrowings	\$ 89	\$ —	\$ —	\$ —	\$ 89
Long-term debt	96	52	100	1,257	1,505
Interest on long-term debt	61	121	111	691	984
Operating leases					
PPAs classified as leases	63	105	—	—	168
Other leases	7	8	3	2	20
Open purchase order obligations ¹	54	19	1	—	74
Fuel oil purchase obligations (estimate based on fuel oil price at December 31)	7	15	—	—	22
Purchase power obligations—minimum fixed capacity charges not classified as leases	51	76	76	241	444
Total (estimated)	\$ 428	\$ 398	\$ 291	\$ 2,191	\$ 3,308

¹ Includes contractual obligations and commitments for capital expenditures and expense amounts.

The table above does not include other categories of obligations and commitments, such as deferred taxes, trade payables, amounts that will become payable in future periods under collective bargaining and other employment agreements and employee benefit plans and potential refunds of amounts collected from ratepayers (e.g., under the earnings sharing mechanism). As of December 31, 2019, the fair value of the assets held in trusts to satisfy the obligations of the Utilities' retirement benefit plans did not exceed the retirement benefit plans' benefit obligation. Minimum funding requirements for retirement benefit plans have not been included in the table above. See Note 10 of the Consolidated Financial Statements for retirement benefit plan obligations and estimated contributions for 2020. There were no material uncertain tax positions as of December 31, 2019.

See "Biofuel sources" in the "Developments in renewable energy efforts" section above for additional information for fuel oil purchase obligation. See Notes 3 and 8 of the Consolidated Financial Statements for a discussion of power purchase commitments and operating leases obligations, respectively.

Competition. Although competition in the generation sector in Hawaii is moderated by the scarcity of generation sites, various permitting processes and lack of interconnections to other electric utilities, the PUC has promoted a more competitive electric industry environment through its decisions concerning competitive bidding and distributed generation (DG). An increasing amount of generation is provided by IPPs and customer distributed generation.

Competitive bidding. In December 2006, the PUC issued a decision that included a final competitive bidding framework, which became effective immediately. The final framework states, among other things, that: (1) a utility is required to use competitive bidding to acquire a future generation resource or a block of generation resources unless the PUC finds bidding to be unsuitable; (2) the framework does not apply in certain situations identified in the framework; (3) waivers from competitive bidding for certain circumstances will be considered; (4) the utility is required to select an independent observer from a list approved by the PUC whenever the utility or its affiliate seeks to advance a project proposal (i.e., in competition with those offered by bidders); (5) the utility may consider its own self-bid proposals in response to generation needs identified in its RFP; and (6) for any resource to which competitive bidding does not apply (due to waiver or exemption), the utility retains its traditional obligation to offer to purchase capacity and energy from a Qualifying Facility (QF) at avoided cost upon reasonable terms and conditions approved by the PUC.

Technological developments. New emerging and breakthrough technological developments (e.g., the commercial development of energy storage, grid support utility interactive inverters, fuel cells, distributed generation, grid modernization,

electrification of transportation, implement predictive analytics using artificial intelligence machine learning algorithms to help assess the state of health of utility assets and prevent premature failure, and the diversification of generation from renewable sources) may impact the Utilities' future competitive position, results of operations, financial condition and liquidity. The Utilities continue to seek prudent opportunities to develop and implement advanced technologies that align with its technical and business plans and will support a more reliable, flexible and resilient utility grid.

Environmental matters. See "Electric utility—Regulation—Environmental regulation" under "Item 1. Business" and "Environmental regulation" in Note 3 of the Consolidated Financial Statements.

Commitments and contingencies. See Item 1A. Risk Factors, and Note 3 of the Consolidated Financial Statements for a discussion of important commitments and contingencies.

Off-balance sheet arrangements. See "Off-balance sheet arrangements" above in HEI Consolidated section.

Material estimates and critical accounting policies. Also see "Material estimates and critical accounting policies" above in HEI Consolidated section.

Regulatory assets and liabilities. The Utilities are regulated by the PUC. In accordance with accounting standards for regulatory operations, the Company's and the Utilities' financial statements reflect assets, liabilities, revenues and costs of the Utilities based on current cost-based rate-making regulations. The actions of regulators can affect the timing of recognition of revenues, expenses, assets and liabilities.

Regulatory liabilities represent amounts collected from customers for costs that are expected to be incurred in the future, or amounts collected in excess of costs incurred that are refundable to customers. Regulatory assets represent incurred costs that have been deferred because their recovery in future customer rates is probable. As of December 31, 2019, the consolidated regulatory liabilities and regulatory assets of the Utilities amounted to \$972 million and \$715 million, respectively, compared to \$950 million and \$833 million as of December 31, 2018, respectively. Regulatory liabilities and regulatory assets are itemized in Note 3 of the Consolidated Financial Statements. Management continually assesses whether the regulatory assets are probable of future recovery by considering factors such as changes in the applicable regulatory environment. Because current rates include the recovery of regulatory assets existing as of the last rate case and rates in effect allow the Utilities to earn a reasonable rate of return, management believes that the recovery of the regulatory assets as of December 31, 2019 is probable. This determination assumes continuation of the current political and regulatory climate in Hawaii and is subject to change in the future.

Management believes that the operations of the Utilities currently satisfy the criteria for regulatory accounting. If events or circumstances should change so that those criteria are no longer satisfied, the Utilities expect that their regulatory assets, net of regulatory liabilities, would be charged to the statement of income in the period of discontinuance, which may result in a material adverse effect on the Company's and the Utilities' results of operations, financial condition and liquidity.

Revenues. Electric utility revenues are based on rates authorized by the PUC and include revenues applicable to estimated energy consumed in the accounting period, but not yet billed to customers (Unbilled revenues), and RBA revenues or refunds for the difference between PUC-approved target revenues and recorded adjusted revenues, which delinks revenues from kWh sales. Unbilled revenues represent an estimate of energy consumed by customers subsequent to the date of the last meter reading to the end of the current reporting period. As of December 31, 2019, Unbilled revenues amounted to \$117 million and the RBA refunds recognized in 2019 amounted to \$11 million.

The rate schedules of the Utilities include ECRCs (changed from ECACs in 2019) under which electric rates are adjusted for changes in the weighted-average price paid for fuel oil and certain components of purchased power, and the relative amounts of company-generated power and purchased power. The rate schedules of the Utilities also include PPACs under which electric rates are more closely aligned with purchase power costs incurred. If the ECRCs, PPACs or RBAs were lost or adversely modified, it could result in a material adverse effect on the Company's and the Utilities' results of operations, financial condition and liquidity.

Asset retirement obligations. The Utilities recognize asset retirement obligations (AROs), which represent the present value of expected costs to retire long-lived assets from service, provided a legal obligation exists and a reasonable estimate of the fair value and the settlement date can be made. The Utilities' recognition of AROs have no impact on earnings, as the cost of the AROs are recovered over the life of the asset through depreciation. AROs recognized by the Utilities relate to legal obligations with the retirement of plant and equipment, including removal of asbestos and other hazardous materials.

The Utilities estimate the ARO using a discounted cash flow model that relies on significant estimates and assumptions about future decommissioning costs, inflationary rates, and the estimated date of decommissioning. The estimated future cash flows are discounted using a credit-adjusted risk-free rate to reflect the risk associated with decommissioning the assets. The

Utilities have not recorded AROs for assets that are expected to operate indefinitely or where the Utilities cannot estimate a settlement date (or range of potential settlement dates.) As such, ARO liabilities are not recorded for certain asset retirement activities, including various Utility-owned generating facilities and certain electric transmission, distribution and telecommunication assets resulting from easements over property not owned by the Utilities.

Changes in estimated costs, timing of decommissioning or other assumptions used in the calculation could cause material revision on the recorded liabilities. As of December 31, 2019 and December 31, 2018, the Utilities' AROs totaled \$10 million and \$8 million, respectively.

Bank

Executive overview and strategy. ASB, headquartered in Honolulu, Hawaii, is a full-service community bank serving both consumer and commercial customers. ASB is one of the largest financial institutions in Hawaii and ended 2019 with assets of \$7.2 billion and net income of \$89 million, compared to assets of \$7.0 billion and net income of \$83 million in 2018.

ASB provides a wide range of financial products and services, and in order to remain competitive and continue building core franchise value, ASB is focused on making banking easier for the customer and developing and introducing new products and services in order to meet market needs. Additionally, the banking industry is constantly changing and ASB is making the investments in people and technology necessary to adapt and remain competitive, facilitate process improvements in order to deliver a continuously better experience for its customers, and be a more efficient bank. ASB's continued focus has been on efficient growth to maximize profitability and capital efficiency, as well as control expenses. Key strategies to drive organic growth include:

1. deepening customer relationships;
2. building out product and service offerings to open new segments;
3. fully deploying online and remotely-assisted account opening capabilities; and
4. prioritizing efficiency actions to gain earnings leverage on organic growth.

The interest rate environment and the quality of ASB's assets will continue to influence its financial results. A lowering of interest rates across the yield curve as a result of the Federal Reserve Board's decreases in short-term interest rates have made it challenging to maintain ASB's net interest margin. The potential for compression of ASB's margin if interest rates continue to decrease is a risk that is actively managed.

As part of its interest rate risk management process, ASB uses simulation analysis to measure net interest income sensitivity to changes in interest rates (see "Item 7A. Quantitative and Qualitative Disclosures about Market Risk"). ASB then employs strategies to limit the impact of changes in interest rates on net interest income. ASB's key strategies to manage interest rate risk include:

1. attracting and retaining low-cost deposits, particularly those in non-interest bearing transaction accounts;
2. diversifying the loan portfolio with higher-spread, shorter-maturity loans and/or variable rate loans;
3. focusing investment growth in securities that exhibit less extension risk (i.e., risk of longer average lives) as rates rise.

Results of operations.

• 2019 vs. 2018

(in millions)	2019	2018	Increase (decrease)	Primary reason(s)
Interest income	\$ 266	\$ 258	\$ 8	Higher interest income was due to higher average loan portfolio balances and yields, partly offset by a decrease in balances and yields in the investment securities portfolio. ASB's average loan portfolio balance for 2019 was \$231 million higher than 2018's average loan portfolio balance primarily due to increases in the average HELOC, residential, commercial and consumer loan portfolio balances of \$99 million, \$59 million, \$40 million and \$30 million, respectively. The growth in these loan portfolios was consistent with ASB's portfolio mix targets and loan growth strategy. The 2019 loan portfolio yield increased 5 basis points compared to the prior year loan portfolio yield due to the repricing of adjustable rate loans in the latter part of 2018 and early 2019. The average investment securities portfolio balance decreased by \$86 million and the portfolio yield decreased 14 basis points. The decrease in the portfolio balance was due to ASB's decision to use investment portfolio repayments to fund the growth in the loan portfolio rather than redeploy it into investment securities. The decrease in the investment yields was due to an increase in the amortization of premiums in the investment portfolio.

(in millions)	2019	2018	Increase (decrease)	Primary reason(s)
Noninterest income	73	56	17	Noninterest income was higher in 2019 compared to 2018 primarily due to a gain on sale of real estate, an increase in mortgage banking income and higher bank-owned life insurance payouts. ASB sold two office facilities that were no longer needed when ASB moved into its new campus headquarters, which resulted in a gain on sale of real estate of \$10.8 million. There were no such sales in 2018. The increase in mortgage banking income was due to an increase in loan sales into the secondary market as a result of higher residential mortgage loan production in 2019 compared to 2018. The higher bank-owned life insurance income was due to higher proceeds from life insurance policies received in 2019 compared to the previous year.
Revenues	339	314	25	The increase in revenues was due to higher interest and noninterest income.
Interest expense	18	15	3	Higher interest expense was primarily due to an increase in term certificate balances and increased deposit rates. Average deposit balances for 2019 increased by \$155 million compared to 2018 due to an increase in core deposits and time certificates of \$134 million and \$21 million, respectively. Average cost of deposits for 2019 was 27 basis points, or 4 basis points above the average cost of deposits for 2018. The other borrowings average balance decreased by \$28 million primarily due to a decrease in repurchase agreements. Average cost of other borrowings for 2019 was 1.42%, or 32 basis points above the average cost of borrowings for 2018.
Provision for loan losses	24	15	9	The provision for loan losses for 2019 increased by \$8.7 million compared to the provision for loan losses in 2018. The provision for loan losses in 2019 was primarily for additional loss reserves for the consumer and credit scored loan portfolios to cover net charge-offs, and reserves for an impaired commercial credit, partly offset by the release of reserves resulting from recoveries of previously charged-off loans. The provision for loan losses for 2018 was primarily for additional loss reserves for the consumer loan portfolio as a result of growth and increased net charge-offs, partly offset by the release of reserves for the commercial, commercial real estate and HELOC loan portfolios as a result of improved credit trends.
Noninterest expense	185	177	8	Higher noninterest expense was primarily due to higher compensation and employee benefit costs, and increases in occupancy and equipment expenses. The increase in compensation and employee benefits was due to an increase in the minimum pay rate for employees, annual merit increases and higher employee benefit costs. Occupancy and equipment expenses for 2019 included occupancy, depreciation and equipment expenses for the new campus while still including the costs of properties being vacated.
Expenses	227	207	20	The increase in expenses was primarily due to higher provision for loan losses, and increases in interest and noninterest expenses.
Operating income	112	107	5	Higher interest and noninterest income was partly offset by higher provision for loan losses, higher interest expense and higher noninterest expenses.
Net income	89	83	6	The increase in net income was the result of higher operating income and lower income tax expense.
Return on average equity ¹	13.5%	13.5%	—%	

¹ Calculated using the average daily balance

For a discussion of 2017 results, please refer to the “Results of operations” section in Item 7, “Management Discussion and Analysis of Financial Condition and Results of Operations—Bank,” in the Company’s 2018 Form 10-K.

See Note 4 of the Consolidated Financial Statements for a discussion of guarantees and further information about ASB.

Average balance sheet and net interest margin. The following table provides a summary of average balances, including major categories of interest-earning assets and interest-bearing liabilities:

(dollars in thousands)	2019			2018			2017		
	Average balance	Interest income/expense	Yield/rate (%)	Average balance	Interest income/expense	Yield/rate (%)	Average balance	Interest income/expense	Yield/rate (%)
Assets:									
Interest-earning deposits	\$ 16,618	\$ 320	1.92	\$ 50,658	\$ 940	1.86	\$ 79,927	\$ 898	1.12
FHLB stock	9,716	350	3.60	9,726	351	3.60	10,770	208	1.93
Investment securities									
Taxable	1,406,564	31,178	2.22	1,503,036	35,862	2.39	1,265,240	27,291	2.16
Non-taxable	27,512	1,360	4.94	17,485	771	4.41	15,427	655	4.24
Total investment securities	1,434,076	32,538	2.27	1,520,521	36,633	2.41	1,280,667	27,946	2.18
Loans									
Residential 1-4 family	2,181,554	89,956	4.12	2,122,895	86,936	4.10	2,077,705	86,934	4.18
Commercial real estate	863,468	40,324	4.67	860,155	39,579	4.60	887,890	37,806	4.26
Home equity line of credit	1,043,479	38,826	3.72	944,065	34,634	3.67	889,360	30,001	3.37
Residential land	14,065	774	5.50	14,935	823	5.51	16,837	1,011	6.00
Commercial	620,206	27,950	4.51	579,765	26,689	4.60	631,170	27,405	4.34
Consumer	270,340	35,864	13.27	240,414	31,802	13.23	205,334	24,098	11.74
Total loans ^{1,2}	4,993,112	233,694	4.68	4,762,229	220,463	4.63	4,708,296	207,255	4.40
Total interest-earning assets ³	6,453,522	266,902	4.14	6,343,134	258,387	4.07	6,079,660	236,307	3.89
Allowance for loan losses	(54,640)			(53,593)			(55,629)		
Noninterest-earning assets	696,270			606,304			546,523		
Total Assets	\$7,095,152			\$6,895,845			\$6,570,554		
Liabilities and Shareholder's Equity:									
Savings	\$2,340,671	1,904	0.08	\$2,334,681	1,639	0.07	\$2,278,396	1,567	0.07
Interest-bearing checking	1,044,315	1,298	0.12	1,006,839	706	0.07	902,678	238	0.03
Money market	145,939	953	0.65	140,225	602	0.43	142,068	168	0.12
Time certificates	810,749	12,675	1.56	789,926	11,044	1.40	696,799	7,687	1.10
Total interest-bearing deposits	4,341,674	16,830	0.39	4,271,671	13,991	0.33	4,019,941	9,660	0.24
Advances from Federal Home Loan Bank	33,652	843	2.50	41,855	845	2.02	79,374	2,245	2.83
Securities sold under agreements to repurchase	79,647	767	0.96	99,162	703	0.71	97,535	251	0.26
Total interest-bearing liabilities	4,454,973	18,440	0.41	4,412,688	15,539	0.35	4,196,850	12,156	0.29
Noninterest bearing liabilities:									
Deposits	1,848,336			1,763,331			1,672,780		
Other	131,691			108,976			102,789		
Shareholder's equity	660,152			610,850			598,135		
Total Liabilities and Shareholder's Equity	\$7,095,152			\$6,895,845			\$6,570,554		
Net interest income		\$ 248,462			\$242,848			\$224,151	
Net interest margin (%) ⁴			3.85			3.83			3.69

¹ Includes loans held for sale, at lower of cost or fair value, of \$6.3 million, \$2.3 million and \$7.4 million as of December 31, 2019, 2018 and 2017, respectively.

² Includes recognition of net deferred loan fees of \$0.2 million, \$0.1 million and \$1.7 million for 2019, 2018 and 2017 respectively, together with interest accrued prior to suspension of interest accrual on nonaccrual loans.

³ For 2019, 2018 and 2017, the taxable-equivalent basis adjustments made to the table above were not material.

⁴ Defined as net interest income, on a fully taxable equivalent basis, as a percentage of average total interest-earning assets.

The following table shows the effect on net interest income of (1) changes in interest rates (change in weighted-average interest rate multiplied by prior year average balance) and (2) changes in volume (change in average balance multiplied by prior period weighted-average interest rate). Any remaining change is allocated to the above two categories on a pro rata basis.

(in thousands)	2019 vs. 2018			2018 vs. 2017		
	Rate	Volume	Total	Rate	Volume	Total
Interest income						
Interest-earning deposits	\$ 31	\$ (651)	\$ (620)	\$ 455	\$ (413)	\$ 42
FHLB stock	—	(1)	(1)	165	(22)	143
Investment securities						
Taxable	(2,462)	(2,222)	(4,684)	3,100	5,471	8,571
Non-taxable	102	487	589	27	89	116
Total investment securities	(2,360)	(1,735)	(4,095)	3,127	5,560	8,687
Loans						
Residential 1-4 family	454	2,566	3,020	(1,768)	1,770	2
Commercial real estate	595	150	745	2,972	(1,199)	1,773
Home equity line of credit	481	3,711	4,192	2,740	1,893	4,633
Residential land	(1)	(48)	(49)	(79)	(109)	(188)
Commercial	(539)	1,800	1,261	1,587	(2,303)	(716)
Consumer	96	3,966	4,062	3,284	4,420	7,704
Total loans	1,086	12,145	13,231	8,736	4,472	13,208
Total increase (decrease) in interest income	(1,243)	9,758	8,515	12,483	9,597	22,080
Interest expense						
Savings	(261)	(4)	(265)	—	(72)	(72)
Interest-bearing checking	(563)	(29)	(592)	(431)	(37)	(468)
Money market	(325)	(26)	(351)	(436)	2	(434)
Time certificates	(1,325)	(306)	(1,631)	(2,253)	(1,104)	(3,357)
Advances from Federal Home Loan Bank	(181)	183	2	528	872	1,400
Securities sold under agreements to repurchase	(219)	155	(64)	(448)	(4)	(452)
Total decrease (increase) in interest expense	(2,874)	(27)	(2,901)	(3,040)	(343)	(3,383)
Increase (decrease) in net interest income	\$ (4,117)	\$ 9,731	\$ 5,614	\$ 9,443	\$ 9,254	\$ 18,697

Earning assets, costing liabilities, contingencies and other factors. Earnings of ASB depend primarily on net interest income, which is the difference between interest earned on earning assets and interest paid on costing liabilities. The interest rate environment has been impacted by disruptions in the financial markets over a period of several years.

Loan originations and mortgage-backed securities are ASB's primary earning assets.

Loan portfolio. ASB's loan volumes and yields are affected by market interest rates, competition, demand for financing, availability of funds and management's responses to these factors. The following table sets forth the composition of ASB's loans held for investment:

December 31	2019		2018		2017		2016		2015	
(dollars in thousands)	Balance	% of total	Balance	% of total	Balance	% of total	Balance	% of total	Balance	% of total
Real estate: ¹										
Residential 1-4 family	\$ 2,178,135	42.6	\$ 2,143,397	44.3	\$ 2,118,047	45.3	\$ 2,048,051	43.2	\$ 2,069,665	44.8
Commercial real estate	824,830	16.1	748,398	15.4	733,106	15.7	800,395	16.9	690,561	14.9
Home equity line of credit	1,092,125	21.3	978,237	20.2	913,052	19.6	863,163	18.2	846,294	18.3
Residential land	14,704	0.3	13,138	0.3	15,797	0.3	18,889	0.4	18,229	0.4
Commercial construction	70,605	1.4	92,264	1.9	108,273	2.3	126,768	2.7	100,796	2.2
Residential construction	11,670	0.2	14,307	0.3	14,910	0.3	16,080	0.3	14,089	0.3
Total real estate	4,192,069	81.9	3,989,741	82.4	3,903,185	83.5	3,873,346	81.7	3,739,634	80.9
Commercial	670,674	13.1	587,891	12.1	544,828	11.7	692,051	14.6	758,659	16.4
Consumer	257,921	5.0	266,002	5.5	223,564	4.8	178,222	3.7	123,775	2.7
Total loans	5,120,664	100.0	4,843,634	100.0	4,671,577	100.0	4,743,619	100.0	4,622,068	100.0
Less: Deferred fees and discounts	512		(613)		(809)		(4,926)		(6,249)	
Allowance for loan losses	(53,355)		(52,119)		(53,637)		(55,533)		(50,038)	
Total loans, net	\$ 5,067,821		\$ 4,790,902		\$ 4,617,131		\$ 4,683,160		\$ 4,565,781	

¹ Includes renegotiated loans.

The increase in the loans balance in 2019 was primarily due to growth in the HELOC, commercial, commercial real estate and residential 1-4 family loan portfolios, which were the portfolios targeted as ASB continued its loan growth strategy of diversifying the loan portfolio with higher-spread, shorter-maturity loans and/or variable rate loans.

The increase in the loans balance in 2018 was primarily due to growth in the HELOC, consumer, commercial and residential 1-4 family loan portfolios, which were portfolios targeted in ASB's loan growth strategy.

The decrease in the loans balance in 2017 was primarily due to decreases in the commercial, commercial real estate, and commercial construction loan portfolios, partly offset by growth in the residential 1-4 family, HELOC, and consumer loan portfolios. The decrease in the commercial loan portfolio was primarily due to the strategic reductions in the portfolio, including a \$75 million reduction in ASB's nationally syndicated loan portfolio. The decrease in the commercial real estate loan portfolio was primarily due to paydown of a large commercial real estate credit. The growth in the residential 1-4 family, HELOC and consumer loan portfolios were consistent with ASB's loan growth strategy.

The increase in the loans balance in 2016 was primarily due to growth in the commercial real estate, consumer, commercial construction and HELOC loan portfolios as a result of demand for these loan types, partly offset by a decrease in the commercial and residential 1-4 family loan portfolios. The growth in the commercial real estate, consumer, commercial construction and HELOC loan portfolios was consistent with ASB's loan growth strategy. The decrease in the commercial loan portfolio was due to the strategic reduction of ASB's nationally syndicated loan portfolio by \$93 million. The decrease in the residential loan portfolio was due to ASB's decision to sell a portion of its loan production with low interest rates to control its interest rate risk.

The increase in the loans balance in 2015 was primarily due to growth in commercial real estate, HELOC and residential 1-4 family loan portfolios, partly offset by a decrease in the commercial loan portfolio. The growth in the commercial real estate, HELOC and residential loan portfolios was driven by demand for this loan type and was consistent with ASB's loan growth strategy.

The following table summarizes loans held for investment based upon contractually scheduled principal payments allocated to the indicated maturity categories:

December 31	2019			
	In 1 year or less	After 1 year through 5 years	After 5 years	Total
Due				
(in millions)				
Commercial – Fixed	\$ 73	\$ 135	\$ 37	\$ 245
Commercial – Adjustable	163	247	16	426
Total commercial	236	382	53	671
Commercial construction – Fixed	—	—	—	—
Commercial construction – Adjustable	26	27	18	71
Total commercial construction	26	27	18	71
Residential construction – Fixed	12	—	—	12
Residential construction – Adjustable	—	—	—	—
Total residential construction	12	—	—	12
Total loans – Fixed	85	135	37	257
Total loans – Adjustable	189	274	34	497
Total loans	\$ 274	\$ 409	\$ 71	\$ 754

Home equity — key credit statistics. Attention has been given by regulators and rating agencies to the potential for increased exposure to credit losses associated with HELOCs that were originated during the period of rapid home price appreciation between 2003 and 2007 as they have reached the end of their 10-year, interest-only payment periods. Once the interest only payment period has ended, payments are reset to include principal repayments along with interest. ASB does not have a large exposure to HELOCs originated between 2003 and 2007. Nearly all of ASB’s HELOC originations prior to 2008 consisted of amortizing equity lines that have structured principal payments during the draw period. These older equity lines represent 1% of the HELOC portfolio and are included in the amortizing balances identified in the loan portfolio table below.

December 31	2019	2018
Outstanding balance of home equity loans (in thousands)	\$ 1,092,125	\$ 978,237
Percent of portfolio in first lien position	53.7%	49.2%
Net charge-off ratio	0.01%	0.01%
Delinquency ratio	0.27%	0.46%

December 31, 2019	Total	Interest only	End of draw period – interest only			Current amortizing
			2019-2020	2021-2023	Thereafter	
Outstanding balance (in thousands)	\$ 1,092,125	\$ 814,174	\$ 42,694	\$ 118,153	\$ 653,327	\$ 277,951
% of total	100%	75%	4%	11%	60%	25%

The HELOC portfolio makes up 21% of the total loan portfolio and is generally an interest-only revolving loan for a 10-year period, after which time the HELOC outstanding balance converts to a fully amortizing variable-rate term loan with a 20-year amortization period. This product type comprises 76% of the total HELOC portfolio and is the current product offering. Borrowers also have a “Fixed Rate Loan Option” to convert a part of their available line of credit into a 5, 7 or 10-year fully amortizing fixed-rate loan with level principal and interest payments. As of December 31, 2019, approximately 23% of the portfolio balances were amortizing loans under the Fixed Rate Loan Option.

Loan portfolio risk elements. When a borrower fails to make a required payment on a loan and does not cure the delinquency promptly, the loan is classified as delinquent. If delinquencies are not cured promptly, ASB normally commences a collection action, including foreclosure proceedings in the case of real estate secured loans. In a foreclosure action, the property collateralizing the delinquent debt is sold at a public auction in which ASB may participate as a bidder to protect its interest. If ASB is the successful bidder, the property is classified as real estate owned until it is sold. As of December 31, 2019 and 2018, ASB had nil and \$0.1 million, respectively, of real estate acquired in settlement of loans.

In addition to delinquent loans, other significant lending risk elements include: (1) loans which accrue interest and are 90 days or more past due as to principal or interest, (2) loans accounted for on a nonaccrual basis (nonaccrual loans), and (3) loans on which various concessions are made with respect to interest rate, maturity, or other terms due to the inability of the borrower to service the obligation under the original terms of the agreement (troubled debt restructured loans). ASB loans that were 90 days or

more past due on which interest was being accrued as of December 31, 2019, 2018, 2017, 2016 and 2015 were immaterial or nil. The following table sets forth certain information with respect to nonaccrual and troubled debt restructured (TDR) loans:

December 31	2019	2018	2017	2016	2015
(dollars in thousands)					
Nonaccrual loans—					
Real estate:					
Residential 1-4 family	\$ 11,395	\$ 12,037	\$ 12,598	\$ 11,154	\$ 20,554
Commercial real estate	195	—	—	223	1,188
Home equity line of credit	6,638	6,348	4,466	3,080	2,254
Residential land	448	436	841	878	970
Commercial construction	—	—	—	—	—
Residential construction	—	—	—	—	—
Total real estate	18,676	18,821	17,905	15,335	24,966
Commercial	5,947	4,278	3,069	6,708	20,174
Consumer	5,113	4,196	2,617	1,282	895
Total nonaccrual loans	\$ 29,736	\$ 27,295	\$ 23,591	\$ 23,325	\$ 46,035
Troubled debt restructured loans not included above—					
Real estate:					
Residential 1-4 family	\$ 9,869	\$ 10,194	\$ 10,982	\$ 14,450	\$ 13,962
Commercial real estate	853	915	1,016	1,346	—
Home equity line of credit	10,376	11,597	6,584	4,934	2,467
Residential land	2,644	1,622	425	2,751	4,713
Commercial construction	—	—	—	—	—
Residential construction	—	—	—	—	—
Total real estate	23,742	24,328	19,007	23,481	21,142
Commercial	2,614	1,527	1,741	14,146	1,104
Consumer	57	62	66	10	—
Total troubled debt restructured loans	\$ 26,413	\$ 25,917	\$ 20,814	\$ 37,637	\$ 22,246

In 2019, nonaccrual loans increased \$2.4 million primarily due to increases in commercial and consumer nonaccrual loans of \$1.7 million and \$0.9 million, respectively. ASB evaluates a restructured loan transaction to determine if the borrower is in financial difficulty and if the restructured terms are considered concessions—typically terms that are out of market, beyond normal or reasonable standards, or otherwise not available to a non-troubled borrower in the normal marketplace. A loan classified as TDR must meet both criteria of financial difficulty and concession. Accruing TDR loans increased by \$0.5 million primarily due to increases of \$1.1 million and \$1.0 million of commercial and residential land loans, respectively, classified as TDR, partially offset by a \$1.2 million decrease in HELOC loans classified as TDR.

In 2018, nonaccrual loans increased \$3.7 million primarily due to increases in HELOC, consumer, and commercial nonaccrual loans of \$1.9 million, \$1.6 million and \$1.2 million, respectively. Accruing TDR loans increased by \$5.1 million primarily due to a \$5.0 million increase in HELOC loans classified as TDR.

In 2017, nonaccrual loans increased slightly by \$0.3 million primarily due to higher nonaccrual residential 1-4 family, HELOC and consumer loans of \$1.4 million, \$1.4 million and \$1.3 million, respectively. Nonaccrual commercial loans decreased by \$3.6 million. Accruing TDR loans decreased by \$16.8 million in 2017 primarily due to decreases of \$12.4 million, \$3.5 million, and \$2.3 million of commercial, residential 1-4 family, and residential land loans, respectively, classified as TDRs.

In 2016, nonaccrual loans decreased \$22.7 million primarily due to upgrades of specific commercial and commercial real estate loans, payoff of a troubled commercial loan and a segment of residential mortgages transferred to held-for-sale. Nonaccrual commercial and residential loans decreased by \$13.5 million and \$9.4 million, respectively. Accruing TDR loans increased \$15.4 million in 2016 primarily due to increases of \$13.0 million and \$2.5 million of commercial and HELOC loans, respectively, classified as TDR. The increase in commercial loans classified as TDR was primarily due to two commercial credits being classified as TDR.

Impact of nonperforming loans on interest income. The following table presents the gross interest income for both nonaccrual and restructured loans that would have been recognized if such loans had been current in accordance with their original contractual terms, and had been outstanding throughout the period or since origination if held for only part of the period. The table also presents the interest income related to these loans that was actually recognized for the period.

(dollars in millions)	Year ended December 31, 2019
Gross amount of interest income that would have been recorded if the loans had been current in accordance with original contractual terms, and had been outstanding throughout the period or since origination, if held for only part of the period ¹	\$ 3
Interest income actually recognized	2
Total interest income foregone	\$ 1

¹ Based on the contractual rate that was being charged at the time the loan was restructured or placed on nonaccrual status.

See “Allowance for loan losses” in Note 4 of the Consolidated Financial Statements for information with respect to nonperforming assets.

Allowance for loan losses. See “Allowance for loan losses” in Note 4 of the Consolidated Financial Statements for the tables which sets forth the allocation of ASB’s allowance for loan losses. Using an effective date of January 1, 2020, ASB will adopt *ASU 2016-13, Financial Instruments - Measurement of Current Expected Credit Losses on Financial Instruments*, which will modify the accounting for the allowance for loan losses from an incurred loss model to an expected loss model (see Note 1, “Summary of Significant Accounting Policies” of the Consolidated Financial Statements).

The following table presents the changes in the allowance for loan losses:

(dollars in thousands)	2019	2018	2017	2016	2015
Allowance for loan losses, January 1	\$ 52,119	\$ 53,637	\$ 55,533	\$ 50,038	\$ 45,618
Provision for loan losses	23,480	14,745	10,901	16,763	6,275
Charge-offs					
Real estate:					
Residential 1-4 family	26	128	826	639	356
Commercial real estate	—	—	—	—	—
Home equity line of credit	144	353	14	112	205
Residential land	4	18	210	138	—
Commercial construction	—	—	—	—	—
Residential construction	—	—	—	—	—
Total real estate	174	499	1,050	889	561
Commercial	6,811	2,722	4,006	5,943	1,074
Consumer	21,677	17,296	11,757	7,413	4,791
Total charge-offs	28,662	20,517	16,813	14,245	6,426
Recoveries					
Real estate:					
Residential 1-4 family	854	74	157	421	226
Commercial real estate	—	—	—	—	—
Home equity line of credit	17	257	308	59	80
Residential land	229	179	482	461	507
Commercial construction	—	—	—	—	—
Residential construction	—	—	—	—	—
Total real estate	1,100	510	947	941	813
Commercial	2,351	2,136	1,852	1,093	2,773
Consumer	2,967	1,608	1,217	943	985
Total recoveries	6,418	4,254	4,016	2,977	4,571
Net charge-offs	22,244	16,263	12,797	11,268	1,855
Allowance for loan losses, December 31	\$ 53,355	\$ 52,119	\$ 53,637	\$ 55,533	\$ 50,038
Ratio of allowance for loan losses to loans held for investment	1.04%	1.08%	1.15%	1.17%	1.08%
Ratio of provision for loan losses during the year to average total loans	0.47%	0.31%	0.23%	0.36%	0.14%
Ratio of net charge-offs during the year to average total loans	0.45%	0.34%	0.27%	0.24%	0.04%

The following table sets forth the allocation of ASB's allowance for loan losses and the percentage of loans in each category to total loans:

December 31 (dollars in thousands)	2019			2018			2017		
	Allowance balance	Allowance to loan receivable %	Loan receivable % of total	Allowance balance	Allowance to loan receivable %	Loan receivable % of total	Allowance balance	Allowance to loan receivable %	Loan receivable % of total
Real estate:									
Residential 1-4 family	\$ 2,380	0.11	42.6	\$ 1,976	0.09	44.3	\$ 2,902	0.14	45.3
Commercial real estate	15,053	1.82	16.1	14,505	1.94	15.4	15,796	2.15	15.7
Home equity line of credit	6,922	0.63	21.3	6,371	0.65	20.2	7,522	0.82	19.6
Residential land	449	3.05	0.3	479	3.65	0.3	896	5.67	0.3
Commercial construction	2,097	2.97	1.4	2,790	3.02	1.9	4,671	4.31	2.3
Residential construction	3	0.03	0.2	4	0.03	0.3	12	0.08	0.3
Total real estate	26,904	0.64	81.9	26,125	0.65	82.4	31,799	0.81	83.5
Commercial	10,245	1.53	13.1	9,225	1.57	12.1	10,851	1.99	11.7
Consumer	16,206	6.28	5.0	16,769	6.30	5.5	10,987	4.91	4.8
Total allowance for loan losses	\$ 53,355	1.04	100.0	\$ 52,119	1.08	100.0	\$ 53,637	1.15	100.0

December 31 (dollars in thousands)	2016			2015		
	Allowance balance	Allowance to loan receivable %	Loan receivable % of total	Allowance balance	Allowance to loan receivable %	Loan receivable % of total
Real estate:						
Residential 1-4 family	\$ 2,873	0.14	43.2	\$ 4,186	0.20	44.8
Commercial real estate	16,004	2.00	16.9	11,342	1.64	14.9
Home equity line of credit	5,039	0.58	18.2	7,260	0.86	18.3
Residential land	1,738	9.20	0.4	1,671	9.17	0.4
Commercial construction	6,449	5.09	2.7	4,461	4.43	2.2
Residential construction	12	0.07	0.3	13	0.09	0.3
Total real estate	32,115	0.83	81.7	28,933	0.77	80.9
Commercial	16,618	2.40	14.6	17,208	2.27	16.4
Consumer	6,800	3.82	3.7	3,897	3.15	2.7
Total allowance for loan losses	\$ 55,533	1.17	100.0	\$ 50,038	1.08	100.0

In 2019, ASB's allowance for loan losses increased by \$1.2 million primarily due to an increase in loan loss reserves for the commercial, commercial real estate and HELOC loan portfolios as a result of loan growth in those loan portfolios. Total delinquencies of \$19.8 million at December 31, 2019 was a decrease of \$6.2 million compared to total delinquencies of \$26.0 million at December 31, 2018 primarily due to decreases in delinquent residential 1-4 family and HELOC loans. The ratio of delinquent loans to total loans decreased from 0.54% of total outstanding loans at December 31, 2018 to 0.39% of total outstanding loans at December 31, 2019. Net charge-offs for 2019 were \$22.2 million, an increase of \$5.9 million compared to \$16.3 million at December 31, 2018 primarily due to an increase in consumer loan portfolio charge-offs as result of ASB's unsecured consumer loan portfolio product offering with risk-based pricing and net charge-offs for an impaired commercial credit. ASB's provision for loan losses was \$23.5 million, an increase of \$8.7 million compared to the provision for loan losses of \$14.7 million for 2018. The increase was due to additional reserves for the consumer and credit scored loan portfolios, and an impaired commercial credit.

In 2018, ASB's allowance for loan losses decreased by \$1.5 million primarily due to lower loan loss reserves required for the commercial, commercial construction, commercial real estate and HELOC loan portfolios as a result of improving credit trends, partly offset by additional loan loss reserves for the consumer loan portfolio. Total delinquencies of \$26.0 million at December 31, 2018 was an increase of \$2.4 million compared to total delinquencies of \$23.6 million at December 31, 2017 primarily due to increases in delinquent consumer, HELOC and residential 1-4 family loans, partly offset by decreases in delinquent commercial loans. The ratio of delinquent loans to total loans increased slightly from 0.51% of total outstanding loans at December 31, 2017 to 0.54% of total outstanding loans at December 31, 2018. Net charge-offs for 2018 were \$16.3 million, an increase of \$3.5 million compared to \$12.8 million at December 31, 2017 primarily due to an increase in consumer loan portfolio charge-offs as a result of ASB's strategic expansion of its unsecured consumer loan portfolio product offering with risk-based pricing. ASB's

provision for loan losses was \$14.7 million, an increase of \$3.8 million compared to the provision for loan losses of \$10.9 million for 2017. The increase was due to additional reserves for the consumer loan portfolio, partly offset by lower reserves required for the commercial, commercial construction, commercial real estate and HELOC loan portfolios as result of improved credit quality in those loan portfolios.

In 2017, ASB's allowance for loan losses decreased by \$1.9 million primarily due to lower loan loss reserves required for the commercial, commercial construction, and commercial real estate loan portfolios as a result of a decrease in the portfolio balances and improving credit trends, partly offset by additional loan loss reserves for the consumer and HELOC loan portfolios. Total delinquencies of \$23.6 million at December 31, 2017 was a slight increase of \$0.5 million compared to total delinquencies of \$23.1 million at December 31, 2016 primarily due to increases in delinquent commercial and consumer loans, offset by decreases in delinquent residential 1-4 family and commercial real estate loans. The ratio of delinquent loans to total loans increased slightly from 0.49% of total loans outstanding at December 31, 2016 to 0.51% of total loans outstanding at December 31, 2017. Net charge-offs for 2017 were \$12.8 million, an increase of \$1.5 million compared to \$11.3 million for 2016 primarily due to an increase in consumer loan portfolio charge-offs as a result of the strategic expansion of ASB's unsecured consumer loan product offering with risk-based pricing. ASB's provision for loan losses was \$10.9 million, a decrease of \$5.9 million compared to the provision for loan losses of \$16.8 million for 2016. The decrease was primarily due to the release of reserves for commercial real estate and commercial loan portfolios due to lower outstanding balances and improved credit quality, partly offset by an increase in loss reserves for the consumer loan portfolio.

In 2016, ASB's allowance for loan losses increased by \$5.5 million primarily due to growth in the commercial real estate and consumer loan portfolios and increases in reserves for the commercial real estate and unsecured consumer loan portfolios. Total delinquencies of \$23.1 million at December 31, 2016 was \$3.0 million lower than total delinquencies of \$26.1 million at December 31, 2015 primarily due to the movement of \$6 million of residential loans to held-for-sale. The ratio of delinquent loans to total loans decreased from 0.57% of total loans outstanding at December 31, 2015 to 0.49% of total loans outstanding at December 31, 2016. Net charge-offs for 2016 were \$11.3 million, an increase of \$9.4 million compared to \$1.9 million for 2015 primarily due to charge-offs of specific commercial loans and an increase in consumer loan charge-offs as a result of the strategic expansion of ASB's unsecured consumer loan product offering with risk-based pricing. ASB's provision for loan losses was \$16.8 million for 2016, an increase of \$10.5 million compared to the provision for loan losses of \$6.3 million for 2015. The increase in provision for loan losses was driven by growth in the commercial real estate and consumer loan portfolios as well as specific reserves for a few commercial loans.

In 2015, ASB's allowance for loan losses increased by \$4.4 million primarily due to growth in the commercial real estate loan portfolio (\$159 million or 29.8% growth in outstanding balances) and increases in reserves for commercial loans. Overall loan quality remained strong as total delinquencies of \$26.1 million at December 31, 2015 was a slight increase of \$0.6 million compared to total delinquencies of \$25.5 million at December 31, 2014 primarily due to an increase in delinquent consumer loans. The ratio of delinquent loans to total loans decreased slightly from 0.58% of total loans outstanding at December 31, 2014 to 0.57% of total loans outstanding at December 31, 2015. Net charge-offs for 2015 were \$1.9 million, an increase of \$1.3 million compared to \$0.6 million for 2014 primarily due to an increase in consumer loan charge-offs as result of the strategic expansion of ASB's unsecured consumer loan product offering with risk-based pricing. ASB's provision for loan losses was \$6.3 million for 2015, an increase of \$0.2 million compared to the provision for loan losses of \$6.1 million for 2014.

Investment securities. ASB's investment portfolio was comprised as follows:

December 31 (dollars in thousands)	2019		2018		2017	
	Balance	% of total	Balance	% of total	Balance	% of total
U.S. Treasury and federal agency obligations	\$ 117,787	9%	\$ 154,349	10%	\$ 184,298	13%
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	1,165,836	85	1,303,291	85	1,245,988	86
Corporate bonds	60,057	4	49,132	3	—	—
Mortgage revenue bonds	28,597	2	23,636	2	15,427	1
Total investment securities	\$ 1,372,277	100%	\$ 1,530,408	100%	\$ 1,445,713	100%

Currently, ASB's investment portfolio consists of U.S. Treasury and federal agency obligations, mortgage-backed securities, corporate bonds and mortgage revenue bonds. ASB owns mortgage-backed securities issued or guaranteed by the U.S. government agencies or sponsored agencies, including the Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC), Government National Mortgage Association (GNMA) and Small Business Administration (SBA). The weighted-average yield on investments during 2019, 2018 and 2017 was 2.27%, 2.41% and 2.18%, respectively. ASB did not maintain a portfolio of securities held for trading during 2019, 2018 and 2017.

As of December 31, 2019, 2018 and 2017, ASB had \$139.5 million, \$141.9 million and \$44.5 million, respectively, of investment securities that were purchased and classified as held-to-maturity. The investment securities were classified as held-to-maturity to enhance ASB's capital management in a rising rate environment. ASB considers the held-to-maturity classification of these investment securities to be appropriate as ASB has the positive intent and ability to hold these securities to maturity.

Principal and interest on mortgage-backed securities issued by FNMA, FHLMC, GNMA and SBA are guaranteed by the issuer and, in the case of GNMA and SBA, backed by the full faith and credit of the U.S. government. U.S. Treasury securities are also backed by the full faith of the U.S. government. The increase in investment securities was due to the purchase of agency mortgage-backed and credit securities, corporate bonds, and a mortgage revenue bond with excess liquidity.

The net unrealized losses on ASB's investment securities were primarily caused by movements in interest rates. All contractual cash flows of those investments are guaranteed by an agency of the U.S. government. Based upon ASB's evaluation at December 31, 2019, 2018, and 2017 there was no indicated impairment as ASB expects to collect the contractual cash flows for these investments. See "Investment securities" in Note 1 of the Consolidated Financial Statements for a discussion of securities impairment assessment.

As of December 31, 2019, 2018, and 2017, ASB did not have any private-issue mortgage-backed securities. ASB does not have any exposure to securities backed by subprime mortgages. See "Investment securities" in Note 4 of the Consolidated Financial Statements for a discussion of other-than-temporarily impaired securities.

The following table summarizes the current amortized cost of ASB's investment portfolio (excluding stock of the FHLB of Des Moines, which has no contractual maturity) and weighted average yields as of December 31, 2019. Mortgage-backed securities are shown separately because they are typically paid in monthly installments over a number of years.

(dollars in millions)	In 1 year or less	After 1 year through 5 years	After 5 years through 10 years	After 10 years	Mortgage- backed securities	Total ¹
U.S. Treasury and federal agency obligations	\$ 47	\$ 41	\$ 29			\$ 117
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies					1,164	1,164
Corporate bonds		35	24			59
Mortgage revenue bonds ²	13			16		29
	\$ 60	\$ 76	\$ 53	\$ 16	\$ 1,164	\$ 1,369
Weighted average yield	2.26%	2.75%	2.44%	3.17%	2.44%	2.54%

¹ As of December 31, 2019, no investment exceeded 10% of ASB's shareholder's equity.

² Weighted average yield on the mortgage revenue bonds is computed on a tax equivalent basis using a federal statutory tax rate of 21%.

Stock in FHLB. As of December 31, 2019, 2018 and 2017, ASB's stock in FHLB of Des Moines (\$8 million, \$10 million and \$10 million, respectively) was carried at cost because it can only be redeemed at par. The amount that ASB is required to invest in FHLB stock is determined by FHLB requirements. In 2019, 2018 and 2017, ASB received cash dividends of \$349,000, \$350,000 and \$208,000, respectively, on its FHLB Stock.

Deposits and other borrowings. As of December 31, 2019 and 2018, ASB's costing liabilities consisted of 98% deposits and 2% other borrowings.

ASB's deposits are obtained primarily from residents of Hawaii. Net deposit inflow or outflow, measured as the year-over-year difference in year-end deposits, was an inflow of \$113 million in 2019, compared to an inflow of \$268 million in 2018 and \$342 million in 2017.

The following table presents the average deposits and average rates by type of deposit. Average balances have been calculated using the average daily balances.

Years ended December 31 (dollars in thousands)	2019			2018			2017		
	Average balance	% of total interest-bearing deposits	Weighted average rate %	Average balance	% of total interest-bearing deposits	Weighted average rate %	Average balance	% of total interest-bearing deposits	Weighted average rate %
Interest-bearing deposit liabilities									
Savings	\$ 2,340,671	53.9%	0.08%	\$ 2,334,681	54.6%	0.07%	\$ 2,278,396	56.7%	0.07%
Checking	1,044,315	24.0	0.12	1,006,839	23.6	0.07	902,678	22.5	0.03
Money market	145,939	3.4	0.65	140,225	3.3	0.43	142,068	3.5	0.12
Certificate	810,749	18.7	1.56	789,926	18.5	1.40	696,799	17.3	1.10
Total interest-bearing deposit liabilities	\$ 4,341,674	100.0%	0.39%	\$ 4,271,671	100.0%	0.33%	\$ 4,019,941	100.0%	0.24%
Total noninterest-bearing demand deposit liabilities	1,848,336			1,763,331			1,672,780		
Total deposit liabilities	\$ 6,190,010			\$ 6,035,002			\$ 5,692,721		

The following table presents the amount of time certificates of deposit of \$100,000 or more, segregated by time remaining until maturity:

(in thousands)	Amount
Three months or less	\$ 204,100
Greater than three months through six months	72,436
Greater than six months through twelve months	64,370
Greater than twelve months	115,604
	\$ 456,510

Other borrowings consist of advances from the FHLB and securities sold under agreements to repurchases. See “Other borrowings” in Note 4 of the Consolidated Financial Statements. ASB may obtain advances from the FHLB of Des Moines provided that certain standards related to creditworthiness have been met. Advances are collateralized by a blanket pledge of certain notes held by ASB and the mortgages securing them. To the extent that advances exceed the amount of mortgage loan collateral pledged to the FHLB of Des Moines, the excess must be covered by qualified marketable securities held under the control of and at the FHLB of Des Moines or at an approved third-party custodian. FHLB advances generally are available to meet seasonal and other withdrawals of deposit accounts, to expand lending and to assist in the effort to improve asset and liability management. FHLB advances are made pursuant to several different credit programs offered from time to time by the FHLB of Des Moines. Securities sold under agreements to repurchase are accounted for as financing transactions and the obligations to repurchase these securities are recorded as liabilities in the consolidated balance sheets. ASB pledges investment securities as collateral for securities sold under agreements to repurchase. All such agreements are subject to master netting arrangements, which provide for conditional right of set-off in case of default by either party; however, ASB presents securities sold under agreements to repurchase on a gross basis in the balance sheet.

The increase in other borrowings in 2019 was due to an increase in business repurchase agreements, partly offset by the payoff of FHLB advances.

The decrease in other borrowings in 2018 was due to the payoff of a maturing FHLB advance and a decrease in business repurchase agreements. The decrease in other borrowings in 2017 was due to the payoff of a maturing FHLB advance, offset by an increase in business repurchase agreements.

As of December 31, 2019, the unused borrowing capacity with the FHLB of Des Moines was \$2.3 billion. The FHLB of Des Moines continues to be an important source of liquidity for ASB. See “Liquidity and capital resources” below for changes in the unused borrowing capacity with the FHLB of Des Moines.

Other factors. Interest rate risk is a significant risk of ASB’s operations and also represents a market risk factor affecting the fair value of ASB’s investment securities. Increases and decreases in prevailing interest rates generally translate into decreases and increases in the fair value of the investment securities, respectively. In addition, changes in credit spreads also impact the fair values of the investment securities.

As of December 31, 2019, ASB had an unrealized gain, net of taxes, on available-for-sale investment securities (including securities pledged for repurchase agreements) in AOCI of \$2.5 million compared to an unrealized loss, net of taxes, of \$24.4 million as of December 31, 2018. See “Quantitative and Qualitative Disclosures About Market Risk.”

Legislation and regulation. ASB is subject to extensive regulation, principally by the OCC and the FDIC. Depending on ASB’s level of regulatory capital and other considerations, these regulations could restrict the ability of ASB to compete with other institutions and to pay dividends to its shareholder. See the discussion below under “Liquidity and capital resources.” Also see “Federal Deposit Insurance Corporation Assessment” in Note 4 of the Consolidated Financial Statements.

Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act). Regulation of the financial services industry, including regulation of HEI, ASB Hawaii and ASB, has changed and will continue to change as a result of the enactment of the Dodd-Frank Act, which became law in July 2010. Importantly for HEI, ASB Hawaii and ASB, under the Dodd-Frank Act all of the functions of the OTS transferred on July 21, 2011 to the OCC, the FDIC, the FRB and the Consumer Financial Protection Bureau (Bureau). Supervision and regulation of HEI and ASB Hawaii, as thrift holding companies, moved to the FRB, and supervision and regulation of ASB, as a federally chartered savings bank, moved to the OCC. While the laws and regulations applicable to HEI and ASB did not generally change, the applicable laws and regulations are being interpreted, and new and amended regulations may be adopted, by the FRB, the OCC and the Bureau. In addition, HEI will continue to be required to serve as a source of strength to ASB in the event of its financial distress. The Dodd-Frank Act also imposed new restrictions on the ability of a savings bank to pay dividends should it fail to remain a qualified thrift lender. At all times during 2019, ASB was a qualified thrift lender.

ASB may also be subject to new state regulation because of a provision in the Dodd-Frank Act that acknowledges that a federal savings bank may be subject to state regulation and allows federal law to preempt a state consumer financial law on a “case by case” basis only when (1) the state law would have a discriminatory effect on the bank compared to that on a bank chartered in that state, (2) the state law prevents or significantly interferes with a bank’s exercise of its power or (3) the state law is preempted by another federal law.

Final Capital Rules. On July 2, 2013, the FRB finalized its rule implementing the Basel III regulatory capital framework. The final rule would apply to banking organizations of all sizes and types regulated by the FRB and the OCC, except bank holding companies subject to the FRB’s Small Bank Holding Company Policy Statement and Savings & Loan Holding Companies (SLHCs) substantially engaged in insurance underwriting or commercial activities. HEI currently meets the requirements of the exemption as a top-tier grandfathered unitary SLHC that derived, as of June 30 of the previous calendar year, either 50% or more of its total consolidated assets or 50% or more of its total revenues on an enterprise-wide basis (calculated under GAAP) from activities that are not financial in nature pursuant to Section 4(k) of the Bank Holding Company Act. The FRB is temporarily excluding these SLHCs from the final rule while it considers a proposal relating to capital and other requirements for SLHC intermediate holding companies (such as ASB Hawaii). The FRB indicated that it would release a proposal on intermediate holding companies that would specify the criteria for establishing and transferring activities to intermediate holding companies and propose to apply the FRB’s capital requirements to such intermediate holding companies. The FRB has not yet issued such a proposal, or a proposal on how to apply the Basel III capital rules to SLHCs that are substantially engaged in commercial or insurance underwriting activities, such as grandfathered unitary SLHCs like HEI.

Pursuant to the final rule and consistent with the proposals, all banking organizations, including covered holding companies, would initially be subject to the following minimum regulatory capital requirements: a common equity Tier 1 capital ratio of 4.5%, a Tier 1 capital ratio of 6%, a total capital ratio of 8% of risk-weighted assets and a tier 1 leverage ratio of 4%, and these requirements would increase in subsequent years. In order to avoid restrictions on capital distributions and discretionary bonus payments to executive officers, the final rule requires a banking organization to hold a buffer of common equity tier 1 capital above its minimum capital requirements in an amount greater than 2.5% of total risk-weighted assets (capital conservation buffer). In addition, a countercyclical capital buffer would expand the capital conservation buffer by up to 2.5% of a banking organization’s total risk-weighted assets for advanced approaches banking organizations. The final rule would establish qualification criteria for common equity, additional tier 1 and tier 2 capital instruments that help to ensure their ability to absorb losses. All banking organizations would be required to calculate risk-weighted assets under the standardized approach, which harmonizes the banking agencies’ calculation of risk-weighted assets and addresses shortcomings in capital requirements identified by the agencies. The phased-in effective dates of the capital requirements under the final rule are:

Minimum Capital Requirements

Effective dates	1/1/2015	1/1/2016	1/1/2017	1/1/2018	1/1/2019
Capital conservation buffer		0.625%	1.25%	1.875%	2.50%
Common equity Tier 1 ratio + conservation buffer	4.50%	5.125%	5.75%	6.375%	7.00%
Tier 1 capital ratio + conservation buffer	6.00%	6.625%	7.25%	7.875%	8.50%
Total capital ratio + conservation buffer	8.00%	8.625%	9.25%	9.875%	10.50%
Tier 1 leverage ratio	4.00%	4.00%	4.00%	4.00%	4.00%
Countercyclical capital buffer — not applicable to ASB		0.625%	1.25%	1.875%	2.50%

The final rule was effective January 1, 2015 for ASB. As of December 31, 2019, ASB met the new capital requirements with a Common equity Tier-1 ratio of 13.2%, a Tier-1 capital ratio of 13.2%, a Total capital ratio of 14.3% and a Tier-1 leverage ratio of 9.1%.

Subject to the timing and final outcome of the FRB's SLHC intermediate holding company proposal, HEI anticipates that the capital requirements in the final rule will eventually be effective for HEI or ASB Hawaii as well. If the fully phased-in capital requirements were currently applicable to HEI, management believes HEI would satisfy the capital requirements, including the fully phased-in capital conservation buffer. Management cannot predict what final rule the FRB may adopt concerning intermediate holding companies or their impact on ASB Hawaii, if any.

Covered Savings Associations. On May 24, 2019, the OCC issued a final rule to allow federal savings associations with total consolidated assets of \$20 billion or less, as reported by the association to the OCC on its call report as of December 31, 2017, to elect to operate as covered savings associations. A covered savings association generally has the same rights and privileges as a national bank that has its main office situated in the same location as the home office of the covered savings association, with some exceptions. It is subject to the same duties, restrictions, penalties, liabilities, conditions, and limitations that apply to a national bank, with some exceptions, and must comply with certain rules and regulations applicable to the powers and investments of a national bank. A covered savings association is not required to comply with the lending and investment limits in HOLA and is not required to be a qualified thrift lender under HOLA. Finally, a covered savings association is not permitted to retain or engage in any subsidiaries, assets, or activities that are not permissible for a national bank. ASB has initiated a preliminary examination of the benefits and disadvantages of such an election with the preservation of being held by a unitary thrift holding company in mind. ASB is awaiting official FRB commentary, and has not reached a decision on the election.

Liquidity and capital resources.

December 31	2019	% change	2018	% change
(dollars in millions)				
Total assets	\$ 7,233	3	\$ 7,028	3
Investment securities	1,372	(10)	1,530	6
Loans held for investment, net	5,068	6	4,791	4
Deposit liabilities	6,272	2	6,159	5
Other bank borrowings	115	5	110	(42)

As of December 31, 2019, ASB was one of Hawaii's largest financial institutions based on assets of \$7.2 billion and deposits of \$6.3 billion.

ASB's principal sources of liquidity are customer deposits, borrowings and the maturity and repayment of portfolio loans and securities. ASB's deposits as of December 31, 2019 were \$113 million higher than December 31, 2018. ASB's sources of borrowings include advances from the FHLB and securities sold under agreements to repurchase from broker/dealers and commercial account holders. As of December 31, 2019, ASB had no FHLB borrowings outstanding. ASB is approved to borrow from the FHLB up to 35% of ASB's assets to the extent it provides qualifying collateral and holds sufficient FHLB stock. As of December 31, 2019, ASB's unused FHLB borrowing capacity was approximately \$2.3 billion with no FHLB borrowings outstanding. In February 2020, the FHLB of Des Moines notified ASB that certain assets would no longer qualify as collateral for FHLB advances, reducing ASB's total FHLB borrowing capacity to approximately \$1.5 billion. The notice included high-quality home equity lines of credit and was technical in nature and unrelated to the credit quality of the home equity loans, of which approximately 54% are in first lien position. ASB is working with the FHLB to understand the nature of the disqualification of those assets as collateral and re-establishing eligibility. Although the reduction in borrowing capacity will not impact ASB's operations, ASB is evaluating other assets to pledge as collateral to increase its reserve borrowing capacity with the FHLB. Over the past 10 years, the maximum amount outstanding as of any quarter end was \$110 million. As of December 31, 2019, securities sold under agreements to repurchase totaled \$115 million, representing 1.6% of assets. ASB utilizes deposits, advances from the

FHLB and securities sold under agreements to repurchase to fund maturing and withdrawn deposits, repay maturing borrowings, fund existing and future loans and purchase investment and mortgage-backed securities. As of December 31, 2019, ASB had commitments to borrowers for loans and unused lines and letters of credit of \$1.9 billion, of which, commitments to lend to borrowers whose loan terms have been modified in troubled debt restructurings were nil. Management believes ASB's current sources of funds will enable it to meet these obligations while maintaining liquidity at satisfactory levels.

As of December 31, 2019 and 2018, ASB had \$29.7 million and \$27.3 million of loans on nonaccrual status, respectively, or 0.6% of net loans outstanding. As of December 31, 2019 and 2018, ASB had nil and \$0.4 million, respectively, of real estate acquired in settlement of loans.

In 2019, operating activities provided cash of \$110 million. Net cash of \$120 million was used by investing activities primarily due to a net increase in loans receivable of \$300 million, purchases of available-for-sale investment securities of \$108 million, capital expenditures of \$24 million, purchases of held-to-maturity investment securities of \$13 million, contributions to low-income housing investments of \$7 million and purchases of bank owned life insurance of \$4 million, partly offset by receipt of repayments from available-for-sale investment securities of \$273 million, proceeds from the sale of real estate of \$21 million, proceeds from the sale of available-for-sale investment securities of \$20 million, repayments from held-to-maturity investment securities of \$16 million and proceeds from the redemption of bank owned life insurance of \$6 million. Financing activities provided net cash of \$62 million primarily due to a net increase in deposits of \$113 million and a net increase in retail repurchase agreements of \$50 million, partly offset by a net decrease in FHLB advances of \$45 million and common stock dividends to HEI (through ASB Hawaii) of \$56 million.

ASB believes that maintaining a satisfactory regulatory capital position provides a basis for public confidence, affords protection to depositors, helps to ensure continued access to capital markets on favorable terms and provides a foundation for growth. FDIC regulations restrict the ability of financial institutions that are not well-capitalized to compete on the same terms as well-capitalized institutions, such as by offering interest rates on deposits that are significantly higher than the rates offered by competing institutions. As of December 31, 2019, ASB was well-capitalized (see Note 4 of the Consolidated Financial Statements for ASB's capital ratios).

For a discussion of ASB dividends, see "Common stock equity" in Note 4 of the Consolidated Financial Statements.

See "Commitments" and "Contingency" in Note 4 of the Consolidated Financial Statements for a discussion of commitments and contingencies and off-balance sheet arrangements.

Material estimates and critical accounting policies. Also see "Material estimates and critical accounting policies" for Consolidated HEI above.

Allowance for loan losses. See Note 1 of the Consolidated Financial Statements and the discussion above under "Earning assets, costing liabilities and other factors." ASB maintains an allowance for loan losses believed to be adequate to absorb losses inherent in its loan portfolio. The level of allowance for loan losses is based on a continuing assessment of existing risks in the loan portfolio, historical loss experience, changes in collateral values and current conditions (for example, economic conditions, real estate market conditions and interest rate environment). The allowance for loan losses is allocated to loan types using both a formula-based approach applied to groups of loans and an analysis of certain individual loans for impairment. The formula-based approach emphasizes loss factors primarily derived from actual historical default and loss rates, which are combined with an assessment of certain qualitative factors to determine the allowance amounts allocated to the various loan categories. Adverse changes in any of these factors could result in higher charge-offs and provision for loan losses.

ASB disaggregates the loan portfolio into loan segments for purposes of determining the allowance for loan losses. Commercial, commercial real estate, and commercial construction loans are defined as non-homogeneous loans. ASB utilizes a risk rating system for evaluating the credit quality of such loans. Loans are rated based on the degree of risk at origination and periodically thereafter, as appropriate. Values are applied separately to the probability of default (borrower risk) and loss given default (transaction risk). ASB utilizes a numerical-based, risk rating "PD Model" that takes into consideration fiscal year-end financial information of the borrower and identified financial attributes including retained earnings, operating cash flows, interest coverage, liquidity and leverage that demonstrate a strong correlation with default to assign default probabilities at the borrower level. In addition, a loss given default value is assigned to each loan to measure loss in the event of default based on loan specific features such as collateral that mitigates the amount of loss in the event of default. Together the PD Model and loss given default construct provide a quantitative, data driven and consistent framework for measuring risk within the portfolio, on a loan by loan basis and for the ultimate collectability of each loan.

Residential, consumer and credit scored business loans are considered homogeneous loans, which are typically underwritten based on common, uniform standards. For the homogeneous portfolio, the quality of the loan is best indicated by the repayment performance of an individual borrower. ASB supplements performance data with external credit bureau data and credit scores

such as the Fair Isaac Corporation (FICO) score on a quarterly basis. ASB has built portfolio loss models for each major segment based on the combination of internal and external data to predict the probability of default at the loan level.

ASB also considers qualitative factors in determining the allowance for loan losses. These include but are not limited to adjustments for changes in policies and procedures in underwriting, monitoring or collections, economic conditions, portfolio mix, lending and risk management personnel, results of internal audit and quality control reviews, collateral values and any concentrations of credit.

The reserve for unfunded commitments is maintained at a level believed by management to be sufficient to absorb estimated probable losses related to unfunded credit facilities and is included in accounts payable and other liabilities in the consolidated balance sheets. The determination of the adequacy of the reserve is based upon an evaluation of the unfunded credit facilities, including an assessment of historical commitment utilization experience, credit risk grading and historical loss rates. This process takes into consideration the same risk elements that are analyzed in the determination of the adequacy of the allowance for loan losses, as discussed above. Net adjustments to the reserve for unfunded commitments are included in other noninterest expense in the consolidated statements of income.

Management believes its allowance for loan losses adequately estimates actual loan losses that will ultimately be incurred. However, such estimates are based on currently available information and historical experience, and future adjustments may be required from time to time to the allowance for loan losses based on new information and changes that occur (e.g., due to changes in economic conditions, particularly in Hawaii). Actual losses could differ from management's estimates, and these differences and subsequent adjustments could be material.

Fair value. Fair value estimates are based on the price that would be received to sell an asset, or paid upon the transfer of a liability, in an orderly transaction between market participants at the measurement date. The fair value estimates are generally determined based on assumptions that market participants would use in pricing the asset or liability and are based on market data obtained from independent third party sources. However, in certain cases, ASB uses its own assumptions based on the best information available in certain circumstances. These valuations are estimates at a specific point in time, based on relevant market information, information about the financial instrument and judgments regarding future expected loss experience, economic conditions, risk characteristics of various financial instruments and other factors. These estimates do not reflect any premium or discount that could result if ASB were to sell its entire holdings of a particular financial instrument at one time. Because no active trading market exists for a portion of its financial instruments, fair value estimates cannot be determined with precision. Changes in the underlying assumptions used, including discount rates and estimates of future cash flows, could significantly affect the estimates. In addition, the tax ramifications related to the realization of the unrealized gains and losses could have a significant effect on fair value estimates, but have not been considered in making such estimates.

ASB classifies its financial assets and liabilities that are measured at fair value in accordance with the three-level valuation hierarchy. Level 1 valuations are based on quoted prices, unadjusted for identical instruments traded in active markets. Level 2 valuations are based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active or model-based techniques for which all significant assumptions are observable in the market. Level 3 valuations are based on model-based techniques that use at least one significant assumption not observable in the market or significant management judgment or estimation. See "Fair value measurements" in Note 1 of the Consolidated Financial Statements).

Significant assets measured at fair value on a recurring basis include ASB's mortgage-backed securities available for sale. These instruments are priced using an external pricing service and are classified as Level 2 within the fair value hierarchy. The third-party pricing services use a variety of methods to determine fair value including quoted prices for similar securities in an active market, yield spreads for similar trades, adjustments for liquidity, size, collateral characteristics, historic and generic prepayment speeds and other observable market factors. To enhance the robustness of the pricing process, ASB compares its standard third-party vendor's price with that of another third-party vendor. If the prices are within an acceptable tolerance range, the price of the standard vendor will be accepted. If the variance is beyond the tolerance range, an evaluation will be conducted by the investment manager and a challenge to the price may be made. Fair value in such cases will be based on the value that best reflects the data and observable characteristics of the security. In all cases, the fair value used will have been independently determined by a third-party pricing vendor or non-affiliated broker.

Fair value is also used on a nonrecurring basis to evaluate certain assets for impairment or for disclosure purposes. Examples of nonrecurring uses of fair value include mortgage servicing rights accounted for by the amortization method, loan impairments for certain loans, real estate acquired in settlement of loans and goodwill.

See "Investment securities" and "Derivative financial instruments" in Note 4 and Note 16 of the Consolidated Financial Statements for additional information regarding ASB's fair value measurements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

HEI and Hawaiian Electric (in the case of Hawaiian Electric, only the information related to Hawaiian Electric and its subsidiaries is applicable):

The Company manages various market risks in the ordinary course of business, including credit risk and liquidity risk. The Company believes the electric utility and the “other” segment’s exposures to these two risks were not material as of December 31, 2019.

Credit risk for ASB is the risk that borrowers or issuers of securities will not be able to repay their obligations to the bank. Credit risk associated with ASB’s lending portfolios is controlled through its underwriting standards, loan rating of commercial and commercial real estate loans, on-going monitoring by loan officers, credit review and quality control functions in these lending areas and adequate allowance for loan losses. Credit risk associated with the securities portfolio is mitigated through investment portfolio limits, experienced staff working with analytical tools, monthly fair value analysis and on-going monitoring and reporting such as investment watch reports and loss sensitivity analysis. See “Allowance for loan losses” in Item 7 above and in Note 4 of the Consolidated Financial Statements.

Liquidity risk for ASB is the risk that the bank will not meet its obligations when they become due. Liquidity risk is mitigated by ASB’s asset/liability management process, on-going analytical analysis, monitoring and reporting information such as weekly cash-flow analyses and maintenance of liquidity contingency plans.

The Utilities are exposed to some commodity price risk primarily related to their fuel supply and IPP contracts. The Utilities’ commodity price risk is substantially mitigated so long as they have their current ECRCs in their rate schedules. The Utilities currently have no hedges against its commodity price risk.

The Company currently has no direct exposure to market risk from trading activities nor foreign currency exchange rate risk.

The Company considers interest rate risk to be a very significant market risk as it could potentially have a significant effect on the Company’s results of operations, financial condition and liquidity, especially as it relates to ASB, but also as it may affect the discount rate used to determine retirement benefit liabilities and minimum contributions, the market value of retirement benefit plans’ assets and the Utilities’ allowed rates of return. Interest rate risk can be defined as the exposure of the Company’s earnings to adverse movements in interest rates.

Bank interest rate risk

The Company’s success is dependent, in part, upon ASB’s ability to manage interest rate risk (IRR). ASB’s interest-rate risk profile is strongly influenced by its primary business of making fixed-rate residential mortgage loans and taking in retail deposits. Large mismatches in the amounts or timing between the maturity or repricing of interest sensitive assets or liabilities could adversely affect ASB’s earnings and the market value of its interest-sensitive assets and liabilities in the event of significant changes in the level of interest rates. Many other factors also affect ASB’s exposure to changes in interest rates, such as general economic and financial conditions, customer preferences and competition for loans or deposits.

ASB’s Asset/Liability Management Committee (ALCO), whose voting members are officers and employees of ASB, is responsible for managing interest rate risk and carrying out the overall asset/liability management objectives and activities of ASB as approved by the ASB Board of Directors. ALCO establishes policies under which management monitors and coordinates ASB’s assets and liabilities.

See Note 4 of the Consolidated Financial Statements for a discussion of the use of rate lock commitments on loans held for sale and forward sale contracts to manage some interest rate risk associated with ASB’s residential loan sale program.

Management of ASB measures interest-rate risk using simulation analysis with an emphasis on measuring changes in net interest income (NII) and the market value of interest-sensitive assets and liabilities in different interest-rate environments. The simulation analysis is performed using a dedicated asset/liability management software system enhanced with a mortgage prepayment model and a collateralized mortgage obligation database. The simulation software is capable of generating scenario-specific cash flows for all instruments using the specified contractual information for each instrument and product specific prepayment assumptions for mortgage loans and mortgage-backed securities.

NII sensitivity analysis measures the change in ASB’s twelve-month, pretax NII in alternate interest rate scenarios. NII sensitivity is measured as the change in NII in the alternate interest-rate scenarios as a percentage of the base case NII. The base case interest-rate scenario is established using the current yield curve and assumes interest rates remain constant over the next

twelve months. The alternate scenarios are created by assuming “rate ramps” or gradual interest changes and accomplished by moving the yield curve in a parallel fashion, over the next twelve-month period, in increments of +/- 100 basis points. The simulation model forecasts scenario-specific principal and interest cash flows for the interest-bearing assets and liabilities, and the NII is calculated for each scenario. Key balance sheet modeling assumptions used in the NII sensitivity analysis include: the size of the balance sheet remains relatively constant over the simulation horizon and maturing assets or liabilities are reinvested in similar instruments in order to maintain the current mix of the balance sheet. In addition, assumptions are made about the prepayment behavior of mortgage-backed assets, future pricing spreads for new assets and liabilities and the speed and magnitude with which deposit rates change in response to changes in the overall level of interest rates. Other NII sensitivity analysis may include scenarios such as yield curve twists or non-static balance sheet changes (such as changes to key balance sheet drivers).

Consistent with OCC guidelines, the market value or economic capitalization of ASB is measured as economic value of equity (EVE). EVE represents the theoretical market value of ASB’s net worth and is defined as the present value of expected net cash flows from existing assets minus the present value of expected cash flows from existing liabilities plus the present value of expected net cash flows from existing off-balance sheet contracts. Key assumptions used in the calculation of ASB’s EVE include the prepayment behavior of loans and investments, the possible distribution of future interest rates, pricing spreads for assets and liabilities in the alternate scenarios and the rate and balance behavior of deposit accounts with indeterminate maturities. EVE is calculated in multiple scenarios. As with the NII simulation, the base case is represented by the current yield curve. Alternate scenarios are created by assuming immediate parallel shifts in the yield curve in increments of +/- 100 basis points (bp) up to + 300 bp. The change in EVE is measured as the change in EVE in a given rate scenario from the base case and expressed as a percentage. To gain further insight into the IRR profile, additional analysis is periodically performed in alternate scenarios including rate shifts of greater magnitude and changes in key balance sheet drivers.

ASB’s interest-rate risk sensitivity measures as of December 31, 2019 and 2018 constitute “forward-looking statements” and were as follows:

Change in interest rates (basis points)	Change in NII (gradual change in interest rates)		Change in EVE (instantaneous change in interest rates)	
	December 31, 2019	December 31, 2018	December 31, 2019	December 31, 2018
+300	2.8%	2.5%	15.3%	10.0%
+200	2.1	1.9	12.2	8.1
+100	1.3	1.1	7.5	5.1
-100	(2.0)	(2.3)	(12.7)	(11.0)

ASB’s NII sensitivity profile was more asset sensitive as of December 31, 2019 compared to December 31, 2018. The decrease in long term market rates increased prepayment expectations, resulting in higher reinvestment into lower yielding fixed-rate mortgage and mortgage-backed investment portfolios. The increased prepayment expectations also drove higher premium amortization on existing mortgage-backed securities. In addition, the bank had more cash on the balance sheet as of December 31, 2019, which contributed to higher NII asset sensitivity.

EVE sensitivity increased as of December 31, 2019 compared to December 31, 2018 as the duration of assets shortened while the duration of liabilities lengthened. The downward shift in the yield curve led to faster prepayment expectations and shortened the durations of the fixed-rate mortgage and mortgage-backed investment portfolios, while lengthening core deposit duration.

The computation of the prospective effects of hypothetical interest rate changes on the NII sensitivity and the percentage change in EVE is based on numerous assumptions, including relative levels of market interest rates, loan prepayments, balance changes and pricing strategies, and should not be relied upon as indications of actual results. To the extent market conditions and other factors vary from the assumptions used in the simulation analysis, actual results may differ materially from the simulation results. NII sensitivity analysis measures the change in ASB’s twelve-month, pretax NII in alternate interest rate scenarios, and is intended to help management identify potential exposures in ASB’s current balance sheet and formulate appropriate strategies for managing interest rate risk. The simulation does not contemplate any actions that ASB management might undertake in response to changes in interest rates. Further, the changes in NII vary in the twelve-month simulation period and are not necessarily evenly distributed over the period. These analyses are for analytical purposes only and do not represent management’s views of future market movements, the level of future earnings, or the timing of any changes in earnings within the twelve-month analysis horizon. The actual impact of changes in interest rates on NII will depend on the magnitude and speed with which rates change, actual changes in ASB’s balance sheet, and management’s responses to the changes in interest rates.

Other than bank interest rate risk

The Company's general policy is to manage "other than bank" interest rate risk through use of a combination of short-term debt, long-term debt and preferred securities. As of December 31, 2019, the Company was exposed to "other than bank" interest rate risk because of its periodic borrowing requirements, the impact of interest rates on the discount rate and the market value of plan assets used to determine retirement benefits expenses and obligations (see "Pension and other postretirement benefits obligations" in HEI's MD&A and "Retirement benefits" in Notes 1 and 10 of the Consolidated Financial Statements) and the possible effect of interest rates on the electric utilities' allowed rates of return. Other than these exposures, management believes its exposure to "other than bank" interest rate risk is not material. The Company's long-term debt, in the form of borrowings of proceeds of revenue bonds, privately-placed senior notes and bank term loans, is predominately at fixed rates (see Note 16 of the Consolidated Financial Statements for the fair value of long-term debt, net-other than bank).

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Hawaiian Electric Industries, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Hawaiian Electric Industries, Inc. and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes and the schedules listed in the Index at Item 15(a)(2) (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Electric utility segment - regulatory assets and liabilities - Refer to Note 3 to the financial statements

Critical Audit Matter Description

Hawaiian Electric Company, Inc. (“Hawaiian Electric,” or the “Utility”) is subject to rate regulation by the Hawaii Public Utility Commission (the “PUC”) and accounts for the effects of regulation under FASB Accounting Standards Codification (“ASC”) Topic 980, “Regulated Operations” as management has determined it meets the requirements under accounting principles generally accepted in the United States of America to prepare its financial statements applying the specialized rules to account for the effects of cost-based rate regulation. Accounting for the economics of rate regulation impacts multiple financial statement line items and disclosures, such as property, plant, and equipment; regulatory assets and liabilities; operating revenues; operation and maintenance expense; and depreciation expense. As of December 31, 2019, regulatory assets and liabilities amounted to approximately \$715,080,000 and \$972,310,000, respectively. The Company’s continued accounting under ASC Topic 980 generally requires that rates are established by an independent, third party regulator, rates are designed to recover the costs of providing service, and it is reasonable to assume that rates can be charged to, and collected from, customers.

Hawaiian Electric’s rates are subject to regulatory rate-setting processes and earnings oversight. Rates are determined and approved in regulatory proceedings based on an analysis of the Company’s costs to provide utility service and a return on, and recovery of, Hawaiian Electric’s investment in the utility business. Any decision by the PUC could (1) impact the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) necessitate a refund or future reductions in rates that should be reported as regulatory liabilities.

We identified the impact of rate regulation as a critical audit matter due to the significant judgments made by management to support its assertions about impacted account balances and disclosures and the high degree of subjectivity involved in assessing the impact of future regulatory orders on the financial statements. Management judgments include assessing the likelihood of (1) recovery in future rates of incurred costs, and (2) a refund to customers. Given that management’s accounting judgements are based on assumptions about the outcome of future decisions by the PUC, auditing these judgments required specialized knowledge of accounting for rate regulation and the rate setting process due to its inherent complexities.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the rate regulators included the following, among others:

- We tested the effectiveness of management’s controls over the evaluation of the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. Such controls include the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or incurring future reductions in rates.
- We evaluated the Company’s disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments.
- We read relevant regulatory orders issued by the PUC for the Company, regulatory statutes, filings made by interveners, and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedence of the PUC’s treatment of similar costs under similar circumstances. We evaluated the external information and compared to management’s recorded regulatory asset and liability balances for completeness.
- For regulatory matters in process, we inspected the Company’s filings with the PUC and the filings with the PUC by intervenors that may impact the Company’s future rates, for any evidence that might contradict management’s assertions.
- We obtained analyses from management, which includes input from regulatory and legal counsel, as appropriate, regarding probability of recovery for regulatory assets or refund or future reduction in rates for regulatory liabilities not yet addressed in a regulatory order to assess management’s assertion that amounts are probable of recovery, or a future reduction in rates.

Allowance for Loan Losses - Refer to Notes 1 and 4 to the financial statements

Critical Audit Matter Description

The Company maintains an allowance for loan losses (the “Allowance”) to absorb losses inherent in its loan portfolio. As of December 31, 2019, the total Allowance balance is \$53.4 million. The level of Allowance is based on existing risks in the loan portfolio, historical loss experience, changes in collateral values and current conditions (e.g., economic conditions, real estate market conditions and the interest rate environment). The Allowance is allocated to loan types using both a formula-based approach applied to groups of loans and an analysis of certain individual loans for impairment. The formula-based approach emphasizes loss factors primarily derived from actual historical default and loss rates, which are combined with an assessment of certain qualitative factors to determine the allowance amounts allocated to the various loan categories. These qualitative factors include, but are not limited to, adjustments for changes in policies and procedures in underwriting, monitoring or collections, economic conditions, portfolio mix, lending and risk management personnel, results of internal audit and quality control reviews, collateral values and any concentrations of credit.

The selection of relevant and appropriate qualitative factors in calculating the Allowance requires significant management judgment. Given the magnitude of the loan portfolio and the subjective nature of determining the Allowance, including the judgments applied by management in determining the qualitative factors, auditing the Allowance attributable to these qualitative factors involves a high degree of auditor judgment, and increased level of effort, and the need to involve more experienced audit professionals.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Allowance, included the following procedures, among others:

- We tested the effectiveness of controls over the Allowance, including management’s controls over the respective qualitative factors.
- We evaluated the reasonableness and conceptual soundness of the Allowance modeling framework, including the use of qualitative factors.
- We tested the mathematical accuracy of the calculation of the qualitative Allowance as well as the accuracy and completeness of data used as inputs to the determination of qualitative factors.
- We evaluated the qualitative factors applied to the historical loss rates under the incurred loss model, including assessing the basis for the factors and the reasonableness of the qualitative factors used in the Allowance.
- In order to identify potential bias in the determination of the Allowance, we performed analytical analysis, including retrospective review, where we compared the estimate of losses to actual losses, analyzed ratios of the Allowance to loans and other relevant metric, such as losses and nonperforming loans, and performed peer analysis where we compared relevant metrics to comparable financial institutions.
- We evaluated the directional consistency and magnitude of the qualitative adjustments as well as the absolute value of the Allowance attributable to the qualitative adjustments.

Summary of significant accounting policies - Recent accounting pronouncements - Credit losses - Refer to Note 1 to the financial statements

Critical Audit Matter Description

On January 1, 2020, the Company will adopt ASU No. 2016-13, “Financial Instruments - Credit Losses”, which requires the measurement of all expected credit losses for financial assets held at the reporting date (based on historical experience, current conditions and reasonable and supportable forecasts) and enhanced disclosures to help financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization’s portfolio. The Company and Utilities will adopt ASU No. 2016-13 using an effective date of January 1, 2020 and will apply the guidance using a modified retrospective basis with the cumulative effect of initially applying the amendments to be recognized in retained earnings as of January 1, 2020.

The allowance for credit losses (ACL) is a material estimate of the Company. As a result of the change from an incurred loss model to a methodology that considers the credit loss over the expected life of the loan, the Company expects to record, upon completing its final analysis, an adjustment between \$18 million and \$22 million to increase the ACL, with a corresponding adjustment to reduce retained earnings as of January 1, 2020. The ACL requires management to make estimates of the expected credit losses over the expected life of the loans, including using estimates of future economic conditions that will impact the amount of such future losses. In order to estimate the expected credit losses, existing credit loss estimation models were updated and, in certain cases, new models implemented to align with the expected loss framework.

The estimation of credit losses significantly changes under the expected loss framework, includes the application of new accounting policies, the use of new subjective judgments, and changes to loss estimation models. Accordingly, the procedures performed to audit the disclosure of the expected impact of the adoption of ASU No. 2016-13 involved a high degree of auditor judgment and required significant effort, including the need to involve our credit specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the disclosure of the expected impact of adopting ASU No. 2016-13 included the following, among others:

- We tested the effectiveness of management’s internal controls over key assumptions and judgments, expected loss estimation models, selection and application of new accounting policies, and disclosure of the impact of adoption discussed in the financial statements.
- We evaluated the adequacy of the Company’s disclosure related to the Adoption of ASU No. 2016-13.
- We evaluated the appropriateness of the Company’s policies, methodologies, and elections involved in the adoption of the expected loss model.
- We tested the mathematical accuracy of the expected loss estimation models, including the completeness and accuracy of inputs to the models.
- We involved credit specialist to assist us in evaluating the reasonableness and conceptual soundness of the methodology as applied in the expected loss estimation models.
- We evaluated the reasonableness of management’s key assumptions and judgments in estimating future credit losses.

/s/ Deloitte & Touche LLP
Honolulu, Hawaii
February 28, 2020

We have served as the Company’s auditor since 2017.

Report of Independent Registered Public Accounting Firm

To the Shareholder and the Board of Directors of Hawaiian Electric Company, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets and statements of capitalization of Hawaiian Electric Company, Inc. and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in common stock equity, and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes and the schedules listed in the Index at Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinions.

/s/ Deloitte & Touche LLP
Honolulu, Hawaii
February 28, 2020

We have served as the Company's auditor since 2017.

Consolidated Statements of Income

Hawaiian Electric Industries, Inc. and Subsidiaries

Years ended December 31	2019	2018	2017
(in thousands, except per share amounts)			
Revenues			
Electric utility	\$ 2,545,942	\$ 2,546,525	\$ 2,257,566
Bank	328,570	314,275	297,640
Other	89	49	419
Total revenues	2,874,601	2,860,849	2,555,625
Expenses			
Electric utility	2,291,564	2,304,864	1,994,042
Bank (includes \$10.8 million gain on sales of properties in 2019)	217,008	206,040	198,104
Other	17,355	16,589	17,246
Total expenses	2,525,927	2,527,493	2,209,392
Operating income (loss)			
Electric utility	254,378	241,661	263,524
Bank	111,562	108,235	99,536
Other	(17,266)	(16,540)	(16,827)
Total operating income	348,674	333,356	346,233
Retirement defined benefits expense—other than service costs	(2,806)	(5,962)	(7,942)
Interest expense, net – other than on deposit liabilities and other bank borrowings	(90,899)	(88,677)	(78,972)
Allowance for borrowed funds used during construction	4,453	4,867	4,778
Allowance for equity funds used during construction	11,987	10,877	12,483
Income before income taxes	271,409	254,461	276,580
Income taxes	51,637	50,797	109,393
Net income	219,772	203,664	167,187
Preferred stock dividends of subsidiaries	1,890	1,890	1,890
Net income for common stock	\$ 217,882	\$ 201,774	\$ 165,297
Basic earnings per common share	\$ 2.00	\$ 1.85	\$ 1.52
Diluted earnings per common share	\$ 1.99	\$ 1.85	\$ 1.52
Weighted-average number of common shares outstanding	108,949	108,855	108,749
Net effect of potentially dilutive shares	458	291	184
Weighted-average shares assuming dilution	109,407	109,146	108,933

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income

Hawaiian Electric Industries, Inc. and Subsidiaries

Years ended December 31 (in thousands)	2019	2018	2017
Net income for common stock	\$ 217,882	\$ 201,774	\$ 165,297
Other comprehensive income (loss), net of taxes:			
Net unrealized gains (losses) on available-for sale investment securities:			
Net unrealized gains (losses) on available-for sale investment securities arising during the period, net of (taxes) benefits of \$(10,024), \$3,468 and \$2,886 for 2019, 2018 and 2017, respectively	27,382	(9,472)	(4,370)
Reclassification adjustment for net realized gains included in net income, net of taxes of \$175, nil and nil for 2019, 2018 and 2017, respectively	(478)	—	—
Derivatives qualified as cash flow hedges:			
Unrealized interest rate hedging losses, net of tax benefit of \$409, \$151 and nil for 2019, 2018 and 2017, respectively	(1,177)	(436)	—
Reclassification adjustment to net income, net of tax benefits of nil, nil and \$289 for 2019, 2018 and 2017, respectively	—	—	454
Retirement benefit plans:			
Net gains (losses) arising during the period, net of (taxes) benefits of \$(3,892), \$9,810 and \$(41,129) for 2019, 2018 and 2017, respectively	10,914	(28,101)	65,531
Adjustment for amortization of prior service credit and net losses recognized during the period in net periodic benefit cost, net of tax benefits of \$3,512, \$7,317 and \$10,041 for 2019, 2018 and 2017, respectively	10,107	21,015	15,737
Reclassification adjustment for impact of D&Os of the PUC included in regulatory assets, net of (taxes) benefits of \$(5,610), \$2,887 and \$(49,523) for 2019, 2018 and 2017, respectively	(16,177)	8,325	(78,724)
Other comprehensive income (loss), net of taxes	30,571	(8,669)	(1,372)
Comprehensive income attributable to Hawaiian Electric Industries, Inc.	\$ 248,453	\$ 193,105	\$ 163,925

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Balance Sheets

Hawaiian Electric Industries, Inc. and Subsidiaries

December 31	2019		2018	
(dollars in thousands)				
ASSETS				
Cash and cash equivalents		\$ 196,813		\$ 169,208
Restricted cash		30,872		—
Accounts receivable and unbilled revenues, net		300,794		325,672
Available-for-sale investment securities, at fair value		1,232,826		1,388,533
Held-to-maturity investment securities, at amortized cost		139,451		141,875
Stock in Federal Home Loan Bank, at cost		8,434		9,958
Loans held for investment, net		5,067,821		4,790,902
Loans held for sale, at lower of cost or fair value		12,286		1,805
Property, plant and equipment, net				
Land	\$ 100,161		\$ 102,925	
Plant and equipment	7,545,083		7,118,709	
Construction in progress	229,953		267,714	
	7,875,197		7,489,348	
Less – accumulated depreciation	(2,765,569)	5,109,628	(2,659,230)	4,830,118
Operating lease right-of-use assets		199,171		—
Regulatory assets		715,080		833,426
Other		649,885		530,364
Goodwill		82,190		82,190
Total assets		\$ 13,745,251		\$ 13,104,051
LIABILITIES AND SHAREHOLDERS' EQUITY				
Liabilities				
Accounts payable		\$ 220,633		\$ 214,773
Interest and dividends payable		24,941		28,254
Deposit liabilities		6,271,902		6,158,852
Short-term borrowings—other than bank		185,710		73,992
Other bank borrowings		115,110		110,040
Long-term debt, net—other than bank		1,964,365		1,879,641
Deferred income taxes		379,324		372,518
Operating lease liabilities		199,571		—
Regulatory liabilities		972,310		950,236
Defined benefit pension and other postretirement benefit plans liability		513,287		538,384
Other		583,545		580,788
Total liabilities		11,430,698		10,907,478
Preferred stock of subsidiaries - not subject to mandatory redemption		34,293		34,293
Commitments and contingencies (Notes 3 and 4)				
Shareholders' equity				
Preferred stock, no par value, authorized 10,000,000 shares; issued: none		—		—
Common stock, no par value, authorized 200,000,000 shares; issued and outstanding: 108,973,328 shares and 108,879,245 shares at December 31, 2019 and 2018, respectively		1,678,257		1,669,267
Retained earnings		622,042		543,623
Accumulated other comprehensive loss, net of tax benefits				
Net unrealized gains (losses) on securities	\$ 2,481		\$ (24,423)	
Unrealized losses on derivatives	(1,613)		(436)	
Retirement benefit plans	(20,907)	(20,039)	(25,751)	(50,610)
Total shareholders' equity		2,280,260		2,162,280
Total liabilities and shareholders' equity		\$ 13,745,251		\$ 13,104,051

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity

Hawaiian Electric Industries, Inc. and Subsidiaries

(in thousands, except per share amounts)	Common stock		Retained earnings	Accumulated other comprehensive income (loss)	Total
	Shares	Amount			
Balance, December 31, 2016	108,583	\$ 1,660,910	\$ 438,972	\$ (33,129)	\$ 2,066,753
Net income for common stock	—	—	165,297	—	165,297
Other comprehensive loss, net of tax benefits	—	—	—	(1,372)	(1,372)
Reclass of AOCI for tax rate reduction impact	—	—	7,440	(7,440)	—
Issuance of common stock:					
Share-based plans	205	4,664	—	—	4,664
Share-based expenses and other, net	—	(3,083)	—	—	(3,083)
Common stock dividends (\$1.24 per share)	—	—	(134,873)	—	(134,873)
Balance, December 31, 2017	108,788	1,662,491	476,836	(41,941)	2,097,386
Net income for common stock	—	—	201,774	—	201,774
Other comprehensive loss, net of tax benefits	—	—	—	(8,669)	(8,669)
Issuance of common stock:					
Share-based plans	91	2,650	—	—	2,650
Share-based expenses and other, net	—	4,126	—	—	4,126
Common stock dividends (\$1.24 per share)	—	—	(134,987)	—	(134,987)
Balance, December 31, 2018	108,879	1,669,267	543,623	(50,610)	2,162,280
Net income for common stock	—	—	217,882	—	217,882
Other comprehensive income, net of taxes	—	—	—	30,571	30,571
Issuance of common stock:					
Share-based plans	94	3,092	—	—	3,092
Share-based expenses and other, net	—	5,898	—	—	5,898
Common stock dividends (\$1.28 per share)	—	—	(139,463)	—	(139,463)
Balance, December 31, 2019	108,973	\$ 1,678,257	\$ 622,042	\$ (20,039)	\$ 2,280,260

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

Hawaiian Electric Industries, Inc. and Subsidiaries

Years ended December 31	2019	2018	2017
(in thousands)			
Cash flows from operating activities			
Net income	\$ 219,772	\$ 203,664	\$ 167,187
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation of property, plant and equipment	229,858	214,036	200,658
Other amortization	48,255	41,593	21,340
Provision for loan losses	23,480	14,745	10,901
Loans originated, held for sale	(285,042)	(109,537)	(115,104)
Proceeds from sale of loans, held for sale	277,119	112,182	127,951
Gain on sale of real estate, held for sale	(10,762)	—	—
Deferred income taxes	(15,085)	(9,368)	37,835
Share-based compensation expense	9,986	7,792	5,404
Allowance for equity funds used during construction	(11,987)	(10,877)	(12,483)
Other	10,822	(4,219)	(3,324)
Changes in assets and liabilities			
Decrease (increase) in accounts receivable and unbilled revenues, net	26,083	(64,321)	(12,875)
Decrease (increase) in fuel oil stock	(11,493)	7,054	(20,794)
Decrease (increase) in regulatory assets	71,262	9,252	(17,256)
Increase (decrease) in accounts, interest and dividends payable	(3,054)	21,528	34,985
Change in prepaid and accrued income taxes, tax credits and utility revenue taxes	(27,538)	29,429	20,685
Increase (decrease) in defined benefit pension and other postretirement benefit plans liability	(4,482)	20,871	882
Change in other assets and liabilities, net	(34,724)	15,488	(25,551)
Net cash provided by operating activities	512,470	499,312	420,441
Cash flows from investing activities			
Available-for-sale investment securities purchased	(108,088)	(224,335)	(528,379)
Principal repayments on available-for-sale investment securities	272,949	218,930	220,231
Proceeds from sale of available-for-sale investment securities	19,810	—	—
Purchases of held-to-maturity investment securities	(13,057)	(103,184)	(44,515)
Proceeds from repayments or maturities of held-to-maturity investment securities	15,505	5,720	—
Purchase of stock from Federal Home Loan Bank	(95,636)	(28,292)	(2,868)
Redemption of stock from Federal Home Loan Bank	97,160	28,040	4,380
Net decrease (increase) in loans held for investment	(300,210)	(189,352)	15,887
Proceeds from sale of commercial loans	—	7,149	36,760
Proceeds from sale of real estate held for sale	21,060	—	—
Capital expenditures	(457,520)	(506,770)	(430,454)
Contributions to low income housing investments	(6,974)	(14,499)	(17,505)
Acquisition of business	—	—	(76,323)
Other, net	13,292	14,534	7,487
Net cash used in investing activities	(541,709)	(792,059)	(815,299)

(continued)

Consolidated Statements of Cash Flows (continued)

Hawaiian Electric Industries, Inc. and Subsidiaries

Years ended December 31	2019	2018	2017
Cash flows from financing activities			
Net increase in deposit liabilities	113,050	165,880	341,668
Net increase (decrease) in short-term borrowings with original maturities of three months or less	86,718	(18,999)	67,992
Proceeds from issuance of short-term debt	75,000	25,000	125,000
Repayment of short-term debt	(50,000)	(50,000)	(75,000)
Net increase in other bank borrowings with original maturities of three months or less	5,070	71,556	61,776
Repayment of other bank borrowings	—	(50,000)	(63,534)
Proceeds from issuance of long-term debt	289,349	250,000	532,325
Repayment of long-term debt and funds transferred for repayment of long-term debt	(287,285)	(53,887)	(465,000)
Withheld shares for employee taxes on vested share-based compensation	(997)	(996)	(3,828)
Common stock dividends	(139,463)	(134,987)	(134,873)
Preferred stock dividends of subsidiaries	(1,890)	(1,890)	(1,890)
Other	(1,836)	(1,603)	(6,349)
Net cash provided by financing activities	87,716	200,074	378,287
Net increase (decrease) in cash, cash equivalents and restricted cash	58,477	(92,673)	(16,571)
Cash, cash equivalents and restricted cash, January 1	169,208	261,881	278,452
Cash, cash equivalents and restricted cash, December 31	227,685	169,208	261,881
Less: Restricted cash	(30,872)	—	—
Cash and cash equivalents, December 31	\$ 196,813	\$ 169,208	\$ 261,881

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Income

Hawaiian Electric Company, Inc. and Subsidiaries

Years ended December 31 (in thousands)	2019	2018	2017
Revenues	\$ 2,545,942	\$ 2,546,525	\$ 2,257,566
Expenses			
Fuel oil	720,709	760,528	587,768
Purchased power	633,256	639,307	586,634
Other operation and maintenance	481,737	461,491	411,907
Depreciation	215,731	203,626	192,784
Taxes, other than income taxes	240,131	239,912	214,949
Total expenses	2,291,564	2,304,864	1,994,042
Operating income	254,378	241,661	263,524
Allowance for equity funds used during construction	11,987	10,877	12,483
Retirement defined benefits expense—other than service costs	(2,836)	(3,631)	(6,003)
Interest expense and other charges, net	(70,842)	(73,348)	(69,637)
Allowance for borrowed funds used during construction	4,453	4,867	4,778
Income before income taxes	197,140	180,426	205,145
Income taxes	38,305	34,778	83,199
Net income	158,835	145,648	121,946
Preferred stock dividends of subsidiaries	915	915	915
Net income attributable to Hawaiian Electric	157,920	144,733	121,031
Preferred stock dividends of Hawaiian Electric	1,080	1,080	1,080
Net income for common stock	\$ 156,840	\$ 143,653	\$ 119,951

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income

Hawaiian Electric Company, Inc. and Subsidiaries

Years ended December 31 (in thousands)	2019	2018	2017
Net income for common stock	\$ 156,840	\$ 143,653	\$ 119,951
Other comprehensive income (loss), net of taxes:			
Derivatives qualified as cash flow hedges:			
Reclassification adjustment to net income, net of tax benefits of nil, nil and \$289 for 2019, 2018 and 2017, respectively	—	—	454
Retirement benefit plans:			
Net gains (losses) arising during the period, net of (taxes) benefits of \$(1,821), \$9,024 and \$(39,587) for 2019, 2018 and 2017, respectively	5,249	(26,019)	63,105
Adjustment for amortization of prior service credit and net losses recognized during the period in net periodic benefit cost, net of tax benefits of \$3,312, \$6,594 and \$9,221 for 2019, 2018 and 2017, respectively	9,550	19,012	14,477
Reclassification adjustment for impact of D&Os of the PUC included in regulatory assets, net of (taxes) benefits of \$(5,610), \$2,887 and \$(49,523) for 2019, 2018 and 2017, respectively	(16,177)	8,325	(78,724)
Other comprehensive income (loss), net of taxes	(1,378)	1,318	(688)
Comprehensive income attributable to Hawaiian Electric Company, Inc.	\$ 155,462	\$ 144,971	\$ 119,263

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Balance Sheets

Hawaiian Electric Company, Inc. and Subsidiaries

December 31 (in thousands)	2019	2018
Assets		
Property, plant and equipment		
Utility property, plant and equipment		
Land	\$ 51,816	\$ 49,667
Plant and equipment	7,240,288	6,809,671
Less accumulated depreciation	(2,690,157)	(2,577,342)
Construction in progress	193,074	233,145
Utility property, plant and equipment, net	4,795,021	4,515,141
Nonutility property, plant and equipment, less accumulated depreciation of \$111 and \$1,255 as of December 31, 2019 and 2018, respectively	6,956	6,961
Total property, plant and equipment, net	4,801,977	4,522,102
Current assets		
Cash and cash equivalents	11,022	35,877
Restricted cash	30,872	—
Customer accounts receivable, net	152,790	177,896
Accrued unbilled revenues, net	117,227	121,738
Other accounts receivable, net	11,568	6,215
Fuel oil stock, at average cost	91,937	79,935
Materials and supplies, at average cost	60,702	55,204
Prepayments and other	116,980	32,118
Regulatory assets	30,710	71,016
Total current assets	623,808	579,999
Other long-term assets		
Operating lease right-of-use-assets	176,809	—
Regulatory assets	684,370	762,410
Other	101,718	102,992
Total other long-term assets	962,897	865,402
Total assets	\$ 6,388,682	\$ 5,967,503
Capitalization and liabilities		
Capitalization (see Consolidated Statements of Capitalization)		
Common stock equity	\$ 2,047,352	\$ 1,957,641
Cumulative preferred stock – not subject to mandatory redemption	34,293	34,293
Commitments and contingencies (Note 3)		
Long-term debt, net	1,401,714	1,418,802
Total capitalization	3,483,359	3,410,736
Current liabilities		
Current portion of operating lease liabilities	63,707	—
Current portion of long-term debt, net	95,953	—
Short-term borrowings from non-affiliate	88,987	25,000
Accounts payable	187,770	171,791
Interest and preferred dividends payable	20,728	23,215
Taxes accrued, including revenue taxes	207,992	233,333
Regulatory liabilities	30,724	17,977
Other	67,305	60,003
Total current liabilities	763,166	531,319
Deferred credits and other liabilities		
Operating lease liabilities	113,400	—
Deferred income taxes	377,150	383,197
Regulatory liabilities	941,586	932,259
Unamortized tax credits	117,868	91,522
Defined benefit pension and other postretirement benefit plans liability	478,763	503,659
Other	113,390	114,811
Total deferred credits and other liabilities	2,142,157	2,025,448
Total capitalization and liabilities	\$ 6,388,682	\$ 5,967,503

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Capitalization

Hawaiian Electric Company, Inc. and Subsidiaries

December 31	2019	2018
(dollars in thousands, except par value)		
Common stock equity		
Common stock of \$6 2/3 par value		
Authorized: 50,000,000 shares. Outstanding: 17,048,783 shares and 16,751,488 shares at December 31, 2019 and 2018, respectively	\$ 113,678	\$ 111,696
Premium on capital stock	714,824	681,305
Retained earnings	1,220,129	1,164,541
Accumulated other comprehensive income (loss), net of taxes-retirement benefit plans	(1,279)	99
Common stock equity	2,047,352	1,957,641

Cumulative preferred stock not subject to mandatory redemption

Authorized: 5,000,000 shares of \$20 par value and 7,000,000 shares of \$100 par value.

Series	Par Value	Shares outstanding December 31, 2019 and 2018	2019	2018
(dollars in thousands, except par value and shares outstanding)				
C-4 1/4%	\$ 20 (Hawaiian Electric)	150,000	\$ 3,000	\$ 3,000
D-5%	20 (Hawaiian Electric)	50,000	1,000	1,000
E-5%	20 (Hawaiian Electric)	150,000	3,000	3,000
H-5 1/4%	20 (Hawaiian Electric)	250,000	5,000	5,000
I-5%	20 (Hawaiian Electric)	89,657	1,793	1,793
J-4 3/4%	20 (Hawaiian Electric)	250,000	5,000	5,000
K-4.65%	20 (Hawaiian Electric)	175,000	3,500	3,500
G-7 5/8%	100 (Hawaii Electric Light)	70,000	7,000	7,000
H-7 5/8%	100 (Maui Electric)	50,000	5,000	5,000
		1,234,657	34,293	34,293

(continued)

Consolidated Statements of Capitalization (continued)

Hawaiian Electric Company, Inc. and Subsidiaries

December 31	2019	2018
(in thousands)		
Long-term debt		
Obligations to the State of Hawaii for the repayment of Special Purpose Revenue Bonds (subsidiary obligations unconditionally guaranteed by Hawaiian Electric):		
3.50%, Series 2019, due 2049	\$ 80,000	\$ —
3.20%, Refunding series 2019, due 2039	150,000	—
3.10%, Refunding series 2017A, due 2026	125,000	125,000
4.00%, Refunding series 2017B, due 2037	140,000	140,000
3.25%, Refunding series 2015, due 2025	47,000	47,000
6.50%, Series 2009, due 2039 - redeemed in 2019	—	150,000
Total obligations to the State of Hawaii	\$ 542,000	\$ 462,000
Other long-term debt – unsecured:		
Taxable senior notes:		
4.21%, Series 2019A, due 2033	\$ 50,000	\$ —
4.38%, Series 2018A, due 2028	67,500	67,500
4.53%, Series 2018B, due 2033	17,500	17,500
4.72%, Series 2018C, due 2048	15,000	15,000
4.31%, Series 2017A, due 2047	50,000	50,000
4.54%, Series 2016A, due 2046	40,000	40,000
5.23%, Series 2015A, due 2045	80,000	80,000
3.83%, Series 2013A, due 2020	14,000	14,000
4.45%, Series 2013A and 2013B, due 2022	52,000	52,000
4.84%, Series 2013A, 2013B and 2013C, due 2027	100,000	100,000
5.65%, Series 2013B and 2013C, due 2043	70,000	70,000
4.03%, Series 2012B, due 2020	82,000	82,000
4.55%, Series 2012B and 2012C, due 2023	100,000	100,000
4.72%, Series 2012D, due 2029	35,000	35,000
5.39%, Series 2012E, due 2042	150,000	150,000
4.53%, Series 2012F, due 2032	40,000	40,000
Total taxable senior notes	963,000	913,000
6.50 %, series 2004, Junior subordinated deferrable interest debentures, due 2034 - redeemed in 2019	—	51,546
Total other long-term debt – unsecured	963,000	964,546
Total long-term debt	1,505,000	1,426,546
Less unamortized debt issuance costs	7,333	7,744
Less current portion long-term debt, net of unamortized debt issuance costs	95,953	—
Long-term debt, net	1,401,714	1,418,802
Total capitalization	\$ 3,483,359	\$ 3,410,736

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Common Stock Equity

Hawaiian Electric Company, Inc. and Subsidiaries

(in thousands)	Common stock		Premium on capital stock	Retained earnings	Accumulated other comprehensive income (loss)	Total
	Shares	Amount				
Balance, December 31, 2016	16,020	\$ 106,818	\$ 601,491	\$ 1,091,800	\$ (322)	\$ 1,799,787
Net income for common stock	—	—	—	119,951	—	119,951
Other comprehensive loss, net of tax benefits	—	—	—	—	(688)	(688)
Reclass of AOCI for tax rate reduction impact	—	—	—	209	(209)	—
Issuance of common stock, net of expenses	122	816	13,184	—	—	14,000
Common stock dividends	—	—	—	(87,767)	—	(87,767)
Balance, December 31, 2017	16,142	107,634	614,675	1,124,193	(1,219)	1,845,283
Net income for common stock	—	—	—	143,653	—	143,653
Other comprehensive income, net of taxes	—	—	—	—	1,318	1,318
Issuance of common stock, net of expenses	609	4,062	66,630	—	—	70,692
Common stock dividends	—	—	—	(103,305)	—	(103,305)
Balance, December 31, 2018	16,751	111,696	681,305	1,164,541	99	1,957,641
Net income for common stock	—	—	—	156,840	—	156,840
Other comprehensive loss, net of tax benefits	—	—	—	—	(1,378)	(1,378)
Issuance of common stock, net of expenses	297	1,982	33,519	—	—	35,501
Common stock dividends	—	—	—	(101,252)	—	(101,252)
Balance, December 31, 2019	17,048	\$ 113,678	\$ 714,824	\$ 1,220,129	\$ (1,279)	\$ 2,047,352

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

Hawaiian Electric Company, Inc. and Subsidiaries

Years ended December 31 (in thousands)	2019	2018	2017
Cash flows from operating activities			
Net income	\$ 158,835	\$ 145,648	\$ 121,946
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation of property, plant and equipment	215,731	203,626	192,784
Other amortization	29,631	26,602	8,498
Deferred income taxes	(16,284)	(7,982)	38,037
Income tax credits, net	27,259	(99)	(52)
State refundable credit	(8,369)	(6,239)	(2,251)
Allowance for equity funds used during construction	(11,987)	(10,877)	(12,483)
Other	200	4,768	1,237
Changes in assets and liabilities			
Decrease (increase) in accounts receivable	20,956	(50,917)	2,914
Decrease (increase) in accrued unbilled revenues	4,511	(14,684)	(15,361)
Decrease (increase) in fuel oil stock	(12,002)	6,938	(20,443)
Increase in materials and supplies	(5,498)	(807)	(718)
Decrease (increase) in regulatory assets	71,262	9,252	(17,256)
Increase in regulatory liabilities	1,953	37,358	3,602
Increase (decrease) in accounts payable	(2,051)	24,358	25,734
Change in prepaid and accrued income taxes, tax credits and revenue taxes	(28,523)	25,036	29,862
Increase (decrease) in defined benefit pension and other postretirement benefit plans liability	(4,448)	18,746	604
Change in other assets and liabilities	(17,220)	(17,114)	(21,468)
Net cash provided by operating activities	423,956	393,613	335,186
Cash flows from investing activities			
Capital expenditures	(419,898)	(415,264)	(376,865)
Other	11,374	10,082	4,578
Net cash used in investing activities	(408,524)	(405,182)	(372,287)
Cash flows from financing activities			
Common stock dividends	(101,252)	(103,305)	(87,767)
Preferred stock dividends of Hawaiian Electric and subsidiaries	(1,995)	(1,995)	(1,995)
Proceeds from issuance of common stock	35,500	70,700	14,000
Proceeds from issuance of long-term debt	280,000	100,000	315,000
Repayment of long-term debt and funds transferred for repayment of long-term debt	(283,546)	(50,000)	(265,000)
Net increase (decrease) in short-term borrowings from non-affiliates and affiliate with original maturities of three months or less	38,987	(4,999)	4,999
Proceeds from issuance of short-term debt	75,000	25,000	—
Repayment of short-term debt	(50,000)	—	—
Other	(2,109)	(472)	(3,905)
Net cash provided by (used in) financing activities	(9,415)	34,929	(24,668)
Net increase (decrease) in cash, cash equivalents and restricted cash	6,017	23,360	(61,769)
Cash, cash equivalents and restricted cash, January 1	35,877	12,517	74,286
Cash, cash equivalents and restricted cash, December 31	41,894	35,877	12,517
Less: Restricted cash	(30,872)	—	—
Cash and cash equivalents, December 31	\$ 11,022	\$ 35,877	\$ 12,517

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 · Summary of significant accounting policies

General

Hawaiian Electric Industries, Inc. (HEI) is a holding company with direct and indirect subsidiaries principally engaged in electric utility, banking, and renewable/sustainable infrastructure investment businesses operating in the State of Hawaii. HEI owns Hawaiian Electric Company, Inc. (Hawaiian Electric), ASB Hawaii, Inc., an intermediate holding company that owns American Savings Bank, F.S.B. (ASB), and Pacific Current, LLC (Pacific Current). Pacific Current's significant subsidiaries include Hamakua Energy, LLC (Hamakua Energy) and Mauo, LLC (Mauo).

Hawaiian Electric and its wholly owned operating subsidiaries, Hawaii Electric Light Company, Inc. (Hawaii Electric Light) and Maui Electric Company, Limited (Maui Electric), are regulated public electric utilities (collectively, the Utilities) in the business of generating, purchasing, transmitting, distributing and selling electric energy on all major islands in Hawaii other than Kauai. See Note 2.

ASB is a federally chartered savings bank providing a full range of banking services to individual and business customers through its branch system in Hawaii.

Hamakua Energy, owns and operates a 60-megawatt (MW) combined-cycle power plant, which sells the power it produces only to Hawaii Electric Light. Mauo is a commercial-scale, solar-plus-storage project (8.6 MW of solar and 42.3 MW of storage) currently under construction on the islands of Oahu and Maui.

Basis of presentation. In preparing the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP), management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ significantly from those estimates.

Material estimates that are particularly susceptible to significant change for HEI and its subsidiaries (collectively, the Company) include the amounts reported as fair value for investment securities (ASB only); pension and other postretirement benefit obligations; contingencies and litigation; income taxes; regulatory assets and liabilities (Utilities only); electric utility unbilled revenues (Utilities only); asset retirement obligations (Utilities only); and allowance for loan losses (ASB only).

Consolidation. The HEI consolidated financial statements include the accounts of HEI and its subsidiaries. The Hawaiian Electric consolidated financial statements include the accounts of Hawaiian Electric and its subsidiaries. When HEI or Hawaiian Electric has a controlling financial interest in another entity (usually, majority voting interest), that entity is consolidated. Investments in companies over which the Company or the Utilities have the ability to exercise significant influence, but not control, are accounted for using the equity method. The consolidated financial statements exclude variable interest entities (VIEs) when the Company or the Utilities are not the primary beneficiaries. In general, significant intercompany amounts are eliminated in consolidation (see Note 2 for exceptions).

Cash and cash equivalents. The Utilities consider cash on hand, deposits in banks, money market accounts, certificates of deposit, short-term commercial paper of non-affiliates and liquid investments (with original maturities of three months or less) to be cash and cash equivalents. The Company considers the same items to be cash and cash equivalents as well as ASB's deposits with the Federal Home Loan Bank (FHLB), federal funds sold (excess funds that ASB loans to other banks overnight at the federal funds rate) and securities purchased under resale agreements with original maturities of three months or less. Additionally, ASB is required by the Federal Reserve System to maintain noninterest-bearing cash reserves equal to a percentage of certain deposits. The reserve requirement for ASB at December 31, 2019 and 2018 was \$26.2 million and \$28.1 million, respectively.

Restricted cash. The Utilities consider funds on deposit with trustees, which represent the undrawn proceeds from the issuance of special purpose revenue bonds to be restricted cash because these funds are available only to finance (or reimburse payment of) approved capital expenditures. At December 31, 2019 and 2018, total restricted cash of Utilities was \$30.9 million and nil, respectively (see Note 6).

Property, plant and equipment. Property, plant and equipment are reported at cost. Self-constructed electric utility plant includes engineering, supervision, administrative and general costs and an allowance for the cost of funds used during the construction period. These costs are recorded in construction in progress and are transferred to utility plant when construction is

completed and the facilities are either placed in service or become useful for public utility purposes. Costs for betterments that make utility plant more useful, more efficient, of greater durability or of greater capacity are also capitalized. Upon the retirement or sale of electric utility plant, generally no gain or loss is recognized. The cost of the plant retired is charged to accumulated depreciation. Amounts collected from customers for cost of removal are included in regulatory liabilities. See discussion regarding “Utility projects” in Note 3.

Depreciation. Depreciation is computed primarily using the straight-line method over the estimated lives of the assets being depreciated. Electric utility plant additions in the current year are depreciated beginning January 1 of the following year in accordance with rate-making. Electric utility plant has lives ranging from 16 to 88 years for production plant, from 10 to 79 years for transmission and distribution plant and from 5 to 65 years for general plant. The Utilities’ composite annual depreciation rate, which includes a component for cost of removal, was 3.2% in 2019, 2018 and 2017.

Retirement benefits. Pension and other postretirement benefit costs are charged primarily to expense and electric utility plant (in the case of the Utilities). Funding for the Company’s qualified pension plans (Plans) is based on actuarial assumptions adopted by the Pension Investment Committee administering the Plans. The participating employers contribute amounts to a master pension trust for the Plans in accordance with the funding requirements of the Employee Retirement Income Security Act of 1974, as amended (ERISA), including changes promulgated by the Pension Protection Act of 2006, and considering the deductibility of contributions under the Internal Revenue Code. The Company generally funds at least the net periodic pension cost during the year, subject to ERISA minimum and Internal Revenue Code limits and targeted funded status.

Certain health care and/or life insurance benefits are provided to eligible retired employees and the employees’ beneficiaries and covered dependents. The Company generally funds the net periodic postretirement benefit costs other than pensions (except for executive life) for postretirement benefits other than pensions (OPEB), while maximizing the use of the most tax-advantaged funding vehicles, subject to cash flow requirements and reviews of the funded status with the consulting actuary.

Environmental expenditures. The Company and the Utilities are subject to numerous federal and state environmental statutes and regulations. In general, environmental contamination treatment costs are charged to expense. Environmental costs are capitalized if the costs extend the life, increase the capacity, or improve the safety or efficiency of property; the costs mitigate or prevent future environmental contamination; or the costs are incurred in preparing the property for sale. Environmental costs are either capitalized or charged to expense when environmental assessments and/or remedial efforts are probable and the cost can be reasonably estimated. The Utilities review their sites and measure the liability quarterly by assessing a range of reasonably likely costs of each identified site using currently available information, including existing technology, presently enacted laws and regulations, experience gained at similar sites, and the probable level of involvement and financial condition of other potentially responsible parties.

Income taxes. Deferred income tax assets and liabilities are established for the temporary differences between the financial reporting bases and the tax bases of the Company’s and the Utilities’ assets and liabilities at federal and state tax rates expected to be in effect when such deferred tax assets or liabilities are realized or settled. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Valuation allowances are established when necessary to reduce deferred income tax assets to the amount expected to be realized.

HEI and the Utilities’ investment tax credits are deferred and amortized over the estimated useful lives of the properties to which the credits relate (and for the Utilities, this treatment is in accordance with Accounting Standards Codification (ASC) Topic 980, “Regulated Operations”).

The Utilities are included in the consolidated income tax returns of HEI. However, income tax expense has been computed for financial statement purposes as if each utility filed a separate income tax return and Hawaiian Electric filed a consolidated Hawaiian Electric income tax return.

Governmental tax authorities could challenge a tax return position taken by the Company. The Company and the Utilities use a “more-likely-than-not” recognition threshold and measurement standard for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return.

Fair value measurements. Fair value estimates are estimates of the price that would be received to sell an asset, or paid upon the transfer of a liability, in an orderly transaction between market participants at the measurement date. The fair value estimates are generally determined based on assumptions that market participants would use in pricing the asset or liability and are based on market data obtained from independent sources. However, in certain cases, the Company and the Utilities use their own assumptions about market participant assumptions based on the best information available in the circumstances. These

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

valuations are estimates at a specific point in time, based on relevant market information, information about the financial instrument and judgments regarding future expected loss experience, economic conditions, risk characteristics of various financial instruments and other factors. These estimates do not reflect any premium or discount that could result if the Company or the Utilities were to sell its entire holdings of a particular financial instrument at one time. Because no active trading market exists for a portion of the Company's and the Utilities' financial instruments, fair value estimates cannot be determined with precision. Changes in the underlying assumptions used, including discount rates and estimates of future cash flows, could significantly affect the estimates. In addition, the tax ramifications related to the realization of the unrealized gains and losses could have a significant effect on fair value estimates, but have not been considered in making such estimates.

The Company and the Utilities group their financial assets measured at fair value in three levels outlined as follows:

Level 1: Inputs to the valuation methodology are quoted prices, unadjusted, for identical assets or liabilities in active markets. A quoted price in an active market provides the most reliable evidence of fair value and is used to measure fair value whenever available.

Level 2: Inputs to the valuation methodology include quoted prices for similar assets or liabilities in active markets; inputs to the valuation methodology include quoted prices for identical or similar assets or liabilities in markets that are not active; or inputs to the valuation methodology that are derived principally from or can be corroborated by observable market data by correlation or other means.

Level 3: Inputs to the valuation methodology are unobservable and significant to the fair value measurement. Level 3 assets and liabilities include financial instruments whose value is determined using discounted cash flow methodologies, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

Classification in the hierarchy is based upon the lowest level input that is significant to the fair value measurement of the asset or liability. For instruments classified in Level 1 and 2 where inputs are primarily based upon observable market data, there is less judgment applied in arriving at the fair value. For instruments classified in Level 3, management judgment is more significant due to the lack of observable market data.

Fair value is also used on a nonrecurring basis to evaluate certain assets for impairment or for disclosure purposes. Examples of nonrecurring uses of fair value include mortgage servicing rights accounted for by the amortization method, loan impairments for certain loans, real estate acquired in settlement of loans, goodwill and asset retirement obligations (AROs).

Earnings per share (HEI only). Basic earnings per share (EPS) is computed by dividing net income for common stock by the weighted-average number of common shares outstanding for the period. Diluted EPS is computed similarly, except that dilutive common shares for stock compensation is added to the denominator. There were no shares of antidilutive securities outstanding during the years ended December 31, 2019, 2018 and 2017.

Impairment of long-lived assets and long-lived assets to be disposed of. The Company and the Utilities review long-lived assets and certain identifiable intangibles for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less costs to sell.

Recent accounting pronouncements.

Leases. In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-02, "Leases (Topic 842)," which requires that lessees recognize a liability to make lease payments (the lease liability) and a right-of-use (ROU) asset, representing its right to use the underlying asset for the lease term, for all leases (except short-term leases) at the commencement date. For finance leases, a lessee is required to recognize interest on the lease liability separately from amortization of the ROU asset in the consolidated statements of income. For operating leases, a lessee is required to recognize a single lease cost, calculated so that the cost of the lease is allocated over the lease term on a generally straight-line basis.

The Company adopted ASU No. 2016-02 on January 1, 2019 and used the effective date as the date of initial application. Consequently, financial information for dates and periods before January 1, 2019 will not be updated and the disclosures required under the new standard will not be provided (i.e., the Company will continue to report prior comparative periods

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

presented in the financial statements under Accounting Standards Codification (ASC) 840, including the required disclosures under ASC 840).

The most significant effect of the new standard relates to the recognition of new ROU assets and lease liabilities on the Company's balance sheet for purchase power agreements and real estate operating leases. On adoption, the Company recognized additional lease liabilities of approximately \$257 million for the Company and approximately \$236 million for the Utilities (\$215 million related to PPAs), based on the present value of the remaining minimum rental payments, with corresponding ROU assets for existing operating leases, under current leasing standards. In determining the lease liability upon transition, the Company used the incremental borrowing rates as of the adoption date based on the remaining lease term and remaining lease payments. See Note 8 for more information.

Credit losses. In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," which is intended to improve financial reporting by requiring timelier recording of credit losses on loans and other financial instruments held by financial institutions and other organizations. ASU No. 2016-13 requires the measurement of all expected credit losses for financial assets held at the reporting date (based on historical experience, current conditions and reasonable and supportable forecasts) and enhanced disclosures to help financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization's portfolio. In addition, ASU No. 2016-13 amends the accounting for credit losses on available-for-sale (AFS) debt securities and purchased financial assets with credit deterioration. The other-than-temporary impairment model of accounting for credit losses on AFS debt securities will be replaced with an estimate of expected credit losses only when the fair value is below the amortized cost of the asset. The length of time the fair value of an AFS debt security has been below the amortized cost will no longer impact the determination of whether a credit loss exists. The AFS debt security model will also require the use of an allowance to record the estimated losses (and subsequent recoveries). The Company and Utilities will adopt ASU No. 2016-13 using an effective date of January 1, 2020 and will apply the guidance using a modified retrospective basis with the cumulative effect of initially applying the amendments to be recognized in retained earnings as of January 1, 2020.

The allowance for credit losses (ACL) is a material estimate of the Company. As a result of the change from an incurred loss model to a methodology that considers the credit loss over the expected life of the loan, the Company expects to record, upon completing its final analysis, an adjustment between \$18 million to \$22 million to increase the ACL, with a corresponding adjustment to reduce retained earnings as of January 1, 2020. The ACL is based on the composition, characteristics and quality of the loans and off balance sheet credit exposures as well as the prevailing economic conditions as of the adoption date. The increase to the ACL for the loan portfolio will result in a decrease to retained earnings and regulatory capital amounts and ratios. However, ASB expects to remain well capitalized under the regulatory framework after the adoption of ASU No. 2016-13. Based on the credit quality of the Company's existing held-to-maturity and AFS investment securities portfolio, the Company will not recognize an ACL at adoption for those investments. The adoption of the new standard did not have a material impact to the Utilities' customer and other accounts receivables and accrued unbilled revenue.

Compensation-retirement benefits-defined benefit plans. In August 2018, the FASB issued ASU No. 2018-14, "Compensation-Retirement Benefits-Defined Benefit Plans-General (Subtopic 715-20): Disclosure Framework-Changes to the Disclosure Requirements for Defined Benefit Plans," which makes minor changes to the disclosure requirements for employers that sponsor defined benefit pension and/or other postretirement benefit plans. The new guidance eliminates requirements for certain disclosures that are no longer considered cost beneficial and requires new ones that the FASB considers pertinent. ASU No. 2018-14 is effective for fiscal years ending after December 15, 2020. The Company early adopted ASU No. 2018-14, effective for the year ended December 31, 2019, and applied the amended disclosure requirements to all periods presented. See Note 10 for additional information regarding the Company's employee benefit plans.

Codification Improvements. In April 2019, the FASB issued ASU No. 2019-04, "Codification Improvements to Topic 326, Financial Instruments - Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments," which is intended to clarify certain issues related to the accounting for financial instruments.

- With respect to Topic 326, *Financial Instruments - Credit Losses*, ASU No. 2019-04 allows entities to measure the allowance for credit losses on accrued interest receivable balances separately from other components of the amortized cost basis of associated financial assets, or to make an accounting policy election not to measure an allowance for credit losses on accrued interest receivable amounts if an entity writes off the uncollectible accrued interest receivable balance in a timely manner and makes certain disclosures. ASU No. 2019-04 also allows an entity to make an accounting policy election regarding the presentation and disclosure of accrued interest receivables and the related allowance for credit losses for those accrued interest receivables. ASU No. 2019-04 also clarifies certain issues related

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

to transfers between classifications or categories for loans and debt securities, recoveries, variable interest rates and prepayments, vintage disclosures, and contractual extensions and renewal options.

- With respect to Topic 815, *Derivatives and Hedging*, ASU No. 2019-04 provides amendments, among others, that address partial-term fair value hedges, fair value hedge basis adjustments, and certain transition requirements.
- With respect to Topic 825, *Financial Instruments*, ASU No. 2019-04 clarifies the scope of the guidance and disclosure requirements with respect to recognizing and measuring financial instruments.

The amended guidance in ASU No. 2019-04 is effective for fiscal years and interim periods beginning after December 15, 2019, with early adoption permitted. The Company adopted ASU No. 2019-04 in the first quarter of 2020 and the impact of the ASU on the Company's consolidated financial statements was not material.

Reclassifications. Certain reclassifications have been made to prior years' financial statements to conform to the 2019 presentation, which did not affect previously reported results of operations.

Electric utility

Regulation by the Public Utilities Commission of the State of Hawaii (PUC). The Utilities are regulated by the PUC and account for the effects of regulation under FASB ASC Topic 980, "Regulated Operations." As a result, the Utilities' financial statements reflect assets, liabilities, revenues and expenses based on current cost-based rate-making regulations (see Note 3—"Regulatory assets and liabilities"). Their continued accounting under ASC Topic 980 generally requires that rates are established by an independent, third-party regulator; rates are designed to recover the costs of providing service; and it is reasonable to assume that rates can be charged to, and collected from, customers.

The rate schedules of the Utilities include energy costs recovery clauses (ECRCs) under which electric rates are adjusted for changes in the weighted-average price paid for fuel oil and certain components of purchased power, and the relative amounts of company-generated power and purchased power. The rate schedules also include purchased power adjustment clauses (PPACs) under which the remaining purchase power expenses are recovered through surcharge mechanisms. The amounts collected through the ECRCs and PPACs are required to be reconciled quarterly.

Accounts receivable. Accounts receivable are recorded at the invoiced amount. The Utilities generally assess a late payment charge on balances unpaid from the previous month. The allowance for doubtful accounts is the Utilities' best estimate of the amount of probable credit losses in the Utilities' existing accounts receivable. At December 31, 2019 and 2018, the allowance for customer accounts receivable, accrued unbilled revenues and other accounts receivable was \$1.4 million and \$1.5 million, respectively.

Electric utility revenues. Revenues related to electric service are generally recorded when service is rendered and include revenues applicable to energy consumed in the accounting period but not yet billed to the customers. The Utilities also record revenue under a decoupling mechanism. See "*Decoupling*" discussion in Note 3 - Electric Utility segment.

Repairs and maintenance costs. Repairs and maintenance costs for overhauls of generating units are generally expensed as they are incurred.

Allowance for funds used during construction (AFUDC). AFUDC is an accounting practice whereby the costs of debt and equity funds used to finance plant construction are credited on the statement of income and charged to construction in progress on the balance sheet. If a project under construction is delayed for an extended period of time, AFUDC on the delayed project may be stopped after assessing the causes of the delay and probability of recovery.

The weighted-average AFUDC rate was 7.4% in 2019, 7.3% in 2018 and 7.7% in 2017, and reflected quarterly compounding.

Bank (HEI only)

Investment securities. Investments in debt securities are classified as held-to-maturity (HTM), trading or available-for-sale (AFS). ASB determines the appropriate classification at the time of purchase. Debt securities that ASB intends to and has the ability to hold to maturity are classified as HTM securities and reported at amortized cost. Marketable debt securities that are bought and held principally for the purpose of selling them in the near term are classified as trading securities and reported at fair value, with unrealized gains and losses included in earnings. Marketable debt securities not classified as either HTM or trading securities are classified as AFS and reported at fair value. Unrealized gains and losses for AFS securities are excluded from earnings and reported on a net basis in accumulated other comprehensive income (AOCI) until realized.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Interest income is recorded on an accrual basis. Discounts and premiums on securities are accreted or amortized into interest income using the interest method over the remaining contractual lives of the agency obligation securities and the estimated lives of the mortgage-backed securities adjusted for anticipated prepayments. ASB uses actual prepayment experience and estimates of future prepayments to determine the constant effective yield necessary to apply the interest method of income recognition. The discounts and premiums on the agency obligations portfolio are accreted or amortized on a prospective basis using expected contractual cash flows. The discounts and premiums on the mortgage-backed securities portfolio are accreted or amortized on a retrospective basis using changes in anticipated prepayments. This method requires a retrospective adjustment of the effective yield each time ASB changes the estimated life as if the new estimate had been known since the original acquisition date of the securities. Estimates of future prepayments are based on the underlying collateral characteristics and historic or projected prepayment behavior of each security. The specific identification method is used in determining realized gains and losses on the sales of securities.

For securities that are not trading securities, individual securities are assessed for impairment at least on a quarterly basis, and more frequently when economic or market conditions warrant. A security is impaired if the fair value of the security is less than its carrying value at the financial statement date. When a security is impaired, ASB determines whether this impairment is temporary or other-than-temporary. If ASB does not expect to recover the entire amortized cost basis of the security or there is a change in the expected cash flows, an OTTI exists. If ASB intends to sell the security, or will more likely than not be required to sell the security before recovery of its amortized cost, the OTTI must be recognized in earnings. If ASB does not intend to sell the security, and it is not more likely than not that ASB will be required to sell the security before recovery of its amortized cost, the OTTI must be separated into the amount representing the credit loss and the amount related to all other factors. The amount of OTTI related to the credit loss is recognized in earnings, while the remaining OTTI is recognized in AOCI. Based on ASB's evaluation as of December 31, 2019, 2018 and 2017, there was no indicated impairment as ASB expects to collect the contractual cash flows for these investments.

Stock in Federal Home Loan Bank (FHLB) is carried at cost and is reviewed at least quarterly for impairment, with valuation adjustments recognized in noninterest income.

Loans. ASB carries loans at amortized cost less the allowance for loan losses, loan origination fees (net of direct loan origination costs), commitment fees and purchase premiums and discounts. Interest on loans is credited to income as it is earned. Discounts and premiums are accreted or amortized over the life of the loans using the interest method.

Loan origination fees (net of direct loan origination costs) are deferred and recognized as an adjustment in yield over periods not exceeding the contractual life of the loan using the interest method or taken into income when the loan is paid off or sold. Nonrefundable commitment fees (net of direct loan origination costs, if applicable) received for commitments to originate or purchase loans are deferred and, if the commitment is exercised, recognized as an adjustment of yield over the life of the loan using the interest method. Nonrefundable commitment fees received for which the commitment expires unexercised are recognized as income upon expiration of the commitment.

Loans held for sale are stated at the lower of cost or estimated fair value on an aggregate basis. Premiums, discounts and net deferred loan fees are not amortized while a loan is classified as held for sale. A sale is recognized only when the consideration received is other than beneficial interests in the assets sold and control over the assets is transferred irrevocably to the buyer. Gains or losses on sales of loans are recognized at the time of sale and are determined by the difference between the net sales proceeds and the allocated basis of the loans sold.

Allowance for loan losses. ASB maintains an allowance for loan losses to absorb losses inherent in its loan portfolio. The level of allowance for loan losses is based on a continuing assessment of existing risks in the loan portfolio, historical loss experience, changes in collateral values and current conditions (e.g., economic conditions, real estate market conditions and interest rate environment). The allowance for loan losses is allocated to loan types using both a formula-based approach applied to groups of loans and an analysis of certain individual loans for impairment. The formula-based approach emphasizes loss factors primarily derived from actual historical default and loss rates, which are combined with an assessment of certain qualitative factors to determine the allowance amounts allocated to the various loan categories. Adverse changes in any of these factors could result in higher charge-offs and provision for loan losses.

ASB disaggregates its portfolio loans into portfolio segments for purposes of determining the allowance for loan losses. Commercial, commercial real estate, and commercial construction loans are defined as non-homogeneous loans and ASB utilizes a risk rating system for evaluating the credit quality of the loans. Non-homogeneous loans are also categorized into the regulatory asset quality classifications—Pass, Special Mention, Substandard, Doubtful, and Loss based on credit quality. ASB utilizes a numerical-based, risk rating “PD Model” that takes into consideration fiscal year-end financial information of the borrower and identified financial attributes including retained earnings, operating cash flows, interest coverage, liquidity and

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

leverage that demonstrate a strong correlation with default to assign default probabilities at the borrower level. In addition, a loss given default (LGD) value is assigned to each loan to measure loss in the event of default based on loan specific features such as collateral that mitigates the amount of loss in the event of default.

Residential, consumer and credit scored business loans are considered homogeneous loans, which are typically underwritten based on common, uniform standards. For the homogeneous portfolio, the quality of the loan is best indicated by the repayment performance of an individual borrower. ASB supplements performance data with external credit bureau data and credit scores such as the Fair Isaac Corporation (FICO) score on a quarterly basis. ASB has built portfolio loss models for each major segment based on the combination of internal and external data to predict the probability of default at the loan level.

ASB also considers qualitative factors in determining the allowance for loan losses. These include but are not limited to adjustments for changes in policies and procedures in underwriting, monitoring or collections, economic conditions, portfolio mix, lending and risk management personnel, results of internal audit and quality control reviews, collateral values and any concentrations of credit.

The reserve for unfunded commitments is maintained at a level believed by management to be sufficient to absorb estimated probable losses related to unfunded credit facilities and is included in accounts payable and other liabilities in the consolidated balance sheets. The determination of the adequacy of the reserve is based upon an evaluation of the unfunded credit facilities, including an assessment of historical commitment utilization experience, credit risk grading and historical loss rates. This process takes into consideration the same risk elements that are analyzed in the determination of the adequacy of the allowance for loan losses, as discussed above. Net adjustments to the reserve for unfunded commitments are included in other noninterest expense in the consolidated statements of income.

The allowance for loan losses is based on currently available information and historical experience, and future adjustments may be required from time to time to the allowance for loan losses based on new information and changes that occur (e.g., due to changes in economic conditions, particularly in Hawaii). Actual losses could differ from management's estimates, and these differences and subsequent adjustments could be material.

Nonperforming loans. Loans are generally placed on nonaccrual status when contractually past due 90 days or more, or earlier if the probability of collection is insufficient to warrant further accrual. All interest that is accrued but not collected is reversed. A loan may be returned to accrual status if (i) principal and interest payments have been brought current and repayment of the remaining contractual principal and interest is expected to be made, (ii) the loan has otherwise become well-secured and in the process of collection, or (iii) the borrower has been making regularly scheduled payments in full for the prior six months and it is reasonably assured that the loan will be brought fully current within a reasonable period. Cash receipts on nonaccruing loans are generally applied to reduce the unpaid principal balance.

Loans considered to be uncollectible are charged-off against the allowance for loan losses. The amount and timing of charge-offs on loans includes consideration of the loan type, length of delinquency, insufficiency of collateral value, lien priority and the overall financial condition of the borrower. Recoveries on loans previously charged-off are credited back to the allowance for loan losses. Loans that have been charged-off against the allowance for loan losses are periodically monitored to evaluate whether further adjustments to the allowance are necessary.

Loans in the commercial and commercial real estate portfolio are charged-off when the loan is risk rated "Doubtful" or "Loss." The loan or a portion thereof is determined to be uncollectible after considering the borrower's overall financial condition and collateral deficiency. A commercial or commercial real estate loan is considered uncollectible when: (a) the borrower is delinquent in principal or interest 90 days or more; (b) significant improvement in the borrower's repayment capacity is doubtful; and/or (c) collateral value is insufficient to cover outstanding indebtedness and no other viable assets or repayment sources exist.

Loans in the residential mortgage and home equity portfolios are charged-off when the loan or a portion thereof is determined to be uncollectible after considering the borrower's overall financial condition and collateral deficiency. Such loan is considered uncollectible when: (a) the borrower is delinquent in principal or interest 180 days or more; (b) it is probable that collateral value is insufficient to cover outstanding indebtedness and no other viable assets or repayment sources exist; (c) notification of the borrower's bankruptcy is received or the borrower's debt is discharged in bankruptcy and the loan is not reaffirmed; or (d) in cases where ASB is in a subordinate position to other debt, the senior lien holder has foreclosed and ASB's junior lien is extinguished.

Other consumer loans are generally charged-off when the balance becomes 120 days delinquent.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Loans modified in a troubled debt restructuring. Loans are considered to have been modified in a troubled debt restructuring (TDR) when, due to a borrower's financial difficulties, ASB makes concessions to the borrower that it would not otherwise consider for a non-troubled borrower. Modifications may include interest rate reductions, interest only payments for an extended period of time, protracted terms such as amortization and maturity beyond the customary length of time found in the normal market place, and other actions intended to minimize economic loss and to provide alternatives to foreclosure or repossession of collateral. Generally, a nonaccrual loan that has been modified in a TDR remains on nonaccrual status until the borrower has demonstrated sustained repayment performance for a period of six consecutive months. However, performance prior to the modification, or significant events that coincide with the modification, are included in assessing whether the borrower can meet the new terms and may result in the loan being returned to accrual status at the time of loan modification or after a shorter performance period. If the borrower's ability to meet the revised payment schedule is uncertain, or there is reasonable doubt over the full collectability of principal and interest, the loan remains on nonaccrual status.

Real estate acquired in settlement of loans. ASB records real estate acquired in settlement of loans at fair value, less estimated selling expenses. ASB obtains appraisals based on recent comparable sales to assist management in estimating the fair value of real estate acquired in settlement of loans. Subsequent declines in value are charged to expense through a valuation allowance. Costs related to holding real estate are charged to operations as incurred.

Goodwill. Goodwill is initially recorded as the excess of the purchase price over the fair value of the net assets acquired in a business combination and is subsequently evaluated at least annually for impairment during the fourth quarter. At December 31, 2019 and 2018, the amount of goodwill was \$82.2 million. The goodwill relates to ASB and is the Company's only intangible asset with an indefinite useful life.

To determine if there was an impairment to the book value of goodwill pertaining to ASB, the fair value of ASB was estimated using a valuation method based on a market approach and discounted cash flow method with each method having an equal weighting in determining the fair value of ASB. The market approach considers publicly traded financial institutions and measures the institutions' market values as a multiple to (1) net income and (2) book equity. The median market value multiples for net income and book equity from the selected institutions were applied to ASB's net income and book equity to calculate ASB's fair value using the market approach. The discounted cash flow method values a company on a going concern basis and is based on the concept that the future benefits derived from a particular company can be measured by its sustainable after-tax cash flows in the future. For the three years ended December 31, 2019, there has been no impairment of goodwill.

Mortgage banking. Mortgage loans held for sale are stated at the lower of cost or estimated fair value on an aggregate basis. Premiums, discounts and net deferred loan fees are not amortized while a loan is classified as held-for-sale. A sale is recognized only when the consideration received is other than beneficial interests in the assets sold and control over the assets is transferred irrevocably to the buyer. Gains or losses on sales of loans are recognized at the time of sale and are determined by the difference between the net sales proceeds and the allocated basis of the loans sold. ASB is obligated to subsequently repurchase a loan if the purchaser discovers a standard representation or warranty violation such as noncompliance with eligibility requirements, customer fraud or servicing violations. This primarily occurs during a loan file review. ASB considers and records a reserve for loan repurchases if appropriate.

ASB recognizes a mortgage servicing asset when a mortgage loan is sold with servicing rights retained. This mortgage servicing right (MSR) is initially capitalized at its presumed fair value based on market data at the time of sale and accounted for in subsequent periods at the lower of amortized cost or fair value. Mortgage servicing assets or liabilities are included as a component of gain on sale of loans. Under ASC Topic 860, "Transfers and Servicing," ASB amortizes the MSRs in proportion to and over the period of estimated net servicing income and assess for impairment at each reporting date.

ASB's MSRs are stratified based on predominant risk characteristics of the underlying loans including loan type such as fixed-rate 15- and 30-year mortgages and note rate in bands primarily of 50 to 100 basis points. For each stratum, fair value is calculated by discounting expected net income streams using discount rates that reflect industry pricing for similar assets. Expected net income streams are estimated based on industry assumptions regarding prepayment expectations and income and expenses associated with servicing residential mortgage loans for others.

ASB uses a present value cash flow model using techniques described above to estimate the fair value of MSRs. Because observable market prices with exact terms and conditions may not be readily available, ASB compares the fair value of MSRs to an estimated value calculated by an independent third-party on a semi-annual basis. The third-party relies on both published and unpublished sources of market related assumptions and its own experience and expertise to arrive at a value. ASB uses the third-party value only to assess the reasonableness of fair value generated by the valuation model.

Impairment is recognized through a valuation allowance for each stratum when the carrying amount exceeds fair value, with any associated provision recorded as a component of loan servicing fees included in "Revenues - bank" in the consolidated

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

statements of income. A direct write-down is recorded when the recoverability of the valuation allowance is deemed to be unrecoverable.

Loan servicing fee income represents income earned for servicing mortgage loans owned by investors. It includes mortgage servicing fees and other ancillary servicing income, net of guaranty fees. Servicing fees are generally calculated on the outstanding principal balances of the loans serviced and are recorded as income when earned.

Tax credit investments. ASB invests in limited liability entities formed to operate qualifying affordable housing projects.

The affordable housing investments provide tax benefits to investors in the form of tax deductions from operating losses and tax credits. As a limited partner, ASB has no significant influence over the operations. These investments are initially recorded at the initial capital contribution with a liability recognized for the commitment to contribute additional capital over the term of the investment.

ASB uses the proportional amortization method of accounting for its investments. Under the proportional amortization method, ASB amortizes the cost of its investments in proportion to the tax credits and other tax benefits it receives. The amortization, tax credits and tax benefits are reported as a component of income tax expense.

For these limited liability entities, ASB assesses whether it is the primary beneficiary of the limited liability entity, which is a variable interest entity (VIE). The primary beneficiary of a VIE is determined to be the party that meets both of the following criteria: (i) has the power to make decisions that most significantly affect the economic performance of the VIE; and (ii) has the obligation to absorb losses or the right to receive benefits that in either case could potentially be significant to the VIE. Generally, ASB, as a limited partner, is not deemed to be the primary beneficiary as it does not meet the power criterion, i.e., no power to direct the activities of a VIE that most significantly impact the VIE's economic performance and no direct ability to unilaterally remove the general partner.

All tax credit investments are evaluated for potential impairment at least annually, or more frequently, when events or conditions indicate that it is deemed probable that ASB will not recover its investment. If an investment is determined to be impaired, it is written down to its estimated fair value and the new cost basis of the investment is not adjusted for subsequent recoveries in value. As of December 31, 2019, ASB did not have any impairment losses resulting from forfeiture or ineligibility of tax credits or other circumstances related to its low-income housing tax credit (LIHTC) investments.

At December 31, 2019 and 2018, the carrying amount of LIHTC investments was \$66.3 million and \$67.6 million, respectively, and included in other assets in the consolidated balance sheets.

ASB's unfunded commitments to fund its LIHTC investment partnerships were \$23.4 million and \$18.1 million as of December 31, 2019 and 2018, respectively. These unfunded commitments are unconditional and legally binding and are recorded in other liabilities with a corresponding increase in other assets. As of December 31, 2019, ASB did not have any impairment losses resulting from forfeiture or ineligibility of tax credits or other circumstances related to its LIHTC investment partnerships.

The table below summarizes the amounts in income tax expense related to ASB's LIHTC investments:

Years ended December 31	2019	2018	2017
(in millions)			
Amounts in income taxes related to low-income housing tax credit investments			
Amortization recognized in the provision for income taxes	\$ (7.9)	\$ (7.7)	\$ (7.4)
Tax credits and other tax benefits recognized in the provision for income taxes	11.9	10.9	10.7
Net benefit to income tax expense	\$ 4.0	\$ 3.2	\$ 3.3

Note 2 · Segment financial information

The electric utility and bank segments are strategic business units of the Company that offer different products and services and operate in different regulatory environments. The accounting policies of the segments are the same as those described for the Company in the summary of significant accounting policies, except as otherwise indicated and except that federal and state income taxes for each segment are calculated on a “stand-alone” basis. HEI evaluates segment performance based on net income. Each segment accounts for intersegment sales and transfers as if the sales and transfers were to third parties (i.e., at current market prices). Intersegment revenues consist primarily of Hamakua Energy revenues, interest, rent and preferred stock dividends.

Electric utility

Hawaiian Electric and its wholly owned operating subsidiaries, Hawaii Electric Light and Maui Electric, are public electric utilities in the business of generating, purchasing, transmitting, distributing and selling electric energy on all major islands in Hawaii other than Kauai, and are regulated by the PUC. The utility subsidiaries are aggregated within the electric utility segment because they: (1) are involved in the business of supplying electric energy in the same geographical location (i.e., the State of Hawaii), (2) have similar production processes that comprise electric generation, (3) serve similar customers within their franchise territories (e.g., residential, commercial and industrial customers), (4) use similar electric grids to distribute the energy to their customers, (5) are regulated by the PUC and undergo similar rate-making processes, (6) have similar economic characteristics and (7) perform financial reporting oversight and management of the business at the consolidated level.

Bank

ASB is a federally chartered savings bank that provides a full range of banking services to individual and business customers through its branch system in Hawaii. ASB is subject to examination and comprehensive regulation by the Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC), and is subject to reserve requirements established by the Board of Governors of the Federal Reserve System.

Other

“Other” includes amounts for the holding companies (HEI and ASB Hawaii, Inc.), Pacific Current, and other subsidiaries not qualifying as reportable segments, and intercompany eliminations.

Pacific Current. Pacific Current was formed in September 2017 to focus on investing in non-regulated renewable energy and sustainable infrastructure in the State of Hawaii to help achieve the state’s sustainability goals. Significant investments of Pacific Current made through its subsidiaries, Hamakua Energy, LLC and Mauo, LLC, include:

Hamakua power plant. On November 24, 2017, Hamakua Energy, LLC acquired Hamakua Energy Partners, L.P.’s 60-MW combined cycle power plant and other assets from affiliates of ArcLight Capital Partners, a private equity firm. The plant sells all the power it produces to Hawaii Electric Light under an existing power purchase agreement (PPA) that expires in 2030.

Solar + Storage Power Purchase Agreement (PPA). On February 2, 2018, Mauo, LLC executed definitive agreements to acquire a solar-plus-storage PPA for a multi-site, commercial-scale project that will provide 8.6 MW of solar capacity and 42.3 MWH of storage capacity on the islands of Maui and Oahu. The PPA has a 15-year term with an option to extend for an additional five years. The system is currently being constructed by a third party contractor under an Engineering, Procurement and Construction (EPC) contract that was contemporaneously negotiated and executed by Mauo, LLC. The EPC contract provides a fixed price for the purchase of the completed system, a project completion schedule and performance obligations designed to match the requirements of the PPA. Mauo, LLC is funding the construction of the project with a construction facility that will be repaid at the commercial operation date (ultimately with cash from investment tax credits, state renewable tax credits, non-recourse project debt, and equity). There are five separate project sites, which are expected to be placed into service during 2020.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Segment financial information was as follows:

(in thousands)	Electric utility		Bank		Other		Total
2019							
Revenues from external customers	\$	2,545,865	\$	328,570	\$	166	\$ 2,874,601
Intersegment revenues (eliminations)		77		—		(77)	—
Revenues		2,545,942		328,570		89	2,874,601
Depreciation and amortization		245,362		28,675		4,076	278,113
Interest expense, net		70,842		18,440		20,057	109,339
Income (loss) before income taxes		197,140		112,034		(37,765)	271,409
Income taxes (benefit)		38,305		23,061		(9,729)	51,637
Net income (loss)		158,835		88,973		(28,036)	219,772
Preferred stock dividends of subsidiaries		1,995		—		(105)	1,890
Net income (loss) for common stock		156,840		88,973		(27,931)	217,882
Capital expenditures		419,898		24,175		13,447	457,520
Assets (at December 31, 2019)		6,388,682		7,233,017		123,552	13,745,251
2018							
Revenues from external customers	\$	2,546,472	\$	314,275	\$	102	\$ 2,860,849
Intersegment revenues (eliminations)		53		—		(53)	—
Revenues		2,546,525		314,275		49	2,860,849
Depreciation and amortization		230,228		21,443		3,958	255,629
Interest expense, net		73,348		15,539		15,329	104,216
Income (loss) before income taxes		180,426		106,578		(32,543)	254,461
Income taxes (benefit)		34,778		24,069		(8,050)	50,797
Net income (loss)		145,648		82,509		(24,493)	203,664
Preferred stock dividends of subsidiaries		1,995		—		(105)	1,890
Net income (loss) for common stock		143,653		82,509		(24,388)	201,774
Capital expenditures ¹		415,264		72,666		18,840	537,369
Assets (at December 31, 2018)		5,967,503		7,027,894		108,654	13,104,051
2017							
Revenues from external customers	\$	2,257,455	\$	297,640	\$	530	\$ 2,555,625
Intersegment revenues (eliminations)		111		—		(111)	—
Revenues		2,257,566		297,640		419	2,555,625
Depreciation and amortization		201,282		19,416		1,300	221,998
Interest expense, net		69,637		12,156		9,335	91,128
Income (loss) before income taxes		205,145		98,716		(27,281)	276,580
Income taxes (benefit)		83,199		31,719		(5,525)	109,393
Net income (loss)		121,946		66,997		(21,756)	167,187
Preferred stock dividends of subsidiaries		1,995		—		(105)	1,890
Net income (loss) for common stock		119,951		66,997		(21,651)	165,297
Capital expenditures ¹		376,865		53,272		317	495,187
Assets (at December 31, 2017)		5,630,613		6,798,659		104,888	12,534,160

¹ Contributions in aid of construction balances are included in capital expenditures.

Intercompany electricity sales of the Utilities to ASB and “other” segments are not eliminated because those segments would need to purchase electricity from another source if it were not provided by the Utilities and the profit on such sales is nominal.

Bank fees that ASB charges the Utilities and “other” segments are not eliminated because those segments would pay fees to another financial institution if they were to bank with another institution and the profit on such fees is nominal.

Hamakua Energy’s sales to Hawaii Electric Light (a regulated affiliate) are eliminated in consolidation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Note 3 · Electric utility segment

Regulatory assets and liabilities. Regulatory assets represent deferred costs and accrued decoupling revenues which are expected to be recovered through rates over PUC-authorized periods. Generally, the Utilities do not earn a return on their regulatory assets; however, they have been allowed to recover interest on certain regulatory assets and to include certain regulatory assets in rate base. Regulatory liabilities represent amounts included in rates and collected from ratepayers for costs expected to be incurred in the future, or amounts collected in excess of costs incurred that are refundable to customers. For example, the regulatory liability for cost of removal in excess of salvage value represents amounts that have been collected from ratepayers for costs that are expected to be incurred in the future to retire utility plant. Generally, the Utilities include regulatory liabilities in rate base or are required to apply interest to certain regulatory liabilities. In the table below, noted in parentheses are the original PUC authorized amortization or recovery periods and, if different, the remaining amortization or recovery periods as of December 31, 2019 are noted.

Regulatory assets were as follows:

December 31	2019	2018
(in thousands)		
Retirement benefit plans (balance primarily varies with plans' funded statuses)	\$ 554,485	\$ 624,126
Income taxes (1-55 years)	102,612	114,076
Decoupling revenue balancing account and RAM (1-2 years)	—	49,560
Unamortized expense and premiums on retired debt and equity issuances (1-20 years; 1-19 years remaining)	10,228	10,065
Vacation earned, but not yet taken (1 year)	12,535	10,820
Other (1-39 years remaining)	35,220	24,779
Total regulatory assets	\$ 715,080	\$ 833,426
Included in:		
Current assets	\$ 30,710	\$ 71,016
Long-term assets	684,370	762,410
Total regulatory assets	\$ 715,080	\$ 833,426

Regulatory liabilities were as follows:

December 31	2019	2018
(in thousands)		
Cost of removal in excess of salvage value (1-60 years)	\$ 521,977	\$ 491,006
Income taxes (1-55 years)	386,990	413,339
Decoupling revenue balancing account and RAM (1-2 years)	16,370	—
Retirement benefit plans (balance primarily varies with plans' funded statuses)	21,707	19,129
Other (1-19 years remaining)	25,266	26,762
Total regulatory liabilities	\$ 972,310	\$ 950,236
Included in:		
Current liabilities	\$ 30,724	\$ 17,977
Long-term liabilities	941,586	932,259
Total regulatory liabilities	\$ 972,310	\$ 950,236

The regulatory asset and liability relating to retirement benefit plans was recorded as a result of pension and OPEB tracking mechanisms adopted by the PUC in rate case decisions for the Utilities in 2007 (see Note 10).

Major customers. The Utilities received 11% (\$281 million), 11% (\$273 million) and 11% (\$239 million) of their operating revenues from the sale of electricity to various federal government agencies in 2019, 2018 and 2017, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Cumulative preferred stock. The following series of cumulative preferred stock are redeemable only at the option of the respective company at the following prices in the event of voluntary liquidation or redemption:

December 31, 2019	Voluntary liquidation price	Redemption price
Series		
C, D, E, H, J and K (Hawaiian Electric)	\$ 20	\$ 21
I (Hawaiian Electric)	20	20
G (Hawaii Electric Light)	100	100
H (Maui Electric)	100	100

Hawaiian Electric is obligated to make dividend, redemption and liquidation payments on the preferred stock of each of its subsidiaries if the respective subsidiary is unable to make such payments, but this obligation is subordinated to Hawaiian Electric's obligation to make payments on its own preferred stock.

Related-party transactions. HEI charged the Utilities \$6.0 million, \$5.9 million and \$6.2 million for general management and administrative services in 2019, 2018 and 2017, respectively. The amounts charged by HEI to its subsidiaries for services provided by HEI employees are allocated primarily on the basis of time expended in providing such services.

For the years ended December 31, 2019 and December 31, 2018, Hamakua Energy, LLC (an indirect subsidiary of HEI) sold energy and capacity to Hawaii Electric Light (subsidiary of Hawaiian Electric and indirect subsidiary of HEI) under a PPA in the amount of \$68 million and \$56 million, respectively.

Hawaiian Electric's short-term borrowings from HEI totaled nil at December 31, 2019 and 2018. Borrowings among the Utilities are eliminated in consolidation. Interest charged by HEI to Hawaiian Electric was not material for the years ended December 31, 2019 and 2018.

HECO Capital Trust III. Trust III, a wholly-owned unconsolidated subsidiary of Hawaiian Electric, was created and exists for the exclusive purposes of (i) issuing in March 2004 2,000,000 6.50% Cumulative Quarterly Income Preferred Securities, Series 2004 (2004 Trust Preferred Securities) (\$50 million aggregate liquidation preference) to the public and trust common securities (\$1.5 million aggregate liquidation preference) to Hawaiian Electric, (ii) investing the proceeds of these trust securities in 2004 Debentures issued by Hawaiian Electric in the principal amount of \$31.5 million and issued by Hawaii Electric Light and Maui Electric each in the principal amount of \$10 million, (iii) making distributions on these trust securities and (iv) engaging in only those other activities necessary or incidental thereto. On May 15, 2019, Trust III redeemed \$50 million of its outstanding 2004 Trust Preferred Securities and \$1.5 million of trust common securities. Subsequently a Certificate of Cancellation of Statutory Trust was filed with the Delaware Secretary of State in order to cancel the Trust III, which became effective on June 10, 2019.

For the year-to-date period ending on the Trust's cancellation date on June 10, 2019, Trust III's income statement consisted of \$1.2 million of interest income received from the 2004 Debentures; \$1.2 million of distributions to holders of the Trust Preferred Securities; and \$37,000 of common dividends on the trust common securities to Hawaiian Electric.

Unconsolidated variable interest entities.

Power purchase agreements. As of December 31, 2019, the Utilities had four PPAs for firm capacity (excluding the PGV PPA as Puna Geothermal Venture (PGV) has been offline since May 2018 due to lava flow on Hawaii Island) and other PPAs with independent power producers (IPPs) and Schedule Q providers (i.e., customers with cogeneration and/or power production facilities who buy power from or sell power to the Utilities), none of which are currently required to be consolidated as VIEs.

Pursuant to the current accounting standards for VIEs, the Utilities are deemed to have a variable interest in Kalaeloa Partners, L.P. (Kalaeloa), AES Hawaii, Inc. (AES Hawaii) and Hamakua Energy by reason of the provisions of the PPA that the Utilities have with the three IPPs. However, management has concluded that the Utilities are not the primary beneficiary of Kalaeloa, AES Hawaii and Hamakua Energy because the Utilities do not have the power to direct the activities that most significantly impact the three IPPs' economic performance nor the obligation to absorb their expected losses, if any, that could potentially be significant to the IPPs. Thus, the Utilities have not consolidated Kalaeloa, AES Hawaii and Hamakua Energy in its consolidated financial statements. Hamakua Energy is an indirect subsidiary of Pacific Current, and is consolidated in HEI's consolidated financial statements.

For the other PPAs with IPPs, the Utilities have concluded that the consolidation of the IPPs was not required because either the Utilities do not have variable interests in the IPPs due to the absence of an obligation in the PPAs for the Utilities to absorb any variability of the IPPs, or the IPP was considered a "governmental organization," and thus excluded from the scope of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

accounting standards for VIEs. Two IPPs of as-available energy declined to provide the information necessary for Utilities to determine the applicability of accounting standards for VIEs.

If information is ultimately received from the IPPs, a possible outcome of future analyses of such information is the consolidation of one or both of such IPPs in the Consolidated Financial Statements. The consolidation of any significant IPP could have a material effect on the Consolidated Financial Statements, including the recognition of a significant amount of assets and liabilities and, if such a consolidated IPP were operating at a loss and had insufficient equity, the potential recognition of such losses. If the Utilities determine they are required to consolidate the financial statements of such an IPP and the consolidation has a material effect, the Utilities would retrospectively apply accounting standards for VIEs to the IPP.

Commitments and contingencies.

Contingencies. The Utilities are subject in the normal course of business to pending and threatened legal proceedings. Management does not anticipate that the aggregate ultimate liability arising out of these pending or threatened legal proceedings will be material to its financial position. However, the Utilities cannot rule out the possibility that such outcomes could have a material effect on the results of operations or liquidity for a particular reporting period in the future.

Power purchase agreements. Purchases from all IPPs were as follows:

Years ended December 31	2019	2018	2017
(in millions)			
Kalaeloa	\$ 214	\$ 216	\$ 180
AES Hawaii	139	140	140
HPOWER	76	69	67
Puna Geothermal Venture	—	15	38
Hamakua Energy	68	56	35
Wind IPPs	95	107	97
Solar IPPs	36	29	27
Other IPPs ¹	5	7	3
Total IPPs	\$ 633	\$ 639	\$ 587

¹ Includes hydro power and other PPAs

As of December 31, 2019, the Utilities had four firm capacity PPAs for a total of 516.5 megawatts (MW) of firm capacity. Since May 2018, PGV facility with 34.6 MW of firm capacity has been offline due to lava flow on Hawaii Island. The PUC allows rate recovery for energy and firm capacity payments to IPPs under these agreements. Assuming that each of the agreements remains in place for its current term (and as amended) and the minimum availability criteria in the PPAs are met, aggregate minimum fixed capacity charges are expected to be approximately \$51 million in 2020, \$38 million each in 2021, 2022, 2023 and 2024, and \$241 million from 2025 through 2033.

In general, the Utilities base their payments under the PPAs upon available capacity and actual energy supplied and they are generally not required to make payments for capacity if the contracted capacity is not available, and payments are reduced, under certain conditions, if available capacity drops below contracted levels. In general, the payment rates for capacity have been predetermined for the terms of the agreements. Energy payments will vary over the terms of the agreements. The Utilities pass on changes in the fuel component of the energy charges to customers through the ECRC in their rate schedules. The Utilities do not operate, or participate in the operation of, any of the facilities that provide power under the agreements. Title to the facilities does not pass to Hawaiian Electric or its subsidiaries upon expiration of the agreements, and the agreements do not contain bargain purchase options for the facilities.

Purchase power adjustment clause. The PUC has approved purchased power adjustment clauses (PPACs) for the Utilities. Purchased power capacity, O&M and other non-energy costs previously recovered through base rates are now recovered in the PPACs and, subject to approval by the PUC, such costs resulting from new purchased power agreements can be added to the PPACs outside of a rate case. Purchased energy costs continue to be recovered through the ECRC.

Kalaeloa Partners, L.P. Under a 1988 PPA, as amended, Hawaiian Electric is committed to purchase 208 MW of firm capacity from Kalaeloa. Hawaiian Electric and Kalaeloa are currently in negotiations to address the PPA term that ended on May 23, 2016. The PPA automatically extends on a month-to-month basis as long as the parties are still negotiating in good faith. Hawaiian Electric and Kalaeloa have agreed that neither party will terminate the PPA (which has been subject to automatic extension on a month-to-month basis) prior to July 31, 2020, to allow for a negotiated resolution and PUC approval.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

AES Hawaii, Inc. Under a PPA entered into in March 1988, as amended (through Amendment No. 2) for a period of 30 years ending September 2022, Hawaiian Electric agreed to purchase 180 MW of firm capacity from AES Hawaii. Hawaiian Electric and AES Hawaii have been in dispute over an additional 9 MW of capacity. In February 2018, Hawaiian Electric reached agreement with AES Hawaii on an amendment to the PPA. However, in June 2018, the PUC issued an order suspending review of the amendment pending a DOH decision on AES Hawaii's request for approval of its Emission Reduction Plan and partnership with Hawaiian Electric. If approved by the PUC, the amendment will resolve AES Hawaii's claims related to the additional capacity.

Hu Honua Bioenergy, LLC (Hu Honua). In May 2012, Hawaii Electric Light signed a PPA, which the PUC approved in December 2013, with Hu Honua for 21.5 MW of renewable, dispatchable firm capacity fueled by locally grown biomass from a facility on the island of Hawaii. Under the terms of the PPA, the Hu Honua plant was scheduled to be in service in 2016. However, Hu Honua encountered construction and litigation delays, which resulted in an amended and restated PPA between Hawaii Electric Light and Hu Honua dated May 5, 2017. In July 2017, the PUC approved the amended and restated PPA, which becomes effective once the PUC's order is final and non-appealable. In August 2017, the PUC's approval was appealed by a third party. On May 10, 2019, the Hawaii Supreme Court issued a decision remanding the matter to the PUC for further proceedings consistent with the court's decision which must include express consideration of Green House Gas emissions that would result from approving the PPA, whether the cost of energy under the PPA is reasonable in light of the potential for GHG emissions, and whether the terms of the PPA are prudent and in the public interest, in light of its potential hidden and long-term consequences. On June 20, 2019, the PUC issued an order reopening the docket for further proceedings. On September 29, 2019, the PUC issued an order setting the procedural schedule for the matter and on December 20, 2019, issued an order modifying the procedural schedule. Pre-hearing matters will be conducted through March 6, 2020. Thereafter, the PUC will set the date for an evidentiary hearing and post-hearing briefing. Hu Honua expected to complete construction of the plant in the fourth quarter of 2019, but has been delayed.

Utility projects. Many public utility projects require PUC approval and various permits from other governmental agencies. Difficulties in obtaining, or the inability to obtain, the necessary approvals or permits can result in significantly increased project costs or even cancellation of projects. In the event a project does not proceed, or if it becomes probable the PUC will disallow cost recovery for all or part of a project, or if PUC-imposed caps on project costs are expected to be exceeded, project costs may need to be written off in amounts that could result in significant reductions in Hawaiian Electric's consolidated net income.

Enterprise Resource Planning/Enterprise Asset Management (ERP/EAM) implementation project. On August 11, 2016, the PUC approved the Utilities' request to commence the ERP/EAM implementation project, subject to certain conditions, including a \$77.6 million cap on cost recovery as well as a requirement that the Utilities achieve future cost savings consistent with a minimum of \$246 million in ERP/EAM project-related benefits to be delivered to customers over the system's 12-year service life. The decision and order (D&O) approved the deferral of certain project costs and allowed the accrual of allowance for funds used during construction (AFUDC), but limited the AFUDC rate to 1.75%.

The ERP/EAM Implementation Project went live in October 2018. In the Hawaiian Electric 2017 rate case, a settlement agreement approved by the PUC included authorization for the deferred project costs to accrue a return at 1.75% after the project went into service and until the deferred project costs are included in rate base, and for amortization of the deferred costs to not begin until the amortization expense is incorporated in rates and the unamortized deferred project costs are included in rate base. As of December 31, 2019, the total deferred project costs and accrued carrying costs after the project went into service amounted to \$59.3 million.

In February 2019, the PUC approved a methodology for passing the future cost saving benefits of the new ERP/EAM system to customers developed by the Utilities in collaboration with the Consumer Advocate. The Utilities filed a benefits clarification document on June 10, 2019, reflecting \$150 million in future net O&M expense reductions and cost avoidance, and \$96 million in capital cost reductions and tax savings over the 12-year service life. To the extent the reduction in O&M expense relates to amounts reflected in electric rates, the Utilities would reduce future rates for such amounts. As of December 31, 2019, the Utilities recorded a total of \$2.4 million as a regulatory liability for amounts to be returned to customers for reduction in O&M expense included in rates.

On September 13, 2019, the Utilities filed their Semi-Annual Enterprise System Benefits Report for the period January 1 through June 30, 2019. In October 2019, the PUC approved the Utilities and the Consumer Advocate's Stipulated Performance Metrics and Tracking Mechanism.

West Loch PV Project. In November 2019, Hawaiian Electric placed into service a 20-MW (ac) utility-owned and operated renewable and dispatchable solar facility on property owned by the Department of the Navy. PUC orders resulted in a project cost cap of \$67 million and a performance guarantee to provide energy at 9.56 cents/kWh or less to the system. Capital cost recovery under MPIR was approved by the PUC in December 2019 (See "Decoupling" section below for MPIR guidelines and cost recovery discussion.) Project costs incurred as of December 31, 2019 amounted to \$51.4 million and generated

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

\$13.4 million and \$14.0 million in federal and state nonrefundable tax credits, respectively. The tax credits are being deferred and amortized, starting in 2020, over PUC-approved amortization periods.

Environmental regulation. The Utilities are subject to environmental laws and regulations that regulate the operation of existing facilities, the construction and operation of new facilities and the proper cleanup and disposal of hazardous waste and toxic substances.

Hawaiian Electric, Hawaii Electric Light and Maui Electric, like other utilities, periodically encounter petroleum or other chemical releases associated with current or previous operations. The Utilities report and take action on these releases when and as required by applicable law and regulations. The Utilities believe the costs of responding to such releases identified to date will not have a material effect, individually or in the aggregate, on Hawaiian Electric’s consolidated results of operations, financial condition or liquidity.

Former Molokai Electric Company generation site. In 1989, Maui Electric acquired by merger Molokai Electric Company. Molokai Electric Company had sold its former generation site (Site) in 1983 but continued to operate at the Site under a lease until 1985. The EPA has since identified environmental impacts in the subsurface soil at the Site. In cooperation with the Hawaii Department of Health and EPA, Maui Electric further investigated the Site and the Adjacent Parcel to determine the extent of impacts of polychlorinated biphenyls (PCBs), residual fuel oils and other subsurface contaminants. Maui Electric has a reserve balance of \$2.7 million as of December 31, 2019, representing the probable and reasonably estimable undiscounted cost for remediation of the Site and the Adjacent Parcel; however, final costs of remediation will depend on cleanup approach implemented.

Pearl Harbor sediment study. In July 2014, the U.S. Navy notified Hawaiian Electric of the Navy’s determination that Hawaiian Electric is a Potentially Responsible Party responsible for the costs of investigation and cleanup of PCBs contamination in sediment in the area offshore of the Waiiau Power Plant as part of the Pearl Harbor Superfund Site. Hawaiian Electric was also required by the EPA to assess potential sources and extent of PCB contamination onshore at Waiiau Power Plant.

As of December 31, 2019, the reserve account balance recorded by Hawaiian Electric to address the PCB contamination was \$4.2 million. The reserve balance represents the probable and reasonably estimable undiscounted cost for the onshore investigation and the remediation of PCB contamination in the offshore sediment. The final remediation costs will depend on the potential onshore source control requirements and actual offshore cleanup costs.

Asset retirement obligations. AROs represent legal obligations associated with the retirement of certain tangible long-lived assets, are measured as the present value of the projected costs for the future retirement of specific assets and are recognized in the period in which the liability is incurred if a reasonable estimate of fair value can be made. The Utilities’ recognition of AROs have no impact on their earnings. The cost of the AROs is recovered over the life of the asset through depreciation. AROs recognized by the Utilities relate to legal obligations associated with the retirement of plant and equipment, including removal of asbestos and other hazardous materials.

The Utilities recorded AROs related to 1) the removal of retired generating units, certain types of transformers and underground storage tanks; 2) the abandonment of fuel pipelines, underground injection and supply wells; and 3) the removal of equipment and restoration of leased land used in connection with Utility-owned renewable and dispatchable generation facilities.

Changes to the ARO liability included in “Other liabilities” on Hawaiian Electric’s balance sheet were as follows:

(in thousands)	2019		2018	
Balance, January 1	\$	8,426	\$	6,035
Accretion expense		312		282
Liabilities incurred		1,594		1,058
Liabilities settled		(8)		(74)
Revisions in estimated cash flows		—		1,125
Balance, December 31	\$	10,324	\$	8,426

The Utilities have not recorded AROs for assets that are expected to operate indefinitely or where the Utilities cannot estimate a settlement date (or range of potential settlement dates). As such, ARO liabilities are not recorded for certain asset retirement activities, including various Utilities-owned generating facilities and certain electric transmission, distribution and telecommunications assets resulting from easements over property not owned by the Utilities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Regulatory proceedings.

Decoupling. Decoupling is a regulatory model that is intended to provide the Utilities with financial stability and facilitate meeting the State of Hawaii's goals to transition to a clean energy economy and achieve an aggressive renewable portfolio standard. The decoupling mechanism has the following major components: (1) monthly revenue balancing account (RBA) revenues or refunds for the difference between PUC-approved target revenues and recorded adjusted revenues, which delinks revenues from kilowatthour sales, (2) RAM revenues for escalation in certain O&M expenses and rate base changes, (3) MPIR component, (4) performance incentive mechanisms (PIMs), and (5) an earnings sharing mechanism, which would provide for a reduction of revenues between rate cases in the event the utility exceeds the return on average common equity (ROACE) allowed in its most recent rate case. Under the decoupling mechanism, triennial general rate cases are required.

Rate adjustment mechanism. The RAM is based on the lesser of: a) an inflationary adjustment for certain O&M expenses and return on investment for certain rate base changes, or b) cumulative annual compounded increase in Gross Domestic Product Price Index applied to annualized target revenues (the RAM Cap). Annualized target revenues reset upon the issuance of an interim or final D&O in a rate case. Each of the Utilities' RAM revenues was below its respective RAM Cap in 2019. The 2019 RAM also incorporated additional amortization of the regulatory liability associated with certain excess deferred taxes resulting from the Tax Act decrease in tax rates. The reduction in the RAM revenues will be counterbalanced by the lower income tax expense and, therefore, will have no net income impact.

Major project interim recovery. On April 27, 2017, the PUC issued an order that provided guidelines for interim recovery of revenues to support major projects placed in service between general rate cases.

Projects eligible for recovery through the MPIR adjustment mechanism are major projects (i.e., projects with capital expenditures net of customer contributions in excess of \$2.5 million), including, but not restricted to, renewable energy, energy efficiency, utility scale generation, grid modernization and smaller qualifying projects grouped into programs for review. The MPIR adjustment mechanism provides the opportunity to recover revenues for approved costs of eligible projects placed in service between general rate cases wherein cost recovery is limited by a revenue cap and is not provided by other effective recovery mechanisms. The request for PUC approval must include a business case, and all costs that are allowed to be recovered through the MPIR adjustment mechanism must be offset by any related benefits. The guidelines provide for accrual of revenues approved for recovery upon in-service date to be collected from customers through the annual RBA tariff. Capital projects that are not recovered through the MPIR would be included in the RAM and be subject to the RAM Cap, until the next rate case when the Utilities would request recovery in base rates.

The PUC approved recovery of capital costs under the MPIR for Schofield Generating Station, which increased revenues in 2018 by \$3.6 million and are being collected in customer bills since June 2019. In February 2019, Hawaiian Electric submitted an MPIR filing of \$19.8 million for 2019 (which accrued effective January 1, 2019) that included the 2019 return on project amount (up to the capped amount) in rate base, depreciation and incremental O&M expenses, for collection from June 2020 through May 2021.

The PUC approved the Utilities' requests for MPIR of the cost of the Grid Modernization Strategy Phase 1 project and West Loch PV project in March and December 2019, respectively. On February 7, 2020, the Utilities submitted an MPIR filing totaling \$24.2 million for the Schofield Generation Station (\$19.2 million), West Loch PV project (\$4.5 million) and Grid Modernization Strategy Phase 1 project (\$0.5 million for all three utilities) for the accrual of revenues effective January 1, 2020, that included the 2020 return on project amount (up to the capped amount) in rate base, depreciation and incremental O&M expenses, for collection from June 2021 through May 2022.

Performance incentive mechanisms. The PUC has established the following PIMs.

- Service Quality performance incentives are measured on a calendar-year basis. The PIM tariff requires the performance targets, deadbands and the amount of maximum financial incentives used to determine the PIM financial incentive levels for each of the PIMs to be re-determined upon issuance of an interim or final order in a general rate case for each utility.
- Service Reliability Performance measured by System Average Interruption Duration and Frequency Indexes (penalties only). Target performance is based on each utility's historical 10-year average performance with a deadband of one standard deviation. The maximum penalty for each performance index is 20 basis points applied to the common equity share of each respective utility's approved rate base (or maximum penalties of approximately \$6.7 million - for both indices in total for the three utilities).
- Call Center Performance measured by the percentage of calls answered within 30 seconds. Target performance is based on the annual average performance for each utility for the most recent 8 quarters with a deadband of 3% above and below the target. The maximum penalty or reward is 8 basis points applied to the common equity share of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

each respective utility’s approved rate base (or maximum penalties or rewards of approximately \$1.3 million - in total for the three utilities).

- In December 2018, the Utilities accrued \$2.1 million in estimated penalties for service reliability, net of call center performance rewards, for 2018. As a result of a PUC order denying the exclusion of the impact of a specific project on the service reliability performance, in May 2019, Hawaiian Electric accrued an additional \$1.3 million in service reliability penalties related to 2018. The net service quality performance penalties related to 2018 were reflected in the 2019 annual decoupling filing and will reduce customer rates in the period June 1, 2019 through May 31, 2020.
- In December 2019, the Utilities accrued \$0.3 million in estimated rewards for call center performance, net of service reliability penalties, for 2019. The net service quality performance rewards related to 2019 will be reflected in the 2020 annual decoupling filing and will increase customer rates in the period June 1, 2020 through May 31, 2021.
- Procurement of low-cost variable renewable resources through the request for proposal process in 2018 measured by comparison of the procurement price to target prices. The incentive is a percentage of the savings determined by comparing procured price to a target of 11.5 cents per kilowatt-hour for renewable projects with storage capability and 9.5 cents per kilowatt-hour for energy-only renewable projects. For PPAs filed by December 31, 2018 and subsequently approved by the PUC, the incentive is 20% of the savings, with a cap of \$3.5 million for the three utilities in total. For PPAs filed in January, February, and March 2019 and subsequently approved by the PUC, scaled incentives are 15%, 10% and 5%, respectively, of the savings for PPAs, with a cap of \$3 million for the three utilities in total. There are no penalties. On March 25, 2019, the PUC approved six contracts, which were filed by December 31, 2018 and qualified for incentives. A seventh contract, which was filed in February 2019 and approved in August 2019, also qualified for incentives. Half of the incentive is earned upon PUC approval of the contract and the other half is eligible to be earned in the year following the in-service date of the projects. The Utilities accrued \$1.7 million in incentives in March 2019, which were reflected in the 2019 annual decoupling filing and will be recovered in rates in the period June 1, 2019 through May 31, 2020.

On October 9, 2019, the PUC issued an order establishing PIMs for the Utilities with regards to the Variable Renewable Dispatchable Generation and Energy Storage requests for proposals (RFPs) as well as the Delivery of Grid Services via Customer-sited Distributed Energy Resources RFPs, that were issued on August 22, 2019 for Oahu, Maui and Hawaii island. The order establishes pricing thresholds, timelines to complete contracting, and other performance criteria for the performance incentive eligibility. The PIMs provide incentives only without penalties. The earliest the Utilities would be eligible for a PIM pursuant to this order is upon PUC approval of executed contracts resulting from the Phase 2 RFPs. The order requires contracts under the Grid Service RFP be filed for approval by May 2020, and by September 2020 under the Renewable RFPs. There is no set time period for approval. The Utilities filed a motion for reconsideration and/or clarification regarding the order on October 21, 2019, relating to certain design aspects and eligibility criteria for the PIMs.

Annual decoupling filings. The net annual incremental amounts approved to be collected (refunded) from June 1, 2019 through May 31, 2020 are as follows:

(in millions)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Total
2019 Annual incremental RAM adjusted revenues, net of changes in Tax Act adjustment*	\$ 6.5	\$ 1.1	\$ 5.4	\$ 13.0
Annual change in accrued RBA balance as of December 31, 2018 (and associated revenue taxes) which incorporates MPIR recovery	(12.2)	(2.0)	0.8	(13.4)
Performance Incentive Mechanisms (net)	(1.3)	—	(0.4)	(1.7)
Net annual incremental amount to be collected (refunded) under the tariffs	\$ (7.0)	\$ (0.9)	\$ 5.8	\$ (2.1)

* The 2017 Tax Cuts and Jobs Act (the Tax Act) had two incremental impacts in 2019. First, the 2019 RAM calculation for all of the Utilities incorporated additional amortization of the regulatory liability associated with certain deferred taxes. Secondly, Maui Electric incorporated a \$2.8 million adjustment in its 2018 annual decoupling filing related to the Tax Act which is not recurring in 2019.

Performance-based regulation proceeding. On April 18, 2018, the PUC issued an order, instituting a proceeding to investigate performance-based regulation (PBR). The PUC stated that PBR seeks to utilize both revenue adjustment mechanisms and performance mechanisms to more strongly align utilities’ incentives with customer interests.

The order stated that, in general, the PUC is interested in ratemaking elements and/or mechanisms that result in:

- Greater cost control and reduced rate volatility;
- Efficient investment and allocation of resources regardless of classification as capital or operating expense;
- Fair distribution of risks between utilities and customers; and
- Fulfillment of State policy goals.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The proceeding has two phases. Phase 1 examined the current regulatory framework and identified those areas of utility performance that are deserving of further focus in Phase 2. In May 2019, the PUC issued an order concluding Phase 1, which established guiding principles, regulatory goals, and priority outcomes to guide the development of the PBR mechanisms in Phase 2. The PUC identified the following guiding principles, which will inform the development of the PBR framework: 1) a customer-centric approach, 2) administrative efficiency to reduce regulatory burdens; and 3) utility financial integrity to maintain the utility's financial health. Priority goals (and priority outcomes) identified by the PUC were: enhance customer experience (affordability, reliability, interconnection experience, and customer engagement), improve utility performance (cost control, distributed energy resources (DER) asset effectiveness, and grid investment efficiency), and advance societal outcomes (capital formation, customer equity, GHG reduction, electrification of transportation, and resilience).

The order also outlined the PUC's vision of a comprehensive PBR framework that would be further developed in Phase 2. The framework envisioned would include 1) a five-year multi-year rate plan with an index-driven annual revenue adjustment based on an inflation factor, an X-factor which would encompass productivity, a Z-factor to account for exceptional circumstances not in the utility's control and a customer dividend, 2) a symmetric earnings sharing mechanism that would help ensure that utility earnings do not excessively benefit or suffer from external factors outside of utility control or unforeseen results of regulatory mechanisms, 3) off-ramp provisions, 4) continuation of the RBA, MPIR adjustment mechanism, the pension and OPEB tracking mechanism, and other recovery mechanisms, and 5) a portfolio of performance incentive mechanisms for customer engagement and DER asset effectiveness (rewards only), and interconnection experience (both rewards and penalties), in addition to scorecards to track progress against targeted performance levels, shared savings mechanisms to apportion savings to the utility and customers, and reported metrics.

The Phase 2 schedule includes working group meetings through the first half of 2020, followed by statements of positions, evidentiary hearing in October 2020 and anticipated decision in December 2020.

Most recent rate proceedings.

Hawaiian Electric 2020 test year rate case. On August 21, 2019, Hawaiian Electric filed an application for a general rate increase for its 2020 test year rate case, requesting an increase of \$77.6 million over revenues at current effective rates (for a 4.1% increase in revenues), based on an 8.0% rate of return (which incorporates a ROACE of 10.5%). In September 2019, the PUC issued an order ruling that Hawaiian Electric's application was complete as of the date of filing. It also ordered that an outside consultant, selected by the PUC, would independently conduct a management audit of Hawaiian Electric. The PUC expects the audit to conclude in May 2020.

Maui Electric consolidated 2015 and 2018 test year rate cases. On August 9, 2018, the PUC approved an interim rate increase based on a stipulated settlement, that included the effects of the 2017 Tax Act, between Maui Electric and the Consumer Advocate. On March 18, 2019, the PUC issued its D&O that approved, with certain modifications, the stipulated settlement, which addressed all issues in the rate case.

Revised tariffs reflecting a final increase of \$12.2 million over revenues at current effective rates based on the approved 7.43% rate of return (which incorporates a ROACE of 9.5% and a capital structure that includes a 57% common equity capitalization) on a \$454 million rate base became effective on June 1, 2019. Maui Electric's ECRC tariff, resulting in the recovery of all fuel and purchased energy through the ECRC and the removal of the recovery of these costs from base rates, became effective on September 1, 2019. The ECRC reflects a 98%/2% fossil fuel generation cost risk-sharing split between ratepayers and Maui Electric, with an annual maximum increase or decrease to revenues to \$0.6 million for the utility.

Hawaii Electric Light 2019 test year rate case. On December 14, 2018, Hawaii Electric Light filed an application for a general rate increase for its 2019 test year rate case, requesting an increase of \$13.4 million over revenues at current effective rates (for a 3.4% increase in revenues), based on an 8.3% rate of return (which incorporates a ROACE of 10.5%).

On September 24, 2019, Hawaii Electric Light and the Consumer Advocate (Parties) filed a Stipulated Partial Settlement Letter (Partial Settlement) which documented agreements reached with the Consumer Advocate on all of the issues in the proceeding except for the ROACE, capital structure, amortization period for the state investment tax credit (ITC), and symmetric or asymmetric automatic annual target heat rate adjustment (collectively, remaining issues). On November 13, 2019, the PUC issued an interim decision maintaining Hawaii Electric Light's revenues at current effective rates based on an interim revenue requirement of \$387 million, average rate base of \$534 million, and a 7.52% ROR on average rate base that incorporates a ROACE of 9.5% and 58.0% total equity ratio. On November 25, 2019, the Parties filed separate responses to the interim order, agreeing that: (1) they do not intend to withdraw from the Partial Settlement; (2) they waive their respective rights to an evidentiary hearing on the remaining contested issues; and (3) the remaining issues in the proceeding can be decided based on the evidence in the record and should be the subject of the filing of opening and reply briefs in February 2020. On December 13, 2019, the PUC issued an order approving the interim tariffs (effective January 1, 2020), removing the evidentiary hearing from

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

the procedural schedule, and scheduling the filing of supplemental evidence on January 17, 2020 and simultaneous opening and reply briefs on February 3, 2020 and February 24, 2020. There is no statutory deadline for the PUC to issue a final decision.

Consolidating financial information. Consolidating financial information for Hawaiian Electric and its subsidiaries are presented for the years ended December 31, 2019, 2018 and 2017, and as of December 31, 2019 and 2018.

Hawaiian Electric unconditionally guarantees Hawaii Electric Light's and Maui Electric's obligations (a) to the State of Hawaii for the repayment of principal and interest on Special Purpose Revenue Bonds issued for the benefit of Hawaii Electric Light and Maui Electric and (b) under their respective private placement note agreements and the Hawaii Electric Light notes and Maui Electric notes issued thereunder (see Hawaiian Electric and Subsidiaries' Consolidated Statements of Capitalization). Hawaiian Electric is also obligated, after the satisfaction of its obligations on its own preferred stock, to make dividend, redemption and liquidation payments on Hawaii Electric Light's and Maui Electric's preferred stock if the respective subsidiary is unable to make such payments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statement of income

Year ended December 31, 2019

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Revenues	\$ 1,803,698	364,590	378,202	—	(548) [1]	\$ 2,545,942
Expenses						
Fuel oil	494,728	84,565	141,416	—	—	720,709
Purchased power	494,215	90,989	48,052	—	—	633,256
Other operation and maintenance	319,771	76,091	85,875	—	—	481,737
Depreciation	143,470	41,812	30,449	—	—	215,731
Taxes, other than income taxes	170,979	33,787	35,365	—	—	240,131
Total expenses	1,623,163	327,244	341,157	—	—	2,291,564
Operating income	180,535	37,346	37,045	—	(548)	254,378
Allowance for equity funds used during construction	9,955	816	1,216	—	—	11,987
Equity in earnings of subsidiaries	43,167	—	—	—	(43,167) [2]	—
Retirement defined benefits expense—other than service costs	(2,287)	(422)	(127)	—	—	(2,836)
Interest expense and other charges, net	(51,199)	(10,741)	(9,450)	—	548 [1]	(70,842)
Allowance for borrowed funds used during construction	3,666	342	445	—	—	4,453
Income before income taxes	183,837	27,341	29,129	—	(43,167)	197,140
Income taxes	25,917	5,990	6,398	—	—	38,305
Net income	157,920	21,351	22,731	—	(43,167)	158,835
Preferred stock dividends of subsidiaries	—	534	381	—	—	915
Net income attributable to Hawaiian Electric	157,920	20,817	22,350	—	(43,167)	157,920
Preferred stock dividends of Hawaiian Electric	1,080	—	—	—	—	1,080
Net income for common stock	\$ 156,840	20,817	22,350	—	(43,167)	\$ 156,840

Consolidating statement of comprehensive income

Year ended December 31, 2019

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Net income for common stock	\$ 156,840	20,817	22,350	—	(43,167)	\$ 156,840
Other comprehensive income (loss), net of taxes:						
Retirement benefit plans:						
Net gains (losses) arising during the period, net of taxes	5,249	373	(204)	—	(169) [1]	5,249
Adjustment for amortization of prior service credit and net losses recognized during the period in net periodic benefit cost, net of tax benefits	9,550	1,455	1,182	—	(2,637) [1]	9,550
Reclassification adjustment for impact of D&Os of the PUC included in regulatory assets, net of taxes	(16,177)	(1,840)	(1,152)	—	2,992 [1]	(16,177)
Other comprehensive loss, net of tax benefits	(1,378)	(12)	(174)	—	186	(1,378)
Comprehensive income attributable to common shareholder	\$ 155,462	20,805	22,176	—	(42,981)	\$ 155,462

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statement of income

Year ended December 31, 2018

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Revenues	\$ 1,802,550	375,493	368,700	—	(218) [1]	\$ 2,546,525
Expenses						
Fuel oil	523,706	90,792	146,030	—	—	760,528
Purchased power	494,450	95,838	49,019	—	—	639,307
Other operation and maintenance	313,346	70,396	77,749	—	—	461,491
Depreciation	137,410	40,235	25,981	—	—	203,626
Taxes, other than income taxes	170,363	34,850	34,699	—	—	239,912
Total expenses	1,639,275	332,111	333,478	—	—	2,304,864
Operating income	163,275	43,382	35,222	—	(218)	241,661
Allowance for equity funds used during construction	9,208	478	1,191	—	—	10,877
Equity in earnings of subsidiaries	45,393	—	—	—	(45,393) [2]	—
Retirement defined benefits expense—other than service costs	(2,649)	(417)	(565)	—	—	(3,631)
Interest expense and other charges, net	(52,180)	(11,836)	(9,550)	—	218 [1]	(73,348)
Allowance for borrowed funds used during construction	4,019	276	572	—	—	4,867
Income before income taxes	167,066	31,883	26,870	—	(45,393)	180,426
Income taxes	22,333	6,868	5,577	—	—	34,778
Net income	144,733	25,015	21,293	—	(45,393)	145,648
Preferred stock dividends of subsidiaries	—	534	381	—	—	915
Net income attributable to Hawaiian Electric	144,733	24,481	20,912	—	(45,393)	144,733
Preferred stock dividends of Hawaiian Electric	1,080	—	—	—	—	1,080
Net income for common stock	\$ 143,653	24,481	20,912	—	(45,393)	\$ 143,653

Consolidating statement of comprehensive income

Year ended December 31, 2018

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Net income for common stock	\$ 143,653	24,481	20,912	—	(45,393)	\$ 143,653
Other comprehensive income (loss), net of taxes:						
Retirement benefit plans:						
Net losses arising during the period, net of tax benefits	(26,019)	(6,090)	(5,004)	—	11,094 [1]	(26,019)
Adjustment for amortization of prior service credit and net losses recognized during the period in net periodic benefit cost, net of tax benefits	19,012	2,819	2,423	—	(5,242) [1]	19,012
Reclassification adjustment for impact of D&Os of the PUC included in regulatory assets, net of taxes	8,325	3,305	2,788	—	(6,093) [1]	8,325
Other comprehensive income, net of taxes	1,318	34	207	—	(241)	1,318
Comprehensive income attributable to common shareholder	\$ 144,971	24,515	21,119	—	(45,634)	\$ 144,971

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statement of income

Year ended December 31, 2017

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Revenues	\$ 1,598,504	333,467	325,678	—	(83) [1]	\$ 2,257,566
Expenses						
Fuel oil	408,204	63,894	115,670	—	—	587,768
Purchased power	454,189	87,772	44,673	—	—	586,634
Other operation and maintenance	274,391	66,184	71,332	—	—	411,907
Depreciation	130,889	38,741	23,154	—	—	192,784
Taxes, other than income taxes	152,933	31,184	30,832	—	—	214,949
Total expenses	1,420,606	287,775	285,661	—	—	1,994,042
Operating income	177,898	45,692	40,017	—	(83)	263,524
Allowance for equity funds used during construction	10,896	554	1,033	—	—	12,483
Equity in earnings of subsidiaries	38,057	—	—	—	(38,057) [2]	—
Retirement defined benefits expense—other than service costs	(5,049)	(93)	(861)	—	—	(6,003)
Interest expense and other charges, net	(48,277)	(11,799)	(9,644)	—	83 [1]	(69,637)
Allowance for borrowed funds used during construction	4,089	238	451	—	—	4,778
Income before income taxes	177,614	34,592	30,996	—	(38,057)	205,145
Income taxes	56,583	13,912	12,704	—	—	83,199
Net income	121,031	20,680	18,292	—	(38,057)	121,946
Preferred stock dividends of subsidiaries	—	534	381	—	—	915
Net income attributable to Hawaiian Electric	121,031	20,146	17,911	—	(38,057)	121,031
Preferred stock dividends of Hawaiian Electric	1,080	—	—	—	—	1,080
Net income for common stock	\$ 119,951	20,146	17,911	—	(38,057)	\$ 119,951

Consolidating statement of comprehensive income

Year ended December 31, 2017

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Net income for common stock	\$ 119,951	20,146	17,911	—	(38,057)	\$ 119,951
Other comprehensive income (loss), net of taxes:						
Derivatives qualified as cash flow hedges:						
Reclassification adjustment to net income, net of tax benefits	454	—	—	—	—	454
Retirement benefit plans:						
Net gains arising during the period, net of taxes	63,105	3,093	7,329	—	(10,422) [1]	63,105
Adjustment for amortization of prior service credit and net losses recognized during the period in net periodic benefit cost, net of tax benefits	14,477	1,903	1,619	—	(3,522) [1]	14,477
Reclassification adjustment for impact of D&Os of the PUC included in regulatory assets, net of taxes	(78,724)	(4,994)	(9,003)	—	13,997 [1]	(78,724)
Other comprehensive income (loss), net of taxes	(688)	2	(55)	—	53	(688)
Comprehensive income attributable to common shareholder	\$ 119,263	20,148	17,856	—	(38,004)	\$ 119,263

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating balance sheet

December 31, 2019

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Assets						
Property, plant and equipment						
Utility property, plant and equipment						
Land	\$ 42,598	5,606	3,612	—	—	\$ 51,816
Plant and equipment	4,765,362	1,313,727	1,161,199	—	—	7,240,288
Less accumulated depreciation	(1,591,241)	(574,615)	(524,301)	—	—	(2,690,157)
Construction in progress	165,137	9,993	17,944	—	—	193,074
Utility property, plant and equipment, net	3,381,856	754,711	658,454	—	—	4,795,021
Nonutility property, plant and equipment, less accumulated depreciation	5,310	114	1,532	—	—	6,956
Total property, plant and equipment, net	3,387,166	754,825	659,986	—	—	4,801,977
Investment in wholly-owned subsidiaries, at equity	591,969	—	—	—	(591,969) [2]	—
Current assets						
Cash and cash equivalents	2,239	6,885	1,797	101	—	11,022
Restricted cash	30,749	123	—	—	—	30,872
Advances to affiliates	27,700	8,000	—	—	(35,700) [1]	—
Customer accounts receivable, net	105,454	24,520	22,816	—	—	152,790
Accrued unbilled revenues, net	83,148	17,071	17,008	—	—	117,227
Other accounts receivable, net	18,396	1,907	1,960	—	(10,695) [1]	11,568
Fuel oil stock, at average cost	69,003	8,901	14,033	—	—	91,937
Materials and supplies, at average cost	34,876	8,313	17,513	—	—	60,702
Prepayments and other	88,334	3,725	24,921	—	—	116,980
Regulatory assets	27,689	1,641	1,380	—	—	30,710
Total current assets	487,588	81,086	101,428	101	(46,395)	623,808
Other long-term assets						
Operating lease right-of-use assets	174,886	1,537	386	—	—	176,809
Regulatory assets	476,390	109,163	98,817	—	—	684,370
Other	69,010	15,493	17,215	—	—	101,718
Total other long-term assets	720,286	126,193	116,418	—	—	962,897
Total assets	\$ 5,187,009	962,104	877,832	101	(638,364)	\$ 6,388,682
Capitalization and liabilities						
Capitalization						
Common stock equity	\$ 2,047,352	298,998	292,870	101	(591,969) [2]	\$ 2,047,352
Cumulative preferred stock—not subject to mandatory redemption	22,293	7,000	5,000	—	—	34,293
Long-term debt, net	1,006,737	206,416	188,561	—	—	1,401,714
Total capitalization	3,076,382	512,414	486,431	101	(591,969)	3,483,359
Current liabilities						
Current portion of operating lease liabilities	63,582	94	31	—	—	63,707
Current portion of long-term debt, net	61,958	13,995	20,000	—	—	95,953
Short-term borrowings-non-affiliate	88,987	—	—	—	—	88,987
Short-term borrowings-affiliate	8,000	—	27,700	—	(35,700) [1]	—
Accounts payable	139,056	25,629	23,085	—	—	187,770
Interest and preferred dividends payable	14,759	3,115	2,900	—	(46) [1]	20,728
Taxes accrued	143,522	32,541	31,929	—	—	207,992
Regulatory liabilities	13,363	9,454	7,907	—	—	30,724
Other	51,295	11,362	15,297	—	(10,649) [1]	67,305
Total current liabilities	584,522	96,190	128,849	—	(46,395)	763,166
Deferred credits and other liabilities						
Operating lease liabilities	111,598	1,442	360	—	—	113,400
Deferred income taxes	265,864	53,534	57,752	—	—	377,150
Regulatory liabilities	664,894	178,474	98,218	—	—	941,586
Unamortized tax credits	86,852	16,196	14,820	—	—	117,868
Defined benefit pension and other postretirement benefit plans liability	339,471	69,928	69,364	—	—	478,763
Other	57,426	33,926	22,038	—	—	113,390
Total deferred credits and other liabilities	1,526,105	353,500	262,552	—	—	2,142,157
Total capitalization and liabilities	\$ 5,187,009	962,104	877,832	101	(638,364)	\$ 6,388,682

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating balance sheet

December 31, 2018

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Assets						
Property, plant and equipment						
Utility property, plant and equipment						
Land	\$ 40,449	5,606	3,612	—	—	\$ 49,667
Plant and equipment	4,456,090	1,259,553	1,094,028	—	—	6,809,671
Less accumulated depreciation	(1,523,861)	(547,848)	(505,633)	—	—	(2,577,342)
Construction in progress	193,677	8,781	30,687	—	—	233,145
Utility property, plant and equipment, net	3,166,355	726,092	622,694	—	—	4,515,141
Nonutility property, plant and equipment, less accumulated depreciation	5,314	115	1,532	—	—	6,961
Total property, plant and equipment, net	3,171,669	726,207	624,226	—	—	4,522,102
Investment in wholly-owned subsidiaries, at equity	576,838	—	—	—	(576,838) [2]	—
Current assets						
Cash and cash equivalents	16,732	15,623	3,421	101	—	35,877
Customer accounts receivable, net	125,960	26,483	25,453	—	—	177,896
Accrued unbilled revenues, net	88,060	17,051	16,627	—	—	121,738
Other accounts receivable, net	21,962	3,131	3,033	—	(21,911) [1]	6,215
Fuel oil stock, at average cost	54,262	11,027	14,646	—	—	79,935
Materials and supplies, at average cost	30,291	7,155	17,758	—	—	55,204
Prepayments and other	23,214	5,212	3,692	—	—	32,118
Regulatory assets	60,093	3,177	7,746	—	—	71,016
Total current assets	420,574	88,859	92,376	101	(21,911)	579,999
Other long-term assets						
Regulatory assets	537,708	120,658	104,044	—	—	762,410
Other	69,749	15,944	17,299	—	—	102,992
Total other long-term assets	607,457	136,602	121,343	—	—	865,402
Total assets	\$ 4,776,538	951,668	837,945	101	(598,749)	\$ 5,967,503
Capitalization and liabilities						
Capitalization						
Common stock equity	\$ 1,957,641	295,874	280,863	101	(576,838) [2]	\$ 1,957,641
Cumulative preferred stock—not subject to mandatory redemption	22,293	7,000	5,000	—	—	34,293
Long-term debt, net	1,000,137	217,749	200,916	—	—	1,418,802
Total capitalization	2,980,071	520,623	486,779	101	(576,838)	3,410,736
Current liabilities						
Short-term borrowings-non-affiliate	25,000	—	—	—	—	25,000
Accounts payable	126,384	20,045	25,362	—	—	171,791
Interest and preferred dividends payable	16,203	4,203	2,841	—	(32) [1]	23,215
Taxes accrued	164,747	34,128	34,458	—	—	233,333
Regulatory liabilities	7,699	4,872	5,406	—	—	17,977
Other	46,391	15,077	20,414	—	(21,879) [1]	60,003
Total current liabilities	386,424	78,325	88,481	—	(21,911)	531,319
Deferred credits and other liabilities						
Deferred income taxes	271,438	54,936	56,823	—	—	383,197
Regulatory liabilities	657,210	176,101	98,948	—	—	932,259
Unamortized tax credits	60,271	16,217	15,034	—	—	91,522
Defined benefit pension and other postretirement benefit plans liability	359,174	73,147	71,338	—	—	503,659
Other	61,950	32,319	20,542	—	—	114,811
Total deferred credits and other liabilities	1,410,043	352,720	262,685	—	—	2,025,448
Total capitalization and liabilities	\$ 4,776,538	951,668	837,945	101	(598,749)	\$ 5,967,503

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statements of changes in common stock equity

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Balance, December 31, 2016	\$ 1,799,787	291,291	259,554	101	(550,946)	\$ 1,799,787
Net income for common stock	119,951	20,146	17,911	—	(38,057)	119,951
Other comprehensive income (loss), net of taxes	(688)	2	(55)	—	53	(688)
Issuance of common stock, net of expenses	14,000	4	4,801	—	(4,805)	14,000
Common stock dividends	(87,767)	(24,796)	(11,946)	—	36,742	(87,767)
Balance, December 31, 2017	1,845,283	286,647	270,265	101	(557,013)	1,845,283
Net income for common stock	143,653	24,481	20,912	—	(45,393)	143,653
Other comprehensive income, net of taxes	1,318	34	207	—	(241)	1,318
Issuance of common stock, net of expenses	70,692	1	1,498	—	(1,499)	70,692
Common stock dividends	(103,305)	(15,289)	(12,019)	—	27,308	(103,305)
Balance, December 31, 2018	1,957,641	295,874	280,863	101	(576,838)	1,957,641
Net income for common stock	156,840	20,817	22,350	—	(43,167)	156,840
Other comprehensive loss, net of tax benefits	(1,378)	(12)	(174)	—	186	(1,378)
Issuance of common stock, net of expenses	35,501	(1)	4,899	—	(4,898)	35,501
Common stock dividends	(101,252)	(17,680)	(15,068)	—	32,748	(101,252)
Balance, December 31, 2019	\$ 2,047,352	298,998	292,870	101	(591,969)	\$ 2,047,352

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statement of cash flows

Year ended December 31, 2019

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Cash flows from operating activities						
Net income	\$ 157,920	21,351	22,731	—	(43,167) [2]	\$ 158,835
Adjustments to reconcile net income to net cash provided by operating activities						
Equity in earnings of subsidiaries	(43,204)	—	—	—	43,167 [2]	(37)
Common stock dividends received from subsidiaries	32,783	—	—	—	(32,748) [2]	35
Depreciation of property, plant and equipment	143,470	41,812	30,449	—	—	215,731
Other amortization	23,351	4,810	1,470	—	—	29,631
Deferred income taxes	(13,547)	(2,383)	(354)	—	—	(16,284)
Income tax credits, net	27,277	(13)	(5)	—	—	27,259
State refundable credit	(6,245)	(559)	(1,565)	—	—	(8,369)
Allowance for equity funds used during construction	(9,955)	(816)	(1,216)	—	—	(11,987)
Other	298	(48)	(50)	—	—	200
Changes in assets and liabilities:						
Decrease in accounts receivable	25,376	3,326	3,469	—	(11,215) [1]	20,956
Decrease (increase) in accrued unbilled revenues	4,912	(20)	(381)	—	—	4,511
Decrease (increase) in fuel oil stock	(14,741)	2,126	613	—	—	(12,002)
Decrease (increase) in materials and supplies	(4,585)	(1,158)	245	—	—	(5,498)
Decrease in regulatory assets	55,494	9,218	6,550	—	—	71,262
Increase (decrease) in regulatory liabilities	102	(1,558)	3,409	—	—	1,953
Increase (decrease) in accounts payable	4,687	(3,160)	(3,578)	—	—	(2,051)
Change in prepaid and accrued income taxes, tax credits and revenue taxes	(24,900)	(893)	(3,097)	—	367 [1]	(28,523)
Decrease in defined benefit pension and other postretirement benefit plans liability	(3,033)	(762)	(653)	—	—	(4,448)
Change in other assets and liabilities	(15,341)	(6,152)	(6,940)	—	11,215 [1]	(17,218)
Net cash provided by operating activities	340,119	65,121	51,097	—	(32,381)	423,956
Cash flows from investing activities						
Capital expenditures	(311,538)	(49,811)	(58,549)	—	—	(419,898)
Advances to affiliates	(27,700)	(8,000)	—	—	35,700 [1]	—
Other	5,241	297	1,303	—	4,533 [1],[2]	11,374
Net cash used in investing activities	(333,997)	(57,514)	(57,246)	—	40,233	(408,524)
Cash flows from financing activities						
Common stock dividends	(101,252)	(17,680)	(15,068)	—	32,748 [2]	(101,252)
Preferred stock dividends of Hawaiian Electric and subsidiaries	(1,080)	(534)	(381)	—	—	(1,995)
Proceeds from issuance of common stock	35,500	—	4,900	—	(4,900) [2]	35,500
Proceeds from issuance of long-term debt	190,000	72,500	17,500	—	—	280,000
Repayment of long-term debt and funds transferred for repayment of long-term debt	(183,546)	(70,000)	(30,000)	—	—	(283,546)
Net increase in short-term borrowings from non-affiliates and affiliate with original maturities of three months or less	46,987	—	27,700	—	(35,700) [1]	38,987
Proceeds from issuance of short-term debt	75,000	—	—	—	—	75,000
Repayment of short-term debt	(50,000)	—	—	—	—	(50,000)
Other	(1,475)	(508)	(126)	—	—	(2,109)
Net cash provided by (used in) financing activities	10,134	(16,222)	4,525	—	(7,852)	(9,415)
Net increase (decrease) in cash, cash equivalents and restricted cash	16,256	(8,615)	(1,624)	—	—	6,017
Cash, cash equivalents and restricted cash, January 1	16,732	15,623	3,421	101	—	35,877
Cash, cash equivalents and restricted cash, December 31	32,988	7,008	1,797	101	—	41,894
Less: Restricted cash	(30,749)	(123)	—	—	—	(30,872)
Cash and cash equivalents, December 31	\$ 2,239	6,885	1,797	101	—	\$ 11,022

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statement of cash flows

Year ended December 31, 2018

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Cash flows from operating activities						
Net income	\$ 144,733	25,015	21,293	—	(45,393) [2]	\$ 145,648
Adjustments to reconcile net income to net cash provided by operating activities						
Equity in earnings of subsidiaries	(45,493)	—	—	—	45,393 [2]	(100)
Common stock dividends received from subsidiaries	27,408	—	—	—	(27,308) [2]	100
Depreciation of property, plant and equipment	137,410	40,235	25,981	—	—	203,626
Other amortization	20,956	5,069	577	—	—	26,602
Deferred income taxes	(9,806)	(341)	2,165	—	—	(7,982)
Income tax credits, net	(83)	(14)	(2)	—	—	(99)
State refundable credit	(4,941)	(547)	(751)	—	—	(6,239)
Allowance for equity funds used during construction	(9,208)	(478)	(1,191)	—	—	(10,877)
Other	3,991	348	429	—	—	4,768
Changes in assets and liabilities:						
Increase in accounts receivable	(51,656)	(4,867)	(8,614)	—	14,220 [1]	(50,917)
Increase in accrued unbilled revenues	(10,884)	(1,111)	(2,689)	—	—	(14,684)
Decrease (increase) in fuel oil stock	10,710	(2,329)	(1,443)	—	—	6,938
Decrease (increase) in materials and supplies	(1,966)	886	273	—	—	(807)
Decrease (increase) in regulatory assets	12,192	71	(3,011)	—	—	9,252
Increase in regulatory liabilities	26,540	5,380	5,438	—	—	37,358
Increase in accounts payable	14,748	6,104	3,506	—	—	24,358
Change in prepaid and accrued income taxes, tax credits and revenue taxes	24,438	(2,118)	3,047	—	(331) [1]	25,036
Increase (decrease) in defined benefit pension and other postretirement benefit plans liability	17,178	(760)	2,328	—	—	18,746
Change in other assets and liabilities	(8,056)	2,806	2,356	—	(14,220) [1]	(17,114)
Net cash provided by operating activities	298,211	73,349	49,692	—	(27,639)	393,613
Cash flows from investing activities						
Capital expenditures	(305,703)	(51,054)	(58,507)	—	—	(415,264)
Advances from affiliates	—	—	12,000	—	(12,000) [1]	—
Other	3,226	1,182	3,843	—	1,831 [1],[2]	10,082
Net cash used in investing activities	(302,477)	(49,872)	(42,664)	—	(10,169)	(405,182)
Cash flows from financing activities						
Common stock dividends	(103,305)	(15,289)	(12,019)	—	27,308 [2]	(103,305)
Preferred stock dividends of Hawaiian Electric and subsidiaries	(1,080)	(534)	(381)	—	—	(1,995)
Proceeds from the issuance of common stock	70,700	—	1,500	—	(1,500) [2]	70,700
Proceeds from the issuance of long-term debt	75,000	15,000	10,000	—	—	100,000
Repayment of long-term debt	(30,000)	(11,000)	(9,000)	—	—	(50,000)
Net decrease in short-term borrowings from non-affiliates and affiliate with original maturities of three months or less	(16,999)	—	—	—	12,000 [1]	(4,999)
Proceeds from issuance of short-term debt	25,000	—	—	—	—	25,000
Other	(377)	(56)	(39)	—	—	(472)
Net cash provided by (used in) financing activities	18,939	(11,879)	(9,939)	—	37,808	34,929
Net increase (decrease) in cash and cash equivalents	14,673	11,598	(2,911)	—	—	23,360
Cash and cash equivalents, January 1	2,059	4,025	6,332	101	—	12,517
Cash and cash equivalents, December 31	\$ 16,732	15,623	3,421	101	—	\$ 35,877

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Consolidating statement of cash flows

Year ended December 31, 2017

(in thousands)	Hawaiian Electric	Hawaii Electric Light	Maui Electric	Other subsidiaries	Consolidating adjustments	Hawaiian Electric Consolidated
Cash flows from operating activities						
Net income	\$ 121,031	20,680	18,292	—	(38,057) [2]	\$ 121,946
Adjustments to reconcile net income to net cash provided by operating activities						
Equity in earnings of subsidiaries	(38,157)	—	—	—	38,057 [2]	(100)
Common stock dividends received from subsidiaries	36,867	—	—	—	(36,742) [2]	125
Depreciation of property, plant and equipment	130,889	38,741	23,154	—	—	192,784
Other amortization	2,398	3,225	2,875	—	—	8,498
Deferred income taxes	26,342	3,954	8,004	—	(263) [1]	38,037
Income tax credits, net	(35)	(16)	(1)	—	—	(52)
State refundable credit	(1,382)	(528)	(341)	—	—	(2,251)
Allowance for equity funds used during construction	(10,896)	(554)	(1,033)	—	—	(12,483)
Other	263	974	—	—	—	1,237
Changes in assets and liabilities:						
Decrease (increase) in accounts receivable	1,817	(359)	45	—	1,411 [1]	2,914
Increase in accrued unbilled revenues	(11,355)	(2,376)	(1,630)	—	—	(15,361)
Increase in fuel oil stock	(17,733)	(469)	(2,241)	—	—	(20,443)
Decrease (increase) in materials and supplies	1,603	(661)	(1,660)	—	—	(718)
Increase in regulatory assets	(8,395)	(4,007)	(4,854)	—	—	(17,256)
Increase in regulatory liabilities	2,552	315	735	—	—	3,602
Increase (decrease) in accounts payable	23,519	(3,547)	5,762	—	—	25,734
Change in prepaid and accrued income taxes, tax credits and revenue taxes	16,716	7,961	5,362	—	(177) [1]	29,862
Increase (decrease) in defined benefit pension and other postretirement benefit plans liability	709	52	(157)	—	—	604
Change in other assets and liabilities	(18,765)	(748)	(569)	—	(1,411) [1]	(21,493)
Net cash provided by operating activities	257,988	62,637	51,743	—	(37,182)	335,186
Cash flows from investing activities						
Capital expenditures	(281,752)	(47,784)	(47,329)	—	—	(376,865)
Advances from (to) affiliates	—	3,500	(2,000)	—	(1,500) [1]	—
Other	(1,711)	649	400	—	5,240 [1],[2]	4,578
Net cash used in investing activities	(283,463)	(43,635)	(48,929)	—	3,740	(372,287)
Cash flows from financing activities						
Common stock dividends	(87,767)	(24,796)	(11,946)	—	36,742 [2]	(87,767)
Preferred stock dividends of Hawaiian Electric and subsidiaries	(1,080)	(534)	(381)	—	—	(1,995)
Proceeds from the issuance of common stock	14,000	—	4,800	—	(4,800) [2]	14,000
Proceeds from the issuance of long-term debt	202,000	28,000	85,000	—	—	315,000
Repayment of long-term debt	(162,000)	(28,000)	(75,000)	—	—	(265,000)
Net increase in short-term borrowings from non-affiliates and affiliate with original maturities of three months or less	3,499	—	—	—	1,500 [1]	4,999
Other	(2,506)	(396)	(1,003)	—	—	(3,905)
Net cash provided by (used in) financing activities	(33,854)	(25,726)	1,470	—	33,442	(24,668)
Net increase (decrease) in cash and cash equivalents	(59,329)	(6,724)	4,284	—	—	(61,769)
Cash and cash equivalents, January 1	61,388	10,749	2,048	101	—	74,286
Cash and cash equivalents, December 31	\$ 2,059	4,025	6,332	101	—	\$ 12,517

Explanation of consolidating adjustments on consolidating schedules:

- [1] Eliminations of intercompany receivables and payables and other intercompany transactions.
- [2] Elimination of investment in subsidiaries, carried at equity.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Note 4: Bank segment (HEI only)

Selected financial information

American Savings Bank, F.S.B.

Statements of Income and Comprehensive Income Data

Years ended December 31 (in thousands)	2019	2018	2017
Interest and dividend income			
Interest and fees on loans	\$ 233,632	\$ 220,463	\$ 207,255
Interest and dividends on investment securities	32,922	37,762	28,823
Total interest and dividend income	266,554	258,225	236,078
Interest expense			
Interest on deposit liabilities	16,830	13,991	9,660
Interest on other borrowings	1,610	1,548	2,496
Total interest expense	18,440	15,539	12,156
Net interest income	248,114	242,686	223,922
Provision for loan losses	23,480	14,745	10,901
Net interest income after provision for loan losses	224,634	227,941	213,021
Noninterest income			
Fees from other financial services	19,275	18,937	22,796
Fee income on deposit liabilities	20,877	21,311	22,204
Fee income on other financial products	6,507	7,052	7,205
Bank-owned life insurance	7,687	5,057	5,539
Mortgage banking income	4,943	1,493	2,201
Gain on sale of real estate	10,762	—	—
Gains on sale of investment securities, net	653	—	—
Other income, net	2,074	2,200	1,617
Total noninterest income	72,778	56,050	61,562
Noninterest expense			
Compensation and employee benefits	103,009	98,387	94,931
Occupancy	21,272	17,073	16,699
Data processing	15,306	14,268	13,280
Services	10,239	10,847	10,994
Equipment	8,760	7,186	7,232
Office supplies, printing and postage	5,512	6,134	6,182
Marketing	4,490	3,567	3,501
FDIC insurance	1,204	2,713	2,904
Other expense	15,586	17,238	20,144
Total noninterest expense	185,378	177,413	175,867
Income before income taxes	112,034	106,578	98,716
Income taxes	23,061	24,069	31,719
Net income	88,973	82,509	66,997
Other comprehensive income (loss), net of taxes	29,406	(7,119)	(3,139)
Comprehensive income	\$ 118,379	\$ 75,390	\$ 63,858

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Reconciliation to amounts per HEI Consolidated Statements of Income*:

Years ended December 31 (in thousands)	2019	2018	2017
Interest and dividend income	\$ 266,554	\$ 258,225	\$ 236,078
Noninterest income	72,778	56,050	61,562
Less: Gain on sale of real estate	(10,762)	—	—
*Revenues-Bank	328,570	314,275	297,640
Total interest expense	18,440	15,539	12,156
Provision for loan losses	23,480	14,745	10,901
Noninterest expense	185,378	177,413	175,867
Less: Retirement defined benefits credit (expense)—other than service costs	472	(1,657)	(820)
Add: Gain on sale of real estate	(10,762)	—	—
*Expenses-Bank	217,008	206,040	198,104
*Operating income-Bank	111,562	108,235	99,536
Add back: Retirement defined benefits expense (credit)—other than service costs	(472)	1,657	820
Income before income taxes	\$ 112,034	\$ 106,578	\$ 98,716

Balance Sheets Data

December 31 (in thousands)	2019	2018
Assets		
Cash and due from banks	\$ 129,770	\$ 122,059
Interest-bearing deposits	48,628	4,225
Investment securities		
Available-for-sale, at fair value	1,232,826	1,388,533
Held-to-maturity, at amortized cost (fair value of \$143,467 and \$142,057 at December 31, 2019 and 2018, respectively)	139,451	141,875
Stock in Federal Home Loan Bank, at cost	8,434	9,958
Loans held for investment	5,121,176	4,843,021
Allowance for loan losses	(53,355)	(52,119)
Net loans	5,067,821	4,790,902
Loans held for sale, at lower of cost or fair value	12,286	1,805
Other	511,611	486,347
Goodwill	82,190	82,190
Total assets	\$ 7,233,017	\$ 7,027,894
Liabilities and shareholder's equity		
Deposit liabilities—noninterest-bearing	\$ 1,909,682	\$ 1,800,727
Deposit liabilities—interest-bearing	4,362,220	4,358,125
Other borrowings	115,110	110,040
Other	146,954	124,613
Total liabilities	6,533,966	6,393,505
Commitments and contingencies		
Common stock	1	1
Additional paid in capital	349,453	347,170
Retained earnings	358,259	325,286
Accumulated other comprehensive loss, net of tax benefits		
Net unrealized gains (losses) on securities	\$ 2,481	\$ (24,423)
Retirement benefit plans	(11,143)	(8,662)
Retirement benefit plans	(13,645)	(38,068)
Total shareholder's equity	699,051	634,389
Total liabilities and shareholder's equity	\$ 7,233,017	\$ 7,027,894

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

December 31 (in thousands)	2019	2018
Other assets		
Bank-owned life insurance	\$ 157,465	\$ 151,172
Premises and equipment, net	204,449	214,415
Accrued interest receivable	19,365	20,140
Mortgage servicing rights	9,101	8,062
Low-income housing investments	66,302	67,626
Real estate acquired in settlement of loans, net	—	406
Other	54,929	24,526
	\$ 511,611	\$ 486,347
Other liabilities		
Accrued expenses	\$ 45,822	\$ 54,084
Federal and state income taxes payable	14,996	2,012
Cashier's checks	23,647	26,906
Advance payments by borrowers	10,486	10,183
Other	52,003	31,428
	\$ 146,954	\$ 124,613

Bank-owned life insurance is life insurance purchased by ASB on the lives of certain key employees, with ASB as the beneficiary. The insurance is used to fund employee benefits through tax-free income from increases in the cash value of the policies and insurance proceeds paid to ASB upon an insured's death.

The decrease in premises and equipment, net was due to the sale of two building facilities.

Investment securities. The major components of investment securities were as follows:

(dollars in thousands)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value	Gross unrealized losses					
					Less than 12 months			12 months or longer		
					Number of issues	Fair value	Amount	Number of issues	Fair value	Amount
December 31, 2019										
Available-for-sale										
U.S. Treasury and federal agency obligations	\$ 117,255	\$ 652	\$ (120)	\$ 117,787	2	\$ 4,110	\$ (11)	3	\$ 27,637	\$ (109)
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	1,024,892	6,000	(4,507)	1,026,385	19	152,071	(819)	75	318,020	(3,688)
Corporate bonds	58,694	1,363	—	60,057	—	—	—	—	—	—
Mortgage revenue bonds	28,597	—	—	28,597	—	—	—	—	—	—
	\$ 1,229,438	\$ 8,015	\$ (4,627)	\$ 1,232,826	21	\$ 156,181	\$ (830)	78	\$ 345,657	\$ (3,797)
Held-to-maturity										
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	\$ 139,451	\$ 4,087	\$ (71)	\$ 143,467	1	\$ 12,986	\$ (71)	—	\$ —	\$ —
	\$ 139,451	\$ 4,087	\$ (71)	\$ 143,467	1	\$ 12,986	\$ (71)	—	\$ —	\$ —

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

(dollars in thousands)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value	Gross unrealized losses					
					Less than 12 months			12 months or longer		
					Number of issues	Fair value	Amount	Number of issues	Fair value	Amount
December 31, 2018										
Available-for-sale										
U.S. Treasury and federal agency obligations	\$ 156,694	\$ 62	\$ (2,407)	\$ 154,349	5	\$ 25,882	\$ (208)	19	\$ 118,405	\$ (2,199)
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	1,192,169	789	(31,542)	1,161,416	22	129,011	(1,330)	145	947,890	(30,212)
Corporate bonds	49,398	103	(369)	49,132	6	23,175	(369)	—	—	—
Mortgage revenue bond	23,636	—	—	23,636	—	—	—	—	—	—
	\$1,421,897	\$ 954	\$ (34,318)	\$ 1,388,533	33	\$ 178,068	\$ (1,907)	164	\$1,066,295	\$(32,411)
Held-to-maturity										
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	\$ 141,875	\$ 1,446	\$ (1,264)	\$ 142,057	3	\$ 29,814	\$ (400)	2	\$ 31,505	\$ (864)
	\$ 141,875	\$ 1,446	\$ (1,264)	\$ 142,057	3	\$ 29,814	\$ (400)	2	\$ 31,505	\$ (864)

ASB does not believe that the investment securities that were in an unrealized loss position as of December 31, 2019, represent an OTTI. Total gross unrealized losses were primarily attributable to change in market conditions. On a quarterly basis the investment securities are evaluated for changes in financial condition of the issuer. Based upon ASB's evaluation, all securities held within the investment portfolio continue to be investment grade by one or more agencies. The contractual cash flows of the U.S. Treasury, federal agency obligations and agency mortgage-backed securities are backed by the full faith and credit guaranty of the United States government or an agency of the government. ASB does not intend to sell the securities before the recovery of its amortized cost basis and there have been no adverse changes in the timing of the contractual cash flows for the securities. ASB did not recognize OTTI for 2019, 2018 and 2017.

U.S. Treasury, federal agency obligations, corporate bonds, and mortgage revenue bonds have contractual terms to maturity. Mortgage-backed securities have contractual terms to maturity, but require periodic payments to reduce principal. In addition, expected maturities will differ from contractual maturities because borrowers have the right to prepay the underlying mortgages.

The contractual maturities of investment securities were as follows:

	Amortized Cost	Fair value
December 31, 2019		
(in thousands)		
Available-for-sale		
Due in one year or less	\$ 60,200	\$ 60,249
Due after one year through five years	75,694	77,225
Due after five years through ten years	53,225	53,540
Due after ten years	15,427	15,427
	204,546	206,441
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	1,024,892	1,026,385
Total available-for-sale securities	\$ 1,229,438	\$ 1,232,826
Held-to-maturity		
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	\$ 139,451	\$ 143,467
Total held-to-maturity securities	\$ 139,451	\$ 143,467

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The proceeds, gross gains and losses from sales of available-for-sale securities were as follows:

Years ended December 31	2019	2018	2017
(in millions)			
Proceeds	\$ 19.8	\$ —	\$ —
Gross gains	0.7	—	—
Gross losses	—	—	—

Interest income from taxable and non-taxable investment securities were as follows:

Years ended December 31	2019	2018	2017
(in thousands)			
Taxable	\$ 31,847	\$ 37,153	\$ 28,398
Non-taxable	1,074	609	425
	\$ 32,921	\$ 37,762	\$ 28,823

ASB pledged securities with a market value of approximately \$546 million as of December 31, 2019 and 2018, as collateral for public funds and other deposits, automated clearinghouse transactions with Bank of Hawaii, borrowing at the discount window of the Federal Reserve Bank of San Francisco, and deposits in ASB's bankruptcy account with the Federal Reserve Bank of San Francisco. As of December 31, 2019 and 2018, securities with a carrying value of \$130 million and \$92 million, respectively, were pledged as collateral for securities sold under agreements to repurchase.

Stock in FHLB. As of December 31, 2019 and 2018, ASB's stock in FHLB was carried at cost (\$8.4 million and \$10.0 million, respectively) because it can only be redeemed at par and it is a required investment based on measurements of ASB's capital, assets and borrowing levels.

Quarterly and as conditions warrant, ASB reviews its investment in the stock of the FHLB for impairment. ASB evaluated its investment in FHLB stock for OTTI as of December 31, 2019, consistent with its accounting policy. ASB did not recognize an OTTI loss for 2019, 2018 and 2017 based on its evaluation of the underlying investment.

Future deterioration in the FHLB's financial position and/or negative developments in any of the factors considered in ASB's impairment evaluation may result in future impairment losses.

Loans. The components of loans were summarized as follows:

December 31	2019	2018
(in thousands)		
Real estate:		
Residential 1-4 family	\$ 2,178,135	\$ 2,143,397
Commercial real estate	824,830	748,398
Home equity line of credit	1,092,125	978,237
Residential land	14,704	13,138
Commercial construction	70,605	92,264
Residential construction	11,670	14,307
Total real estate	4,192,069	3,989,741
Commercial	670,674	587,891
Consumer	257,921	266,002
Total loans	5,120,664	4,843,634
Less: Deferred fees and discounts	512	(613)
Allowance for loan losses	(53,355)	(52,119)
Total loans, net	\$ 5,067,821	\$ 4,790,902

ASB's policy is to require private mortgage insurance on all real estate loans when the loan-to-value ratio of the property exceeds 80% of the lower of the appraised value or purchase price at origination. For non-owner occupied residential property purchases, the loan-to-value ratio may not exceed 75% of the lower of the appraised value or purchase price at origination.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

ASB services real estate loans for investors (principal balance of \$1.3 billion, \$1.2 billion and \$1.2 billion as of December 31, 2019, 2018 and 2017, respectively), which are not included in the accompanying balance sheets data. ASB reports fees earned for servicing such loans as income when the related mortgage loan payments are collected and charges loan servicing cost to expense as incurred.

As of December 31, 2019 and 2018, ASB had pledged loans with an amortized cost of approximately \$2.9 billion and \$2.7 billion, respectively, as collateral to secure advances from the FHLB.

As of December 31, 2019 and 2018, the aggregate amount of loans to directors and executive officers of ASB and its affiliates and any related interests (as defined in Federal Reserve Board (FRB) Regulation O) of such individuals, was \$24.1 million and \$24.0 million, respectively. As of December 31, 2019 and 2018, \$18.0 million and \$18.3 million of the loan balances, respectively, were to related interests of individuals who are directors of ASB. All such loans were made at ASB's normal credit terms.

Allowance for loan losses. As discussed in Note 1, ASB must maintain an allowance for loan losses that is adequate to absorb estimated probable credit losses associated with its loan portfolio.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The allowance for loan losses (balances and changes) and financing receivables were as follows:

(in thousands)	Residential 1-4 family	Commercial real estate	Home equity line of credit	Residential land	Commercial construction	Residential construction	Commercial	Consumer	Total
December 31, 2019									
Allowance for loan losses:									
Beginning balance	\$ 1,976	\$ 14,505	\$ 6,371	\$ 479	\$ 2,790	\$ 4	\$ 9,225	\$ 16,769	\$ 52,119
Charge-offs	(26)	—	(144)	(4)	—	—	(6,811)	(21,677)	(28,662)
Recoveries	854	—	17	229	—	—	2,351	2,967	6,418
Provision	(424)	548	678	(255)	(693)	(1)	5,480	18,147	23,480
Ending balance	\$ 2,380	\$ 15,053	\$ 6,922	\$ 449	\$ 2,097	\$ 3	\$ 10,245	\$ 16,206	\$ 53,355
Ending balance: individually evaluated for impairment	\$ 898	\$ 2	\$ 322	\$ —	\$ —	\$ —	\$ 1,015	\$ 454	\$ 2,691
Ending balance: collectively evaluated for impairment	\$ 1,482	\$ 15,051	\$ 6,600	\$ 449	\$ 2,097	\$ 3	\$ 9,230	\$ 15,752	\$ 50,664
Financing Receivables:									
Ending balance	\$ 2,178,135	\$ 824,830	\$ 1,092,125	\$ 14,704	\$ 70,605	\$ 11,670	\$ 670,674	\$ 257,921	\$ 5,120,664
Ending balance: individually evaluated for impairment	\$ 15,600	\$ 1,048	\$ 12,073	\$ 3,091	\$ —	\$ —	\$ 8,418	\$ 507	\$ 40,737
Ending balance: collectively evaluated for impairment	\$ 2,162,535	\$ 823,782	\$ 1,080,052	\$ 11,613	\$ 70,605	\$ 11,670	\$ 662,256	\$ 257,414	\$ 5,079,927
December 31, 2018									
Allowance for loan losses:									
Beginning balance	\$ 2,902	\$ 15,796	\$ 7,522	\$ 896	\$ 4,671	\$ 12	\$ 10,851	\$ 10,987	\$ 53,637
Charge-offs	(128)	—	(353)	(18)	—	—	(2,722)	(17,296)	(20,517)
Recoveries	74	—	257	179	—	—	2,136	1,608	4,254
Provision	(872)	(1,291)	(1,055)	(578)	(1,881)	(8)	(1,040)	21,470	14,745
Ending balance	\$ 1,976	\$ 14,505	\$ 6,371	\$ 479	\$ 2,790	\$ 4	\$ 9,225	\$ 16,769	\$ 52,119
Ending balance: individually evaluated for impairment	\$ 876	\$ 7	\$ 701	\$ 6	\$ —	\$ —	\$ 628	\$ 4	\$ 2,222
Ending balance: collectively evaluated for impairment	\$ 1,100	\$ 14,498	\$ 5,670	\$ 473	\$ 2,790	\$ 4	\$ 8,597	\$ 16,765	\$ 49,897
Financing Receivables:									
Ending balance	\$ 2,143,397	\$ 748,398	\$ 978,237	\$ 13,138	\$ 92,264	\$ 14,307	\$ 587,891	\$ 266,002	\$ 4,843,634
Ending balance: individually evaluated for impairment	\$ 16,494	\$ 915	\$ 14,800	\$ 2,059	\$ —	\$ —	\$ 5,340	\$ 89	\$ 39,697
Ending balance: collectively evaluated for impairment	\$ 2,126,903	\$ 747,483	\$ 963,437	\$ 11,079	\$ 92,264	\$ 14,307	\$ 582,551	\$ 265,913	\$ 4,803,937
December 31, 2017									
Allowance for loan losses:									
Beginning balance	\$ 2,873	\$ 16,004	\$ 5,039	\$ 1,738	\$ 6,449	\$ 12	\$ 16,618	\$ 6,800	\$ 55,533
Charge-offs	(826)	—	(14)	(210)	—	—	(4,006)	(11,757)	(16,813)
Recoveries	157	—	308	482	—	—	1,852	1,217	4,016
Provision	698	(208)	2,189	(1,114)	(1,778)	—	(3,613)	14,727	10,901
Ending balance	\$ 2,902	\$ 15,796	\$ 7,522	\$ 896	\$ 4,671	\$ 12	\$ 10,851	\$ 10,987	\$ 53,637
Ending balance: individually evaluated for impairment	\$ 1,248	\$ 65	\$ 647	\$ 47	\$ —	\$ —	\$ 694	\$ 29	\$ 2,730
Ending balance: collectively evaluated for impairment	\$ 1,654	\$ 15,731	\$ 6,875	\$ 849	\$ 4,671	\$ 12	\$ 10,157	\$ 10,958	\$ 50,907
Financing Receivables:									
Ending balance	\$ 2,118,047	\$ 733,106	\$ 913,052	\$ 15,797	\$ 108,273	\$ 14,910	\$ 544,828	\$ 223,564	\$ 4,671,577
Ending balance: individually evaluated for impairment	\$ 18,284	\$ 1,016	\$ 8,188	\$ 1,265	\$ —	\$ —	\$ 4,574	\$ 66	\$ 33,393
Ending balance: collectively evaluated for impairment	\$ 2,099,763	\$ 732,090	\$ 904,864	\$ 14,532	\$ 108,273	\$ 14,910	\$ 540,254	\$ 223,498	\$ 4,638,184

Credit quality. ASB performs an internal loan review and grading on an ongoing basis. The review provides management with periodic information as to the quality of the loan portfolio and effectiveness of its lending policies and procedures. The objectives of the loan review and grading procedures are to identify, in a timely manner, existing or emerging credit trends so

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

that appropriate steps can be initiated to manage risk and avoid or minimize future losses. Loans subject to grading include commercial, commercial real estate and commercial construction loans.

Each commercial and commercial real estate loan is assigned an Asset Quality Rating (AQR) reflecting the likelihood of repayment or orderly liquidation of that loan transaction pursuant to regulatory credit classifications: Pass, Special Mention, Substandard, Doubtful, and Loss. The AQR is a function of the probability of default model rating, the loss given default, and possible non-model factors which impact the ultimate collectability of the loan such as character of the business owner/guarantor, interim period performance, litigation, tax liens and major changes in business and economic conditions. Pass exposures generally are well protected by the current net worth and paying capacity of the obligor or by the value of the asset or underlying collateral. Special Mention loans have potential weaknesses that, if left uncorrected, could jeopardize the liquidation of the debt. Substandard loans have well-defined weaknesses that jeopardize the liquidation of the debt and are characterized by the distinct possibility that ASB may sustain some loss. An asset classified Doubtful has the weaknesses of those classified Substandard, with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently existing facts, conditions, and values, highly questionable and improbable. An asset classified Loss is considered uncollectible and has such little value that its continuance as a bankable asset is not warranted.

The credit risk profile by internally assigned grade for loans was as follows:

December 31 (in thousands)	2019				2018			
	Commercial real estate	Commercial construction	Commercial	Total	Commercial real estate	Commercial construction	Commercial	Total
Grade:								
Pass	\$ 756,747	\$ 68,316	\$ 621,657	\$ 1,446,720	\$ 658,288	\$ 89,974	\$ 547,640	\$ 1,295,902
Special mention	4,451	—	29,921	34,372	32,871	—	11,598	44,469
Substandard	63,632	2,289	19,096	85,017	57,239	2,290	28,653	88,182
Doubtful	—	—	—	—	—	—	—	—
Loss	—	—	—	—	—	—	—	—
Total	\$ 824,830	\$ 70,605	\$ 670,674	\$ 1,566,109	\$ 748,398	\$ 92,264	\$ 587,891	\$ 1,428,553

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The credit risk profile based on payment activity for loans was as follows:

(in thousands)	30-59 days past due	60-89 days past due	Greater than 90 days	Total past due	Current	Total financing receivables	Recorded investment > 90 days and accruing
December 31, 2019							
Real estate:							
Residential 1-4 family	\$ 2,588	\$ 290	\$ 1,808	\$ 4,686	\$ 2,173,449	\$ 2,178,135	\$ —
Commercial real estate	—	—	—	—	824,830	824,830	—
Home equity line of credit	813	—	2,117	2,930	1,089,195	1,092,125	—
Residential land	—	—	25	25	14,679	14,704	—
Commercial construction	—	—	—	—	70,605	70,605	—
Residential construction	—	—	—	—	11,670	11,670	—
Commercial	1,077	311	172	1,560	669,114	670,674	—
Consumer	4,386	3,257	2,907	10,550	247,371	257,921	—
Total loans	\$ 8,864	\$ 3,858	\$ 7,029	\$ 19,751	\$ 5,100,913	\$ 5,120,664	\$ —
December 31, 2018							
Real estate:							
Residential 1-4 family	\$ 3,757	\$ 2,773	\$ 2,339	\$ 8,869	\$ 2,134,528	\$ 2,143,397	\$ —
Commercial real estate	—	—	—	—	748,398	748,398	—
Home equity line of credit	1,139	681	2,720	4,540	973,697	978,237	—
Residential land	9	—	319	328	12,810	13,138	—
Commercial construction	—	—	—	—	92,264	92,264	—
Residential construction	—	—	—	—	14,307	14,307	—
Commercial	315	281	548	1,144	586,747	587,891	—
Consumer	5,220	3,166	2,702	11,088	254,914	266,002	—
Total loans	\$ 10,440	\$ 6,901	\$ 8,628	\$ 25,969	\$ 4,817,665	\$ 4,843,634	\$ —

The credit risk profile based on nonaccrual loans, accruing loans 90 days or more past due, and TDR loans was as follows:

December 31	Nonaccrual loans		Accruing loans 90 days or more past due		Troubled debt restructured loans not included in nonaccrual loans	
(in thousands)	2019	2018	2019	2018	2019	2018
Real estate:						
Residential 1-4 family	\$ 11,395	\$ 12,037	\$ —	\$ —	\$ 9,869	\$ 10,194
Commercial real estate	195	—	—	—	853	915
Home equity line of credit	6,638	6,348	—	—	10,376	11,597
Residential land	448	436	—	—	2,644	1,622
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	5,947	4,278	—	—	2,614	1,527
Consumer	5,113	4,196	—	—	57	62
Total	\$ 29,736	\$ 27,295	\$ —	\$ —	\$ 26,413	\$ 25,917

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The total carrying amount and the total unpaid principal balance of impaired loans were as follows:

December 31	2019			2018		
(in thousands)	Recorded investment	Unpaid principal balance	Related allowance	Recorded investment	Unpaid principal balance	Related allowance
With no related allowance recorded						
Real estate:						
Residential 1-4 family	\$ 6,817	\$ 7,207	\$ —	\$ 7,822	\$ 8,333	\$ —
Commercial real estate	195	200	—	—	—	—
Home equity line of credit	1,984	2,135	—	2,743	3,004	—
Residential land	3,091	3,294	—	2,030	2,228	—
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	1,948	2,285	—	3,722	4,775	—
Consumer	2	2	—	32	32	—
	14,037	15,123	—	16,349	18,372	—
With an allowance recorded						
Real estate:						
Residential 1-4 family	8,783	8,835	898	8,672	8,875	876
Commercial real estate	853	853	2	915	915	7
Home equity line of credit	10,089	10,099	322	12,057	12,086	701
Residential land	—	—	—	29	29	6
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	6,470	6,470	1,015	1,618	1,618	628
Consumer	505	505	454	57	57	4
	26,700	26,762	2,691	23,348	23,580	2,222
Total						
Real estate:						
Residential 1-4 family	15,600	16,042	898	16,494	17,208	876
Commercial real estate	1,048	1,053	2	915	915	7
Home equity line of credit	12,073	12,234	322	14,800	15,090	701
Residential land	3,091	3,294	—	2,059	2,257	6
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	8,418	8,755	1,015	5,340	6,393	628
Consumer	507	507	454	89	89	4
	\$ 40,737	\$ 41,885	\$ 2,691	\$ 39,697	\$ 41,952	\$ 2,222

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

ASB's average recorded investment of, and interest income recognized from, impaired loans were as follows:

December 31	2019		2018		2017	
(in thousands)	Average recorded investment	Interest income recognized*	Average recorded investment	Interest income recognized*	Average recorded investment	Interest income recognized*
With no related allowance recorded						
Real estate:						
Residential 1-4 family	\$ 8,169	\$ 907	\$ 8,595	\$ 445	\$ 9,440	\$ 316
Commercial real estate	16	—	—	—	91	11
Home equity line of credit	2,020	84	2,206	75	1,976	101
Residential land	2,662	129	1,532	40	1,094	117
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	4,534	276	3,275	28	2,776	54
Consumer	21	4	22	—	1	—
	17,422	1,400	15,630	588	15,378	599
With an allowance recorded						
Real estate:						
Residential 1-4 family	8,390	359	8,878	363	9,818	493
Commercial real estate	886	37	982	42	1,241	54
Home equity line of credit	11,319	567	10,617	440	5,045	251
Residential land	27	—	37	3	1,308	97
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	6,990	132	1,789	122	3,691	723
Consumer	360	24	57	4	57	3
	27,972	1,119	22,360	974	21,160	1,621
Total						
Real estate:						
Residential 1-4 family	16,559	1,266	17,473	808	19,258	809
Commercial real estate	902	37	982	42	1,332	65
Home equity line of credit	13,339	651	12,823	515	7,021	352
Residential land	2,689	129	1,569	43	2,402	214
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	11,524	408	5,064	150	6,467	777
Consumer	381	28	79	4	58	3
	\$ 45,394	\$ 2,519	\$ 37,990	\$ 1,562	\$ 36,538	\$ 2,220

* Since loan was classified as impaired.

Troubled debt restructurings. A loan modification is deemed to be a TDR when the borrower is determined to be experiencing financial difficulties and ASB grants a concession it would not otherwise consider. When a borrower experiencing financial difficulty fails to make a required payment on a loan or is in imminent default, ASB takes a number of steps to improve the collectability of the loan and maximize the likelihood of full repayment. At times, ASB may modify or restructure a loan to help a distressed borrower improve its financial position to eventually be able to fully repay the loan, provided the borrower has demonstrated both the willingness and the ability to fulfill the modified terms. TDR loans are considered an alternative to foreclosure or liquidation with the goal of minimizing losses to ASB and maximizing recovery.

ASB may consider various types of concessions in granting a TDR including maturity date extensions, extended amortization of principal, temporary deferral of principal payments, and temporary interest rate reductions. ASB rarely grants principal forgiveness in its TDR modifications. Residential loan modifications generally involve interest rate reduction, extending the amortization period, or capitalizing certain delinquent amounts owed not to exceed the original loan balance. Land loans at origination are typically structured as a three-year term, interest-only monthly payment with a balloon payment due at maturity. Land loan TDR modifications typically involve extending the maturity date up to five five years and converting the payments from interest-only to principal and interest monthly, at the same or higher interest rate. Commercial loan modifications generally involve extensions of maturity dates, extending the amortization period, and temporary deferral

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

or reduction of principal payments. ASB generally does not reduce the interest rate on commercial loan TDR modifications. Occasionally, additional collateral and/or guaranties are obtained.

All TDR loans are classified as impaired and are segregated and reviewed separately when assessing the adequacy of the allowance for loan losses based on the appropriate method of measuring impairment: (1) present value of expected future cash flows discounted at the loan's effective original contractual rate, (2) fair value of collateral less cost to sell or (3) observable market price. The financial impact of the calculated impairment amount is an increase to the allowance associated with the modified loan. When available information confirms that specific loans or portions thereof are uncollectible (confirmed losses), these amounts are charged off against the allowance for loan losses.

Loan modifications that occurred during 2019, 2018, and 2017 were as follows:

Years ended	December 31, 2019			December 31, 2018		
(dollars in thousands)	Number of contracts	Outstanding recorded investment (as of period end) ¹	Related allowance (as of period end)	Number of contracts	Outstanding recorded investment (as of period end) ¹	Related allowance (as of period end)
Real estate:						
Residential 1-4 family	11	\$ 1,770	\$ 190	3	\$ 566	\$ 26
Commercial real estate	—	—	—	—	—	—
Home equity line of credit	3	442	73	53	6,659	578
Residential land	3	1,086	—	2	1,338	—
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	8	5,523	417	12	2,165	211
Consumer	—	—	—	—	—	—
	25	\$ 8,821	\$ 680	70	\$ 10,728	\$ 815

Year ended	December 31, 2017		
(dollars in thousands)	Number of contracts	Outstanding recorded investment (as of period end) ¹	Related allowance (as of period end)
Real estate:			
Residential 1-4 family	3	\$ 469	\$ 65
Commercial real estate	—	—	—
Home equity line of credit	44	2,791	545
Residential land	1	92	—
Commercial construction	—	—	—
Residential construction	—	—	—
Commercial	8	525	250
Consumer	1	58	29
	57	\$ 3,935	\$ 889

¹ The period end balances reflect all paydowns and charge-offs since the modification period. TDRs fully paid off, charged-off, or foreclosed upon by period end are not included.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Loans modified in TDRs that experienced a payment default of 90 days or more in 2019, 2018, and 2017 and for which the payment default occurred within one year of the modification, were as follows:

Years ended December 31	2019		2018		2017	
(dollars in thousands)	Number of contracts	Recorded investment	Number of contracts	Recorded investment	Number of contracts	Recorded investment
Troubled debt restructurings that subsequently defaulted						
Real estate:						
Residential 1-4 family	—	\$ —	—	\$ —	1	\$ 222
Commercial real estate	—	—	—	—	—	—
Home equity line of credit	—	—	1	81	—	—
Residential land	—	—	—	—	—	—
Commercial construction	—	—	—	—	—	—
Residential construction	—	—	—	—	—	—
Commercial	—	—	1	246	—	—
Consumer	—	—	—	—	—	—
	—	\$ —	2	\$ 327	1	\$ 222

If loans modified in a TDR subsequently default, ASB evaluates the loan for further impairment. Based on its evaluation, adjustments may be made in the allocation of the allowance or partial charge-offs may be taken to further write-down the carrying value of the loan. Commitments to lend additional funds to borrowers whose loan terms have been modified in a TDR were nil at December 31, 2019 and 2018.

The Company had \$3.5 million and \$4.2 million of consumer mortgage loans collateralized by residential real estate property that were in the process of foreclosure at December 31, 2019 and 2018, respectively.

Mortgage servicing rights (MSRs). In its mortgage banking business, ASB sells residential mortgage loans to government-sponsored entities and other parties, who may issue securities backed by pools of such loans. ASB retains no beneficial interests in these loans other than the servicing rights of certain loans sold.

ASB received \$277.1 million, \$112.2 million and \$128.0 million of proceeds from the sale of residential mortgages in 2019, 2018, and 2017, respectively, and recognized gains on such sales of \$4.9 million, \$1.5 million, and \$2.2 million in 2019, 2018, and 2017, respectively. Repurchased mortgage loans were nil for 2019, 2018 and 2017. The repurchase reserve was \$0.1 million as of December 31, 2019, 2018 and 2017.

Mortgage servicing fees, a component of other income, net, were \$3.0 million for the years ended December 31, 2019, 2018, and 2017.

Changes in the carrying value of MSRs were as follows:

(in thousands)	Gross carrying amount ¹	Accumulated amortization ¹	Valuation allowance	Net carrying amount
December 31, 2019	\$ 21,543	\$ (12,442)	\$ —	\$ 9,101
December 31, 2018	\$ 18,556	\$ (10,494)	\$ —	\$ 8,062

¹ Reflects impact of loans paid in full.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Changes related to MSRs were as follows:

(in thousands)	2019	2018	2017
Mortgage servicing rights			
Balance, January 1	\$ 8,062	\$ 8,639	\$ 9,373
Amount capitalized	2,987	1,045	1,239
Amortization	(1,948)	(1,622)	(1,973)
Sale of mortgage servicing rights	—	—	—
Other-than-temporary impairment	—	—	—
Carrying amount before valuation allowance, December 31	9,101	8,062	8,639
Valuation allowance for mortgage servicing rights			
Balance, January 1	—	—	—
Provision (recovery)	—	—	—
Other-than-temporary impairment	—	—	—
Balance, December 31	—	—	—
Net carrying value of mortgage servicing rights	\$ 9,101	\$ 8,062	\$ 8,639

The estimated aggregate amortization expenses of MSRs for 2020, 2021, 2022, 2023 and 2024 are \$1.5 million, \$1.2 million, \$1.1 million, \$0.9 million and \$0.8 million, respectively.

ASB capitalizes MSRs acquired upon the sale of mortgage loans with servicing rights retained. On a monthly basis, ASB compares the net carrying value of the MSRs to its fair value to determine if there are any changes to the valuation allowance and/or other-than-temporary impairment for the MSRs.

ASB uses a present value cash flow model to estimate the fair value of MSRs. Impairment is recognized through a valuation allowance for each stratum when the carrying amount exceeds fair value, with any associated provision recorded as a component of loan servicing fees included in “Revenues - bank” in the consolidated statements of income. A direct write-down is recorded when the recoverability of the valuation allowance is deemed to be unrecoverable.

Key assumptions used in estimating the fair value of ASB’s MSRs used in the impairment analysis were as follows:

December 31	2019	2018
(dollars in thousands)		
Unpaid principal balance	\$ 1,276,437	\$ 1,188,514
Weighted average note rate	3.96%	3.98%
Weighted average discount rate	9.3%	10.0%
Weighted average prepayment speed	11.4%	6.5%

The sensitivity analysis of fair value of MSRs to hypothetical adverse changes of 25 and 50 basis points in certain key assumptions was as follows:

December 31	2019	2018
(in thousands)		
Prepayment rate:		
25 basis points adverse rate change	\$ (950)	\$ (250)
50 basis points adverse rate change	(1,947)	(566)
Discount rate:		
25 basis points adverse rate change	(102)	(139)
50 basis points adverse rate change	(202)	(275)

The effect of a variation in certain assumptions on fair value is calculated without changing any other assumptions. This analysis typically cannot be extrapolated because the relationship of a change in one key assumption to the changes in the fair value of MSRs typically is not linear.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Deposit liabilities. The summarized components of deposit liabilities were as follows:

December 31	2019		2018	
	Weighted- average stated rate	Amount	Weighted- average stated rate	Amount
(dollars in thousands)				
Savings	0.09%	\$ 2,379,522	0.07%	\$ 2,322,552
Checking				
Interest-bearing	0.09	1,062,122	0.09	1,055,019
Noninterest-bearing	—	977,459	—	932,608
Commercial checking	—	932,223	—	868,119
Money market	0.69	150,751	0.63	152,713
Time certificates	1.42	769,825	1.61	827,841
	0.24%	\$ 6,271,902	0.27%	\$ 6,158,852

As of December 31, 2019 and 2018, time certificates of \$100,000 or more totaled \$456.5 million and \$500.2 million, respectively.

The approximate scheduled maturities of time certificates outstanding at December 31, 2019 were as follows:

(in thousands)				
	2021		112,632	
	2022		87,132	
	2023		29,134	
	2024		35,253	
Thereafter			2,460	
		\$	769,825	

Overdrawn deposit accounts are classified as loans and totaled \$2.4 million and \$2.1 million at December 31, 2019 and 2018, respectively.

Interest expense on deposit liabilities by type of deposit was as follows:

Years ended December 31	2019	2018	2017
(in thousands)			
Time certificates	\$ 12,675	\$ 11,044	\$ 7,687
Savings	1,904	1,639	1,567
Money market	953	602	168
Interest-bearing checking	1,298	706	238
	\$ 16,830	\$ 13,991	\$ 9,660

Other borrowings.

Securities sold under agreements to repurchase. Securities sold under agreements to repurchase are accounted for as financing transactions and the obligations to repurchase these securities are recorded as liabilities in the consolidated balance sheets. ASB pledges investment securities as collateral for securities sold under agreements to repurchase. All such agreements are subject to master netting arrangements, which provide for conditional right of set-off in case of default by either party; however, ASB presents securities sold under agreements to repurchase on a gross basis in the balance sheet. The following tables present information about the securities sold under agreements to repurchase, including the related collateral received from or pledged to counterparties:

(in millions)	Gross amount of recognized liabilities	Gross amount offset in the Balance Sheets	Net amount of liabilities presented in the Balance Sheets
Repurchase agreements			
December 31, 2019	\$ 115	\$ —	\$ 115
December 31, 2018	65	—	65

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in millions)	Gross amount not offset in the Balance Sheets		
	Net amount of liabilities presented in the Balance Sheets	Financial instruments	Cash collateral pledged
Commercial account holders			
December 31, 2019	\$ 115	\$ 130	\$ —
December 31, 2018	65	92	—

The securities underlying the agreements to repurchase are book-entry securities and were delivered by appropriate entry into the counterparties' accounts or into segregated tri-party custodial accounts at the FHLB. The securities underlying the agreements to repurchase continue to be reflected in ASB's asset accounts. The counterparties or tri-parties may determine that additional collateral is required based on movements in the fair value of the collateral. Typically, a five percent discount is taken from the fair value of the investment securities to determine the value of the collateral pledged for the repurchase agreements.

Information concerning securities sold under agreements to repurchase, which provided for the repurchase of identical securities, was as follows:

(dollars in millions)	2019	2018	2017
Amount outstanding as of December 31	\$ 115	\$ 65	\$ 141
Average amount outstanding during the year	\$ 80	\$ 99	\$ 98
Maximum amount outstanding as of any month-end	\$ 115	\$ 152	\$ 141
Weighted-average interest rate as of December 31	0.98%	0.75%	0.65%
Weighted-average interest rate during the year	0.96%	0.71%	0.26%
Weighted-average remaining days to maturity as of December 31	1	1	1

Securities sold under agreements to repurchase were summarized as follows:

December 31	2019			2018		
	Repurchase liability	Weighted-average interest rate	Collateralized by mortgage-backed securities and federal agency obligations at fair value plus accrued interest	Repurchase liability	Weighted-average interest rate	Collateralized by mortgage-backed securities and federal agency obligations at fair value plus accrued interest
(dollars in thousands)						
Overnight	\$ 115,110	0.98%	\$ 129,527	\$ 65,040	0.75%	\$ 92,290
1 to 29 days	—	—	—	—	—	—
30 to 90 days	—	—	—	—	—	—
Over 90 days	—	—	—	—	—	—
	\$ 115,110	0.98%	\$ 129,527	\$ 65,040	0.75%	\$ 92,290

Advances from Federal Home Loan Bank. FHLB advances were nil and \$45 million as of December 31, 2019 and 2018.

ASB and the FHLB are parties to an Advances, Pledge and Security Agreement (Advances Agreement), which applies to currently outstanding and future advances, and governs the terms and conditions under which ASB borrows and the FHLB makes loans or advances from time to time. Under the Advances Agreement, ASB agrees to abide by the FHLB's credit policies, and makes certain warranties and representations to the FHLB. Upon the occurrence of and during the continuation of an "Event of Default" (which term includes any event of nonpayment of interest or principal of any advance when due or failure to perform any promise or obligation under the Advances Agreement or other credit arrangements between the parties), the FHLB may, at its option, declare all indebtedness and accrued interest thereon, including any prepayment fees or charges, to be immediately due and payable. Advances from the FHLB are collateralized by loans and stock in the FHLB. As of December 31, 2019 and 2018, ASB's available FHLB borrowing capacity was \$2.3 billion, and \$2.0 billion, respectively. In February 2020, the FHLB of Des Moines notified ASB that certain assets would no longer qualify as collateral for FHLB advances, reducing ASB's total FHLB borrowing capacity to approximately \$1.5 billion. The notice included high-quality home equity lines of credit and was technical in nature and unrelated to the credit quality of the home equity loans, of which approximately 54% are in first lien position. ASB is working with the FHLB to understand the nature of the disqualification of those assets as collateral and re-establishing eligibility.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

ASB is required to obtain and hold a specific number of shares of capital stock of the FHLB. ASB was in compliance with all Advances Agreement requirements as of December 31, 2019 and 2018.

Common stock equity. ASB is regulated and supervised by the OCC. Failure to meet minimum capital requirements can initiate certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could have a direct material effect on ASB's financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, ASB must meet specific capital guidelines that involve quantitative measures of ASB's assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

The prompt corrective action provisions impose certain restrictions on institutions that are undercapitalized. The restrictions imposed become increasingly more severe as an institution's capital category declines from "undercapitalized" to "critically undercapitalized." The regulators have substantial discretion in the corrective actions that might direct and could include restrictions on dividends and other distributions that ASB may make to ASB Hawaii and the requirement that ASB develop and implement a plan to restore its capital. In 1988, HEI agreed with the OTS predecessor regulatory agency at the time, to contribute additional capital to ASB up to a maximum aggregate amount of approximately \$65.1 million (Capital Maintenance Agreement). As of December 31, 2019, as a result of capital contributions in prior years, HEI's maximum obligation to contribute additional capital under the Capital Maintenance Agreement has been reduced to approximately \$28.3 million.

To be categorized as "well capitalized," ASB must maintain minimum total capital, Tier 1 capital, and Tier 1 leverage ratios as set forth in the table below. As of December 31, 2019, and 2018 ASB was in compliance with the minimum capital requirements under OCC regulations, and was categorized as "well capitalized" under the regulatory framework for prompt corrective action. There are no conditions or events that management believes have changed the institution's category under the capital guidelines.

The tables below set forth actual and minimum required capital amounts and ratios:

(dollars in thousands)	Actual		Minimum required		Required to be well capitalized	
	Capital	Ratio	Capital	Ratio	Capital	Ratio
December 31, 2019						
Tier 1 leverage	641,547	9.06%	283,122	4.00%	353,903	5.00%
Common equity tier 1	641,547	13.18%	219,071	4.50%	316,435	6.50%
Tier 1 capital	641,547	13.18%	292,094	6.00%	389,459	8.00%
Total capital	696,643	14.31%	389,459	8.00%	486,823	10.00%
December 31, 2018						
Tier 1 leverage	606,291	8.70%	278,811	4.00%	348,514	5.00%
Common equity tier 1	606,291	12.80%	213,190	4.50%	307,941	6.50%
Tier 1 capital	606,291	12.80%	284,253	6.00%	379,004	8.00%
Total capital	660,151	13.93%	379,004	8.00%	473,755	10.00%

In 2019, ASB paid cash dividends of \$56.0 million to HEI, compared to cash dividends of \$50.0 million in 2018. The FRB and OCC approved the dividends.

Related-party transactions. HEI charged ASB \$2.3 million, \$2.2 million and \$2.1 million for general management and administrative services in 2019, 2018 and 2017, respectively. The amounts charged by HEI for services performed by HEI employees to its subsidiaries are allocated primarily on the basis of time expended in providing such services. All amounts charged to ASB were settled as a capital contribution by HEI to ASB.

Derivative financial instruments. ASB enters into interest rate lock commitments (IRLCs) with borrowers, and forward commitments to sell loans or to-be-announced mortgage-backed securities to investors to hedge against the inherent interest rate and pricing risks associated with selling loans.

ASB enters into IRLCs for residential mortgage loans, which commit ASB to lend funds to a potential borrower at a specific interest rate and within a specified period of time. IRLCs that relate to the origination of mortgage loans that will be held for sale are considered derivative financial instruments under applicable accounting guidance. Outstanding IRLCs expose ASB to the risk that the price of the mortgage loans underlying the commitments may decline due to increases in mortgage interest rates from inception of the rate lock to the funding of the loan. The IRLCs are free-standing derivatives which are carried at fair value with changes recorded in mortgage banking income.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

ASB enters into forward commitments to hedge the interest rate risk for rate locked mortgage applications in process and closed mortgage loans held for sale. These commitments are primarily forward sales of to-be-announced mortgage backed securities. Generally, when mortgage loans are closed, the forward commitment is liquidated and replaced with a mandatory delivery forward sale of the mortgage to a secondary market investor. In some cases, a best-efforts forward sale agreement is utilized as the forward commitment. These commitments are free-standing derivatives which are carried at fair value with changes recorded in mortgage banking income.

Changes in the fair value of IRLCs and forward commitments subsequent to inception are based on changes in the fair value of the underlying loan resulting from the fulfillment of the commitment and changes in the probability that the loan will fund within the terms of the commitment, which is affected primarily by changes in interest rates and the passage of time.

The notional amount and fair value of ASB's derivative financial instruments were as follows:

December 31 (in thousands)	2019		2018	
	Notional amount	Fair value	Notional amount	Fair value
Interest rate lock commitments	\$ 23,171	\$ 297	\$ 10,180	\$ 91
Forward commitments	29,383	(42)	10,132	(43)

ASB's derivative financial instruments, their fair values, and balance sheet location were as follows:

Derivative Financial Instruments Not Designated as Hedging Instruments ¹

December 31 (in thousands)	2019		2018	
	Asset derivatives	Liability derivatives	Asset derivatives	Liability derivatives
Interest rate lock commitments	\$ 297	\$ —	\$ 91	\$ —
Forward commitments	3	45	—	43
	\$ 300	\$ 45	\$ 91	\$ 43

¹ Asset derivatives are included in other assets and liability derivatives are included in other liabilities in the balance sheets.

The following table presents ASB's derivative financial instruments and the amount and location of the net gains or losses recognized in ASB's statements of income:

Derivative Financial Instruments Not Designated as Hedging Instruments (in thousands)	Location of net gains (losses) recognized in the Statements of Income	Years ended December 31		
		2019	2018	2017
		Interest rate lock commitments	Mortgage banking income	\$ 206
Forward commitments	Mortgage banking income	1	(19)	153
		\$ 207	\$ (59)	\$ (137)

Commitments. Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the commitments. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since certain commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. ASB minimizes its exposure to loss under these commitments by requiring that customers meet certain conditions prior to disbursing funds. The amount of collateral, if any, is based on a credit evaluation of the borrower and may include residential real estate, accounts receivable, inventory and property, plant and equipment.

Letters of credit are conditional commitments issued by ASB to guarantee payment and performance of a customer to a third party. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. ASB holds collateral supporting those commitments for which collateral is deemed necessary.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following is a summary of outstanding off-balance sheet arrangements:

December 31 (in thousands)	2019	2018
Unfunded commitments to extend credit:		
Home equity line of credit	\$ 1,290,854	\$ 1,242,804
Commercial and commercial real estate	484,806	515,058
Consumer	70,088	70,292
Residential 1-4 family	21,131	17,552
Commercial and financial standby letters of credit	11,912	13,340
Total	\$ 1,878,791	\$ 1,859,046

Contingency. In October 2007, ASB, as a member financial institution of Visa U.S.A. Inc., received restricted shares of Visa, Inc. (Visa) as a result of a restructuring of Visa U.S.A. Inc. in preparation for an initial public offering by Visa. As a part of the restructuring, ASB entered into a judgment and loss sharing agreement with Visa in order to apportion financial responsibilities arising from any potential adverse judgment or negotiated settlements related to indemnified litigation involving Visa. In November 2012, a federal judge granted preliminary approval to a proposed settlement between merchants and Visa over credit card fees and in December 2013, a federal judge granted final approval to the settlement. Some merchants and trade organizations filed a notice of appeal shortly after the approval was issued. As of December 31, 2019, ASB had accrued a reserve of \$1.1 million related to the agreement. Because the extent of ASB's obligations under this agreement depends entirely upon the occurrence of future events, ASB's maximum potential future liability under this agreement is not determinable.

Federal Deposit Insurance Corporation assessment. The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) raised the minimum reserve ratio for the Deposit Insurance Fund to 1.35 percent but required the Federal Deposit Insurance Corporation (FDIC) to offset the effect of the increase in the minimum reserve ratio on small institutions (generally insured depository institutions with total consolidated assets of \$10 billion or less) when setting assessments. In September 2018, the reserve ratio reached 1.36 percent and the FDIC awarded the small institutions an assessment credit, which was applied to the 2019 second and third quarter assessments for these banks. For the years ended December 31, 2019, 2018 and 2017 ASB's FDIC insurance expenses were \$1.2 million, \$2.5 million and \$2.6 million, respectively.

Note 5 • Short-term borrowings

Commercial paper and bank term loan. As of December 31, 2019 and 2018, HEI had \$97 million and \$49 million of commercial paper outstanding, with a weighted-average interest rate of 2.3% and 2.9%, respectively.

As of December 31, 2019 and 2018, Hawaiian Electric had \$39 million of and no commercial paper outstanding, respectively. Additionally, on December 23, 2019, Hawaiian Electric entered into a 364-day, \$100 million term loan credit agreement that matures on December 21, 2020. The term loan credit agreement includes substantially the same financial covenant and customary representations and warranties, affirmative and negative covenants, and events of default (the occurrence of which may result in the loan outstanding becoming immediately due and payable) consistent with those in Hawaiian Electric's existing, amended revolving unsecured credit agreement. Hawaiian Electric drew the first \$50 million on December 23, 2019 and has until March 23, 2020, to draw the remaining \$50 million, if needed. The weighted-average interest rate of Hawaiian Electric's outstanding commercial paper and bank term loan as of December 31, 2019 was 2.3%.

As of December 31, 2019 and 2018, HEI had three letters of credit outstanding in the aggregate amount of \$6 million and \$7 million, respectively, on behalf of Hamakua Energy.

Credit agreements. HEI and Hawaiian Electric each entered into a separate agreement with a syndicate of eight financial institutions (the HEI Facility and Hawaiian Electric Facility, respectively, and together, the Credit Facilities), effective July 3, 2017, to amend and restate their respective previously existing revolving unsecured credit agreements. The \$150 million HEI Facility and \$200 million Hawaiian Electric Facility both terminate on June 30, 2022. As of December 31, 2019 and December 31, 2018, no amounts were outstanding under the Credit Facilities. None of the facilities are collateralized.

Under the Credit Facilities, draws would generally bear interest, based on each company's respective current long-term credit ratings, at the "Adjusted LIBO Rate," as defined in the agreement, plus 1.375% and annual fees on undrawn commitments, excluding swingline borrowings, of 20 basis points. The Credit Facilities contain provisions for pricing adjustments in the event of a long-term ratings change based on the respective Credit Facilities' ratings-based pricing grid, which includes the ratings by Fitch, Moody's and S&P. Certain modifications were made to incorporate some updated terms

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

and conditions customary for facilities of this type. The Credit Facilities continue to contain customary conditions that must be met in order to draw on them, including compliance with covenants (such as covenants preventing HEI's/Hawaiian Electric's subsidiaries from entering into agreements that restrict the ability of the subsidiaries to pay dividends to, or to repay borrowings from, HEI/Hawaiian Electric; and a covenant in Hawaiian Electric's facility restricting Hawaiian Electric's ability, as well as the ability of any of its subsidiaries, to guarantee additional indebtedness of the subsidiaries if such additional debt would cause the subsidiary's "Consolidated Subsidiary Funded Debt to Capitalization Ratio" to exceed 65%).

Under the HEI Facility, it is an event of default if HEI fails to maintain an unconsolidated "Capitalization Ratio" (funded debt) of 50% or less or if HEI no longer owns Hawaiian Electric or ASB. Under the Hawaiian Electric Facility, it is an event of default if Hawaiian Electric fails to maintain a "Consolidated Capitalization Ratio" (equity) of at least 35%, or if Hawaiian Electric is no longer owned by HEI.

The Credit Facilities will be maintained to support each company's respective short-term commercial paper program, but may be drawn on to meet each company's respective working capital needs and general corporate purposes.

Note 6 · Long-term debt

December 31	2019	2018
(dollars in thousands)		
Long-term debt of Utilities, net of unamortized debt issuance costs ¹	\$ 1,497,667	\$ 1,418,802
HEI 2.99% term loan, due 2022	150,000	150,000
HEI 5.67% senior notes, due 2021	50,000	50,000
HEI 3.99% senior notes, due 2023	50,000	50,000
HEI 4.58% senior notes, due 2025	50,000	50,000
HEI 4.72% senior notes, due 2028	100,000	100,000
Hamakua Energy 4.02% notes, due 2030, secured by real and personal property of Hamakua Energy, LLC	59,699	63,438
Mauo LIBOR + 1.375% loan, due 2022	9,349	—
Less unamortized debt issuance costs	(2,350)	(2,599)
	\$ 1,964,365	\$ 1,879,641

¹ See components of "Total long-term debt" and unamortized debt issuance costs in Hawaiian Electric and subsidiaries' Consolidated Statements of Capitalization.

As of December 31, 2019, the aggregate principal payments required on the Company's long-term debt for 2020 through 2024 are \$102 million in 2020, \$54 million in 2021, \$213 million in 2022, \$154 million in 2023 and \$5 million in 2024. As of December 31, 2019, the aggregate payments of principal required on the Utilities' long-term debt for 2020 through 2024 are \$96 million in 2020, nil in 2021, \$52 million in 2022, \$100 million in 2023 and nil in 2024.

The HEI term loans and senior notes contain customary representation and warranties, affirmative and negative covenants and events of default (the occurrence of which may result in some or all of the notes then outstanding becoming immediately due and payable). The HEI term loans and senior notes also contain provisions requiring the maintenance by HEI of certain financial ratios generally consistent with those in HEI's existing, amended revolving unsecured credit agreement. Upon a change of control or certain dispositions of assets (as defined in the Master Note Purchase Agreements dated March 24, 2011 and October 4, 2018), HEI is required to offer to prepay the senior notes.

The Utilities' senior notes contain customary representations and warranties, affirmative and negative covenants, and events of default (the occurrence of which may result in some or all of the notes of each and all of the utilities then outstanding becoming immediately due and payable) and provisions requiring the maintenance by Hawaiian Electric, and each of Hawaii Electric Light and Maui Electric, of certain financial ratios generally consistent with those in Hawaiian Electric's existing, amended revolving unsecured credit agreement.

Changes in long-term debt.

Mauo. In June 2018, Mauo, LLC, an indirect subsidiary of Pacific Current, LLC, entered into an unsecured \$50.5 million construction loan facility in connection with the construction of the solar-plus-storage PPA project. In October 2019, the loan was amended to extend the maturity date to March 31, 2022 and to revise certain other defined terms. The loan bears interest at LIBOR plus 1.375%. As of December 31, 2019, \$9 million was outstanding under the facility. The loan is guaranteed by HEI

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

and contains restrictive covenants that are substantially the same as the financial covenants contained in HEI's senior credit facility, as amended.

Hawaiian Electric. On May 13, 2019, the Utilities issued, through a private placement pursuant to separate Note Purchase Agreements (the Note Purchase Agreements), the following unsecured notes bearing taxable interest (the Unsecured Notes):

	Series 2019A
Aggregate principal amount	\$50 million
Fixed coupon interest rate	4.21%
Maturity date	May 15, 2034
Principal amount by company:	
Hawaiian Electric	\$30 million
Hawaii Electric Light	\$10 million
Maui Electric	\$10 million

The Unsecured Notes include substantially the same financial covenants and customary conditions as Hawaiian Electric's credit agreement. Hawaiian Electric is also a party as guarantor under the Note Purchase Agreements entered into by Hawaii Electric Light and Maui Electric. The Unsecured Notes may be prepaid in whole or in part at any time at the prepayment price of the principal amount plus a "Make-Whole Amount," as defined in the Note Purchase Agreements. On May 15, 2019, proceeds from the sale were applied to redeem the Utilities' 2004 junior subordinated deferrable interest debentures at par value:

	2004 Junior subordinated deferrable interest debentures redeemed
Aggregate principal amount	\$51.5 million
Fixed coupon interest rate	6.50%
Maturity date	May 15, 2034
Principal amount by company:	
Hawaiian Electric	\$31.5 million
Hawaii Electric Light	\$10 million
Maui Electric	\$10 million

On July 18, 2019, the Department of Budget and Finance of the State of Hawaii (DBF) for the benefit of Hawaiian Electric and Hawaii Electric Light, issued, at par:

	Refunding Series 2019 Special Purpose Revenue Bonds
Aggregate principal amount	\$150 million
Fixed coupon interest rate	3.20%
Maturity date	July 1, 2039
DBF loaned the proceeds to:	
Hawaiian Electric	\$90 million
Hawaii Electric Light	\$60 million

On July 26, 2019, proceeds from the sale were applied to redeem at par, bonds previously issued by the DBF for the benefit of Hawaiian Electric and Hawaii Electric Light:

	Series 2009 Special Purpose Revenue Bonds Redeemed
Aggregate principal amount	\$150 million
Fixed coupon interest rate	6.50%
Maturity date	July 1, 2039
Principal amount by company:	
Hawaiian Electric	\$90 million
Hawaii Electric Light	\$60 million

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

On October 10, 2019, the DBF for the benefit of Hawaiian Electric, Hawaii Electric Light and Maui Electric, issued, at par:

Series 2019 Special Purpose Revenue Bonds	
Aggregate principal amount	\$80 million
Fixed coupon interest rate	3.50%
Maturity date	October 1, 2049
DBF loaned the proceeds to:	
Hawaiian Electric	\$70 million
Hawaii Electric Light	\$2.5 million
Maui Electric	\$7.5 million

Proceeds from the Series 2019 Special Purpose Revenue Bonds will be used only to finance capital expenditures, including reimbursements to the Companies for previously incurred approved capital expenditures. The undrawn funds are deposited with a trustee and earn interest at market rates. As of December 31, 2019, Hawaiian Electric and Hawaii Electric Light had \$30.8 million and \$0.1 million of undrawn funds remaining with the trustee, respectively. Maui Electric received all bond proceeds at closing and had no undrawn funds as of December 31, 2019. Undrawn funds are included in restricted cash in the consolidated balance sheets. (See Note 1).

On December 31, 2019, Hawaiian Electric and Maui Electric wired approximately \$84 million to pay off the Series 2012B senior note (\$62 million for Hawaiian Electric, \$20 million for Maui Electric, and approximately \$2 million of accrued interest), which matured on January 1, 2020.

Note 7 · Shareholders' equity

Reserved shares. As of December 31, 2019, HEI had reserved a total of 18.5 million shares of common stock for future issuance under the HEI Dividend Reinvestment and Stock Purchase Plan (DRIP), the Hawaiian Electric Industries Retirement Savings Plan (HEIRSP), the HEI 2011 Nonemployee Director Stock Plan, the ASB 401(k) Plan and the 2010 Executive Incentive Plan.

Accumulated other comprehensive income/(loss). Changes in the balances of each component of accumulated other comprehensive income/(loss) (AOCI) were as follows:

(in thousands)	HEI Consolidated				Hawaiian Electric Consolidated			
	Net unrealized gains (losses) on securities	Unrealized gains (losses) on derivatives	Retirement benefit plans	AOCI	Unrealized gains (losses) on derivatives	Retirement benefit plans	AOCI	
Balance, December 31, 2016	\$ (7,931)	\$ (454)	\$ (24,744)	\$ (33,129)	\$ (454)	\$ 132	\$ (322)	
Current period other comprehensive income (loss) and reclassifications, net of taxes	(4,370)	454	2,544	(1,372)	454	(1,142)	(688)	
Reclass of AOCI for tax rate reduction impact ¹	(2,650)	—	(4,790)	(7,440)	—	(209)	(209)	
Balance, December 31, 2017	(14,951)	—	(26,990)	(41,941)	—	(1,219)	(1,219)	
Current period other comprehensive income (loss) and reclassifications, net of taxes	(9,472)	(436)	1,239	(8,669)	—	1,318	1,318	
Balance, December 31, 2018	(24,423)	(436)	(25,751)	(50,610)	—	99	99	
Current period other comprehensive income (loss) and reclassifications, net of taxes	26,904	(1,177)	4,844	30,571	—	(1,378)	(1,378)	
Balance, December 31, 2019	\$ 2,481	\$ (1,613)	\$ (20,907)	\$ (20,039)	\$ —	\$ (1,279)	\$ (1,279)	

¹ The Company and the Utilities adopted ASU No. 2018-02 as of the beginning of the fourth quarter of 2017 and elected to reclassify the income tax effects of the Tax Act from AOCI to retained earnings. Other than this reclassification to retained earnings, the Company and the Utilities release the income tax effects in AOCI from AOCI when the specific AOCI items (e.g., on a security-by-security basis for ASB's gains/losses on investment securities) are included in net income.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Reclassifications out of AOCI were as follows:

Years ended December 31 (in thousands)	Amount reclassified from AOCI			Affected line item in the Statement of Income/Balance Sheet
	2019	2018	2017	
HEI consolidated				
Net realized gains on securities included in net income	\$ (478)	\$ —	\$ —	Revenues-bank (gains on sale of investment securities, net)
Derivatives qualifying as cash flow hedges:				
Window forward contracts	—	—	454	Property, plant and equipment-electric utilities (2017)
Retirement benefit plans:				
Amortization of prior service credit and net losses recognized during the period in net periodic benefit cost	10,107	21,015	15,737	See Note 10 for additional details
Impact of D&Os of the PUC included in regulatory assets	(16,177)	8,325	(78,724)	See Note 10 for additional details
Total reclassifications	\$ (6,548)	\$ 29,340	\$ (62,533)	
Hawaiian Electric consolidated				
Derivatives qualifying as cash flow hedges:				
Window forward contracts	\$ —	\$ —	\$ 454	Property, plant and equipment (2017)
Retirement benefit plans:				
Amortization of prior service credit and net losses recognized during the period in net periodic benefit cost	9,550	19,012	14,477	See Note 10 for additional details
Impact of D&Os of the PUC included in regulatory assets	(16,177)	8,325	(78,724)	See Note 10 for additional details
Total reclassifications	\$ (6,627)	\$ 27,337	\$ (63,793)	

Note 8 · Leases

The Company adopted ASU No. 2016-02 and related amendments on January 1, 2019, and used the effective date as the date of initial application. The Company elected the practical expedient package under which the Company did not reassess its prior conclusions about whether any expired or existing contracts are or contain leases, whether there is a change in lease classification for any expired or existing leases under the new standard, or whether there were initial direct costs for any existing leases that would be treated differently under the new standard. The Company elected the short-term lease recognition exemption for all of its leases that qualify, and accordingly, does not recognize lease liabilities and ROU assets for all leases that have lease terms that are 12 months or less. The amounts related to short-term leases are not material. The Company elected the practical expedient to not separate lease and non-lease components for its real estate and equipment and fossil fuel and renewable energy PPAs. The Company elected the practical expedient to not assess all existing land easements that were not previously accounted for in accordance with ASC 840.

The Company leases certain real estate and equipment for various terms under long-term operating lease agreements. The agreements expire at various dates through 2054 and provide for renewal options up to 10 years. The periods associated with the renewal options are excluded for the purpose of determining the lease term unless the exercise of the renewable option is reasonably certain. In the normal course of business, it is expected that many of these agreements will be replaced by similar agreements. Certain real estate leases require the Company to pay for operating expenses such as common area maintenance, real estate taxes and insurance, which are recognized as variable lease expense when incurred and are not included in the measurement of the lease liability.

Additionally, the Utilities contract with independent power producers to supply energy under long-term power purchase agreements. Certain PPAs are treated as operating leases under the new standard because the Company elected the practical expedient package under which prior conclusions about lease identification were not reassessed. The fixed capacity payments under the PPAs are included in the lease liability, while the variable lease payments (e.g., payments based on kWh) are excluded from the lease liability. Several as-available PPAs have variable-only payment terms based on production. For PPAs with no minimum lease payments, the Utilities do not recognize any lease liabilities or ROU assets, and the related costs are reported as variable lease costs.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

In August 2019, Hawaiian Electric entered into a lease agreement for a total office space of approximately 195,000 square feet in downtown Honolulu to lower costs and bring together office workers currently in separate leased buildings. The lease consists of two different phases with commencement dates of January 2020 and January 2021, respectively, and is an operating lease for a term of 12 years with various options to extend up to 10 years. Annual base rent expense for each phase is approximately \$1.9 million and \$1.7 million, respectively, and the operating lease liability recorded upon commencement of the first phase of the lease was \$21 million and the operating lease liability to be recorded upon commencement of the second phase is approximately \$19 million. In addition to the annual base rent payments that are included in the lease liability, there are additional payments for operating expenses, which are recognized as variable lease cost when incurred. These payments are related to operating expenses, such as common area maintenance, various taxes and insurance. Under the terms of the lease, Hawaiian Electric is entitled to receive up to \$5.0 million and \$4.6 million in reimbursements for various office improvements for each phase, respectively. The amounts are to be included as a reduction to the initial measurement of the ROU asset on each respective commencement date, and will be subsequently adjusted if the actual reimbursements are different from the initial amounts previously recognized.

The Utilities' lease payments for each operating lease agreement were discounted using its estimated unsecured borrowing rates for the appropriate term, reduced for the estimated impact of collateral, which is a reduction of approximately 15 basis points. ASB's lease payments for each operating lease agreement were discounted using Federal Home Loan Bank of Des Moines (FHLB) fixed rate advance rates, which are collateralized, for the appropriate term. The FHLB is ASB's primary wholesale funding source and can provide collateralized borrowing rates for various terms starting at overnight borrowings to 30-year borrowing terms.

Amounts related to the Company's total lease cost and cash flows arising from lease transaction are as follows:

Year ended December 31, 2019	HEI consolidated			Hawaiian Electric consolidated		
	Other leases	PPAs classified as leases	Total	Other leases	PPAs classified as leases	Total
(dollars in thousands)						
Operating lease cost	\$ 10,265	\$ 63,319	\$ 73,584	\$ 4,955	\$ 63,319	\$ 68,274
Variable lease cost	13,034	192,138	205,172	10,272	192,138	202,410
Total lease cost	\$ 23,299	\$ 255,457	\$ 278,756	\$ 15,227	\$ 255,457	\$ 270,684
Other information						
Cash paid for amounts included in the measurement of lease liabilities—Operating cash flows from operating leases	\$ 10,447	\$ 62,594	\$ 73,041	\$ 5,768	\$ 62,594	\$ 68,362
Weighted-average remaining lease term—operating leases (in years)	6.5	2.8	3.5	4.5	2.8	2.9
Weighted-average discount rate—operating leases	3.50%	4.08%	3.96%	4.11%	4.08%	4.08%

The following table summarizes the maturity of our operating lease liabilities as of December 31, 2019:

(in millions)	HEI consolidated			Hawaiian Electric consolidated		
	Other leases	PPAs classified as leases	Total	Other leases	PPAs classified as leases	Total
2020	\$ 12	\$ 63	\$ 75	\$ 7	\$ 63	\$ 70
2021	10	63	73	5	63	68
2022	6	42	48	3	42	45
2023	5	—	5	2	—	2
2024	4	—	4	1	—	1
Thereafter	9	—	9	2	—	2
Total lease payments	46	168	214	20	168	188
Less: Imputed interest	(5)	(9)	(14)	(2)	(9)	(11)
Total present value of lease payments ¹	\$ 41	\$ 159	\$ 200	\$ 18	\$ 159	\$ 177

¹ The fixed capacity payment related to the existing PPA with PGV, which will expire on December 31, 2027, is not included as a lease liability as of December 31, 2019 as the facility has been offline since May 2018 due to lava flow on Hawaii Island. The annual capacity payment is approximately \$7 million. The lease liability will be remeasured when PGV is back in service.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The future minimum lease obligations under operating leases in effect as of December 31, 2018, having a term in excess of one year as determined prior to the adoption of ASC 842 are as follows:

(in millions)	HEI consolidated			Hawaiian Electric consolidated		
	Other leases	PPAs classified as leases	Total	Other leases	PPAs classified as leases	Total
2019	\$ 11	\$ 63	\$ 74	\$ 6	\$ 63	\$ 69
2020	9	63	72	6	63	69
2021	8	63	71	5	63	68
2022	5	42	47	2	42	44
2023	4	—	4	2	—	2
Thereafter	12	—	12	3	—	3
Total lease payments	\$ 49	\$ 231	\$ 280	\$ 24	\$ 231	\$ 255

HEI’s consolidated operating lease expense prior to the adoption of ASC 842 was \$21 million and \$20 million in 2018 and 2017, respectively. The Utilities’ operating lease expense prior to the adoption of ASC 842 was \$11 million each year for 2018 and 2017.

Note 9• Revenues

Revenue from contracts with customers. The revenues subject to Topic 606 include the Utilities’ electric energy sales revenue and the ASB’s transaction fees, as further described below.

Electric Utilities.

Electric energy sales. Electric energy sales represent revenues from the generation and transmission of electricity to customers under tariffs approved by the PUC. Transaction pricing for electricity is determined and approved by the PUC for each rate class and includes revenues from the base electric charges, which are composed of (1) the customer, demand, energy, and minimum charges, and (2) the power factor, service voltage, and other adjustments as provided in each rate and rate rider schedule. The Utilities satisfy performance obligations over time, i.e., the Utilities generate and transfer control of the electricity over time as the customer simultaneously receives and consumes the benefits provided by the Utilities’ performance. Payments from customers are generally due within 30 days from the end of the billing period. As electric bills to customers reflect the amount that corresponds directly with the value of the Utilities’ performance to date, the Utilities have elected to use the right to invoice practical expedient, which entitles them to recognize revenue in the amount they have the right to invoice.

The Utilities’ revenues include amounts for recovery of various Hawaii state revenue taxes. Revenue taxes are generally recorded as an expense in the year the related revenues are recognized. For 2019, 2018 and 2017, the Utilities’ revenues include recovery of revenue taxes of approximately \$226 million, \$226 million and \$202 million, respectively, which amounts are in “Taxes, other than income taxes” expense. However, the Utilities pay revenue taxes to the taxing authorities based on (1) the prior year’s billed revenues (in the case of public service company taxes and PUC fees) in the current year or (2) the current year’s cash collections from electric sales (in the case of franchise taxes) after year end. As of December 31, 2019 and 2018, the Utilities had recorded \$132 million and \$130 million, respectively, in “Taxes accrued, including revenue taxes” on the Utilities’ consolidated balance sheet for amounts previously collected from customers or accrued for public service company taxes and PUC fees, net of amounts paid to the taxing authorities. Such amounts will be used to pay public service company taxes and PUC fees owed for the following year.

Bank.

Bank fees. Bank fees are primarily transaction-based and are recognized when the transaction has occurred and the performance obligation satisfied. From time to time, customers will request a fee waiver and ASB may grant reversals of fees. Revenues are not recorded for the estimated amount of fee reversals for each period. Under the new standard, certain fees paid to third parties that were previously recognized as a component of noninterest expense are now netted with fee income. The change in presentation will have no effect on the reported amount of operating income.

Fees from other financial services - These fees primarily include debit card interchange income and fees, automated teller machine fees, credit card interchange income and fees, check ordering fees, wire fees, safe deposit rental fees, corporate/business fees, merchant income, online banking fees and international banking fees. Amounts paid to third parties for payment network expenses are included in this financial statement caption in ASB’s Statements of Income and Comprehensive Income

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Data (in Revenues—Bank financial statement caption of HEI’s Consolidated Statements of Income). Previously, these expenses were recorded in the other expense financial statement caption of ASB’s Statements of Income and Comprehensive Income Data (in Expenses—Bank financial statement caption of HEI’s Consolidated Statements of Income).

Fee income on deposit liabilities - These fees primarily include “not sufficient funds” fees, monthly deposit account service charge fees, commercial account analysis fees and other deposit fees.

Fee income on other financial products - These fees primarily include commission income from the sales of annuity, mutual fund, and life insurance products. In 2017, ASB began offering a fee-based, managed account product in which income is based on a percentage of assets under management. ASB satisfies its performance obligations under the managed account arrangement over time, and consequently, fees for assets under management are recognized over time as the customer simultaneously receives and consumes the benefit of asset management services. Fees recognized to date from the managed account product were minimal.

Revenues from other sources. Revenues from other sources not subject to Topic 606 are accounted for as follows:

Electric Utilities.

Regulatory revenues. Regulatory revenues primarily consist of revenues from decoupling mechanism, cost recovery surcharges and the Tax Act adjustments.

Decoupling mechanism - Under the decoupling mechanism, the Utilities are allowed to recover or obligated to refund the difference between actual revenue and the target revenue as determined by the PUC, collect revenue adjustment mechanism and major project interim recovery revenues, and recover or refund performance incentive mechanism penalties or rewards. These adjustments will be reflected in tariffs in future periods. Under the decoupling tariff approved in 2011, the prior year accrued RBA revenues and the annual RAM amount are billed from June 1 of each year through May 31 of the following year, which is within 24 months following the end of the year in which they are recorded as required by the accounting standard for alternative revenue programs.

Cost recovery surcharges - For the timely recovery of additional costs incurred, and reconciliation of costs and expenses included in tariffed rates, the Utilities recognize revenues under surcharge mechanisms approved by the PUC. These will be reflected in tariffs in future periods (e.g., ECRC and PPAC).

Tax Act adjustments - These represent adjustments to revenues for the amounts included in tariffed revenues that will be returned to customers as a result of the Tax Act.

Since revenue adjustments discussed above resulted from either agreements with the PUC or change in tax law, rather than contracts with customers, they are not subject to the scope of Topic 606. Also, see Notes 1, 3 and 12 of the Consolidated Financial Statements. The Utilities have elected to present these revenue adjustments on a gross basis, which results in the amounts being billed to customers presented in revenues from contracts with customers and the amortization of the related regulatory asset/liability as revenues from other sources. Depending on whether the previous deferral balance being amortized was a regulatory asset or regulatory liability, and depending on the size and direction of the current year deferral of surcharges and/or refunds to customers, it could result in negative regulatory revenue during the year.

Utility pole attachment fees. These fees primarily represent revenues from third-party companies for their access to and shared use of Utilities-owned poles through licensing agreements. As the shared portion of the utility pole is functionally dependent on the rest of the structure, no distinct goods appear to exist. Therefore, these fees are not subject to the scope of Topic 606, but recognized in accordance with ASC Topic 610, *Other Income*.

Bank.

Interest and dividend income. Interest and fees on loans are recognized in accordance with ASC Topic 310, *Receivables*, including the related allowance for loan losses. Interest and dividends on investment securities are recognized in accordance with ASC Topic 320, *Investments-Debt and Equity Securities*. See Notes 1 and 4 of the Consolidated Financial Statements.

Other bank noninterest income. Other bank noninterest income primarily consists of mortgage banking income and bank-owned life insurance income.

Mortgage banking income - Mortgage banking income consists primarily of realized and unrealized gains on sale of loans accounted for pursuant to ASC Topic 860, *Transfers and Servicing*. Interest rate lock commitments and forward loan sales are considered derivatives and are accounted pursuant to ASC Topic 815, *Derivatives and Hedging*.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Bank-Owned Life Insurance (BOLI) - The recognition of BOLI cash surrender value does not represent a contract with a customer and is accounted for in accordance with Emerging Issues Task Force Issue 06-05, *Accounting for Purchases of Life Insurance-Determining the Amount that Could be Realized in Accordance with FASB Technical Bulletin No. 85-4, Accounting for Purchases of Life Insurance*.

Revenue disaggregation. The following tables disaggregate revenues by major source, timing of revenue recognition, and segment:

(in thousands)	Year ended December 31, 2019				Year ended December 31, 2018			
	Electric utility	Bank	Other	Total	Electric utility	Bank	Other	Total
Revenues from contracts with customers								
Electric energy sales - residential	\$ 807,652	\$ —	\$ —	\$ 807,652	\$ 801,846	\$ —	\$ —	\$ 801,846
Electric energy sales - commercial	846,110	—	—	846,110	853,672	—	—	853,672
Electric energy sales - large light and power	905,308	—	—	905,308	894,770	—	—	894,770
Electric energy sales - other	16,296	—	—	16,296	17,243	—	—	17,243
Bank fees	—	46,659	—	46,659	—	47,300	—	47,300
Total revenues from contracts with customers	2,575,366	46,659	—	2,622,025	2,567,531	47,300	—	2,614,831
Revenues from other sources								
Regulatory revenue	(54,101)	—	—	(54,101)	(37,687)	—	—	(37,687)
Bank interest and dividend income	—	266,554	—	266,554	—	258,225	—	258,225
Other bank noninterest income	—	15,357	—	15,357	—	8,750	—	8,750
Other	24,677	—	89	24,766	16,681	—	49	16,730
Total revenues from other sources	(29,424)	281,911	89	252,576	(21,006)	266,975	49	246,018
Total revenues	\$ 2,545,942	\$ 328,570	\$ 89	\$ 2,874,601	\$ 2,546,525	\$ 314,275	\$ 49	\$ 2,860,849
Timing of revenue recognition								
Services/goods transferred at a point in time	\$ —	\$ 46,659	\$ —	\$ 46,659	\$ —	\$ 47,300	\$ —	\$ 47,300
Services/goods transferred over time	2,575,366	—	—	2,575,366	2,567,531	—	—	2,567,531
Total revenues from contracts with customers	\$ 2,575,366	\$ 46,659	\$ —	\$ 2,622,025	\$ 2,567,531	\$ 47,300	\$ —	\$ 2,614,831

There are no material contract assets or liabilities associated with revenues from contracts with customers existing at December 31, 2018 or December 31, 2019. Accounts receivable and unbilled revenues related to contracts with customers represent an unconditional right to consideration since all performance obligations have been satisfied. These amounts are disclosed as *accounts receivable and unbilled revenues, net* on HEI's consolidated balance sheets and *customer accounts receivable, net* and *accrued unbilled revenues, net* on Hawaiian Electric's consolidated balance sheets.

As of December 31, 2019, the Company had no material remaining performance obligations due to the nature of the Company's contracts with its customers. For the Utilities, performance obligations are fulfilled as electricity is delivered to customers. For ASB, fees are recognized when a transaction is completed.

Note 10 · Retirement benefits

Defined benefit plans. Substantially all of the employees of HEI and the Utilities participate in the Retirement Plan for Employees of Hawaiian Electric Industries, Inc. and Participating Subsidiaries (HEI Pension Plan). Substantially all of the employees of ASB participated in the American Savings Bank Retirement Plan (ASB Pension Plan) until it was frozen on December 31, 2007. The HEI Pension Plan and the ASB Pension Plan (collectively, the Plans) are qualified, noncontributory defined benefit pension plans and include, in the case of the HEI Pension Plan, benefits for utility union employees determined in accordance with the terms of the collective bargaining agreements between the Utilities and the union. The Plans are subject to the provisions of ERISA. In addition, some current and former executives and directors of HEI and its subsidiaries participate in noncontributory, nonqualified plans (collectively, Supplemental Plans). In general, benefits are based on the employees' or directors' years of service and compensation.

The continuation of the Plans and the Supplemental Plans and the payment of any contribution thereunder are not assumed as contractual obligations by the participating employers. The Supplemental Plan for directors has been frozen since 1996. The ASB Pension Plan was frozen as of December 31, 2007. The HEI Supplemental Executive Retirement Plan and ASB Supplemental Executive Retirement, Disability, and Death Benefit Plan (noncontributory, nonqualified, defined benefit plans) were frozen as of December 31, 2008. No participants have accrued any benefits under these plans after the respective plan's freeze and the plans will be terminated at the time all remaining benefits have been paid.

Each participating employer reserves the right to terminate its participation in the applicable plans at any time, and HEI and ASB reserve the right to terminate their respective plans at any time. If a participating employer terminates its participation in the Plans, the interest of each affected participant would become 100% vested to the extent funded. Upon the termination of the Plans, assets would be distributed to affected participants in accordance with the applicable allocation provisions of ERISA and any excess assets that exist would be paid to the participating employers. Participants' benefits in the Plans are covered up to certain limits under insurance provided by the Pension Benefit Guaranty Corporation.

Postretirement benefits other than pensions. HEI and the Utilities provide eligible employees health and life insurance benefits upon retirement under the Postretirement Welfare Benefits Plan for Employees of Hawaiian Electric Company, Inc. and participating employers (Hawaiian Electric Benefits Plan). Eligibility of employees and dependents is based on eligibility to retire at termination, the retirement date and the date of hire. The plan was amended in 2011, changing eligibility for certain bargaining unit employees hired prior to May 1, 2011, based on new minimum age and service requirements effective January 1, 2012, per the collective bargaining agreement, and certain management employees hired prior to May 1, 2011 based on new eligibility minimum age and service requirements effective January 1, 2012. The minimum age and service requirements for management and bargaining unit employees hired May 1, 2011 and thereafter have increased and their dependents are not eligible to receive postretirement benefits. Employees may be eligible to receive benefits from the HEI Pension Plan but may not be eligible for postretirement welfare benefits if the different eligibility requirements are not met.

The executive death benefit plan was frozen on September 10, 2009 for participants at benefit levels as of that date.

The Company's and Utilities' cost for OPEB has been adjusted to reflect the plan amendments, which reduced benefits and created prior service credits to be amortized over average future service of affected participants. The amortization of the prior service credit will reduce benefit until the various credit bases are fully recognized. Each participating employer reserves the right to terminate its participation in the Hawaiian Electric Benefits Plan at any time.

Balance sheet recognition of the funded status of retirement plans. Employers must recognize on their balance sheets the funded status of defined benefit pension and other postretirement benefit plans with an offset to AOCI in shareholders' equity (using the projected benefit obligation (PBO) and accumulated postretirement benefit obligation (APBO), to calculate the funded status).

The PUC allowed the Utilities to adopt pension and OPEB tracking mechanisms in previous rate cases. The amount of the net periodic pension cost (NPPC) and net periodic benefits costs (NPBC) to be recovered in rates is established by the PUC in each rate case. Under the Utilities' tracking mechanisms, any actual costs determined in accordance with GAAP that are over/under amounts allowed in rates are charged/credited to a regulatory asset/liability. The regulatory asset/liability for each utility will then be amortized over 5 years beginning with the respective utility's next rate case. Accordingly, all retirement benefit expenses (except for executive life and nonqualified pension plan expenses, which amounted to \$1.1 million and \$1.0 million in 2019 and 2018, respectively) determined in accordance with GAAP will be recovered.

Under the tracking mechanisms, amounts that would otherwise be recorded in AOCI (excluding amounts for executive life and nonqualified pension plans), net of taxes, as well as other pension and OPEB charges, are allowed to be reclassified as a regulatory asset, as those costs will be recovered in rates through the NPPC and NPBC in the future. The Utilities have reclassified to a regulatory asset/(liability) charges for retirement benefits that would otherwise be recorded in AOCI (amounting to the elimination of a potential charge to AOCI of \$(21.8) million pretax and \$11.2 million pretax for 2019 and 2018, respectively).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Under the pension tracking mechanism, the Utilities are required to make contributions to the pension trust in the amount of the actuarially calculated NPPC, except when limited by the ERISA minimum contribution requirements or the maximum contributions imposed by the Internal Revenue Code. Contributions in excess of the calculated NPPC are recorded in a separate regulatory asset. In 2018, the pension tracking mechanism was modified to allow prior year contributions made in excess of NPPC to satisfy future contributions, when the ERISA minimum required contribution is less than NPPC. The Utilities reduced their 2018 contribution for this modification.

The OPEB tracking mechanisms generally require the Utilities to make contributions to the OPEB trust in the amount of the actuarially calculated NPBC, (excluding amounts for executive life), except when limited by material, adverse consequences imposed by federal regulations. Future decisions in rate cases could further impact funding amounts.

Defined benefit pension and other postretirement benefit plans information. The changes in the obligations and assets of the Company's and Utilities' retirement benefit plans and the changes in AOCI (gross) for 2019 and 2018 and the funded status of these plans and amounts related to these plans reflected in the Company's and Utilities' consolidated balance sheet as of December 31, 2019 and 2018 were as follows:

(in thousands)	2019		2018	
	Pension benefits	Other benefits	Pension benefits	Other benefits
HEI consolidated				
Benefit obligation, January 1	\$ 1,991,384	\$ 188,666	\$ 2,094,356	\$ 212,601
Service cost	62,135	2,209	68,987	2,721
Interest cost	84,267	8,004	77,374	7,933
Actuarial losses (gains)	224,421	25,998	(171,226)	(25,977)
Participants contributions	—	2,351	—	2,505
Benefits paid and expenses	(83,924)	(11,589)	(78,107)	(11,117)
Benefit obligation, December 31	2,278,283	215,639	1,991,384	188,666
Fair value of plan assets, January 1	1,479,067	173,693	1,618,703	193,995
Actual return on plan assets	354,072	35,525	(101,406)	(11,846)
Employer contributions	48,629	—	38,496	—
Participants contributions	—	2,351	—	2,505
Benefits paid and expenses	(82,568)	(10,738)	(76,726)	(10,961)
Fair value of plan assets, December 31	1,799,200	200,831	1,479,067	173,693
Accrued benefit asset (liability), December 31	\$ (479,083)	\$ (14,808)	\$ (512,317)	\$ (14,973)
Other assets	\$ 19,396	\$ —	\$ 10,930	\$ —
Defined benefit pension and other postretirement benefit plans liability	(498,479)	(14,808)	(523,247)	(14,973)
Accrued benefit asset (liability), December 31	\$ (479,083)	\$ (14,808)	\$ (512,317)	\$ (14,973)
AOCI debit, January 1 (excluding impact of PUC D&Os)	\$ 536,920	\$ 1,962	\$ 527,830	\$ 1,474
Recognized during year – prior service credit	42	1,806	42	1,805
Recognized during year – net actuarial (losses) gains	(15,479)	13	(30,084)	(95)
Occurring during year – net actuarial losses (gains)	(17,662)	2,829	39,132	(1,222)
AOCI debit before cumulative impact of PUC D&Os, December 31	503,821	6,610	536,920	1,962
Cumulative impact of PUC D&Os	(474,628)	(7,458)	(498,944)	(4,929)
AOCI debit/(credit), December 31	\$ 29,193	\$ (848)	\$ 37,976	\$ (2,967)
Net actuarial loss	\$ 503,813	\$ 11,707	\$ 536,954	\$ 8,865
Prior service cost (gain)	8	(5,097)	(34)	(6,903)
AOCI debit before cumulative impact of PUC D&Os, December 31	503,821	6,610	536,920	1,962
Cumulative impact of PUC D&Os	(474,628)	(7,458)	(498,944)	(4,929)
AOCI debit/(credit), December 31	29,193	(848)	37,976	(2,967)
Income taxes (benefits)	(7,677)	219	(10,023)	765
AOCI debit/(credit), net of taxes (benefits), December 31	\$ 21,516	\$ (629)	\$ 27,953	\$ (2,202)

As of December 31, 2019 and 2018, the other postretirement benefit plans shown in the table above had ABOs in excess of plan assets.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands)	2019		2018	
	Pension benefits	Other benefits	Pension benefits	Other benefits
Hawaiian Electric consolidated				
Benefit obligation, January 1	\$ 1,837,653	\$ 181,162	\$ 1,928,648	\$ 204,644
Service cost	60,461	2,191	67,359	2,704
Interest cost	77,851	7,673	71,294	7,628
Actuarial losses (gains)	212,310	25,123	(158,258)	(25,330)
Participants contributions	—	2,311	—	2,472
Benefits paid and expenses	(77,060)	(11,382)	(71,535)	(10,958)
Transfers	(311)	(5)	145	2
Benefit obligation, December 31	2,110,904	207,073	1,837,653	181,162
Fair value of plan assets, January 1	1,343,113	170,862	1,468,403	190,814
Actual return on plan assets	326,204	34,928	(91,836)	(11,625)
Employer contributions	47,808	—	37,550	—
Participants contributions	—	2,311	—	2,472
Benefits paid and expenses	(76,581)	(10,532)	(71,060)	(10,801)
Other	(127)	(5)	56	2
Fair value of plan assets, December 31	1,640,417	197,564	1,343,113	170,862
Accrued benefit liability, December 31	\$ (470,487)	\$ (9,509)	\$ (494,540)	\$ (10,300)
Other liabilities (short-term)	(518)	(715)	(512)	(669)
Defined benefit pension and other postretirement benefit plans liability	(469,969)	(8,794)	(494,028)	(9,631)
Accrued benefit liability, December 31	\$ (470,487)	\$ (9,509)	\$ (494,540)	\$ (10,300)
AOCI debit, January 1 (excluding impact of PUC D&Os)	\$ 502,189	\$ 1,551	\$ 493,464	\$ 839
Recognized during year – prior service credit (cost)	(7)	1,803	(8)	1,803
Recognized during year – net actuarial losses	(14,658)	—	(27,302)	(98)
Occurring during year – net actuarial losses (gains)	(9,446)	2,376	36,035	(993)
AOCI debit before cumulative impact of PUC D&Os, December 31	478,078	5,730	502,189	1,551
Cumulative impact of PUC D&Os	(474,628)	(7,458)	(498,944)	(4,929)
AOCI debit/(credit), December 31	\$ 3,450	\$ (1,728)	\$ 3,245	\$ (3,378)
Net actuarial loss	\$ 478,069	\$ 10,815	\$ 502,173	\$ 8,439
Prior service cost (gain)	9	(5,085)	16	(6,888)
AOCI debit before cumulative impact of PUC D&Os, December 31	478,078	5,730	502,189	1,551
Cumulative impact of PUC D&Os	(474,628)	(7,458)	(498,944)	(4,929)
AOCI debit/(credit), December 31	3,450	(1,728)	3,245	(3,378)
Income taxes (benefits)	(888)	445	(836)	870
AOCI debit/(credit), net of taxes (benefits), December 31	\$ 2,562	\$ (1,283)	\$ 2,409	\$ (2,508)

As of December 31, 2019 and 2018, the other postretirement benefit plan shown in the table above had ABOs in excess of plan assets.

Pension benefits. In 2019, investment returns were higher than assumed rates and together with updates to mortality assumptions projected generationally, improved the funded position. Actuarial losses due to demographic experience, including assumption changes, the most significant of which was the decrease in the discount rate used to measure PBO compared to the prior year, partially offset the improvement in funded position.

In 2018, actuarial gains due to demographic experience, including assumption changes, the most significant of which was the increase in the discount rate used to measure PBO and updates to mortality assumptions projected generationally improved funded position but investment losses more than offset any improvement resulting in a deterioration in the funded position.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Other benefits. In 2019, investment returns were higher than assumed rates, which improved funded position and predominately offset the actuarial losses due to demographic experience, including assumption changes, the most significant of which was the decrease in the discount rate used to measure APBO. Updates to the per capita claims costs also contributed to a deterioration in the funded position.

In 2018, actuarial gains due to demographic experience, including assumption changes, the most significant of which was the increase in the discount rate used to measure APBO along with updates to mortality assumptions projected generationally and per capita claims costs improved funded position beyond the deterioration caused by investment losses.

The dates used to determine retirement benefit measurements for the defined benefit plans and OPEB were December 31 of 2019, 2018 and 2017.

For purposes of calculating NPPC and NPBC, the Company and the Utilities have determined the market-related value of retirement benefit plan assets by calculating the difference between the expected return and the actual return on the fair value of the plan assets, then amortizing the difference over future years – 0% in the first year and 25% in each of years two through five – and finally adding or subtracting the unamortized differences for the past four years from fair value. The method includes a 15% range restriction around the fair value of such assets (i.e., 85% to 115% of fair value).

A primary goal of the plans is to achieve long-term asset growth sufficient to pay future benefit obligations at a reasonable level of risk. The investment policy target for defined benefit pension and OPEB plans reflects the philosophy that long-term growth can best be achieved by prudent investments in equity securities while balancing overall fund and pension liability volatility by an appropriate allocation to fixed income securities. In order to reduce the level of portfolio risk and volatility in returns, efforts have been made to diversify the plans’ investments by asset class, geographic region, market capitalization and investment style.

The asset allocation of defined benefit retirement plans to equity and fixed income securities (excluding cash) and related investment policy targets and ranges were as follows:

December 31	Pension benefits ¹				Other benefits ²			
	2019	2018	Investment policy		2019	2018	Investment policy	
			Target	Range			Target	Range
Assets held by category								
Equity securities	71%	69%	70%	65-75	71%	70%	70%	65-75
Fixed income securities	29	31	30	25-35	29	30	30	25-35
	100%	100%	100%		100%	100%	100%	

¹ Asset allocation (excluding cash) is applicable to only HEI and the Utilities. As of December 31, 2019 and 2018, nearly all of ASB’s pension assets were invested in fixed income securities.

² Asset allocation (excluding cash) is applicable to only HEI and the Utilities. ASB does not fund its other benefits.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Assets held in various trusts for the retirement benefit plans are measured at fair value on a recurring basis and were as follows:

(in millions)	Pension benefits				Other benefits			
	December 31	Fair value measurements using			December 31	Fair value measurements using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)		Level 1	Level 2	Level 3
2019								
Equity securities	\$ 470	\$ 470	\$ —	\$ —	\$ 61	\$ 61	\$ —	\$ —
Equity index and exchange-traded funds	610	610	—	—	69	69	—	—
Equity investments at net asset value (NAV)	78	—	—	—	11	—	—	—
Total equity investments	1,158	1,080	—	—	141	130	—	—
Fixed income securities and public mutual funds	353	123	230	—	52	49	2	—
Fixed income investments at NAV	245	—	—	—	4	—	—	—
Total fixed income investments	598	123	230	—	56	49	2	—
Cash equivalents at NAV	39	—	—	—	4	—	—	—
Total	1,795	\$ 1,203	\$ 230	\$ —	201	\$ 179	\$ 2	\$ —
Cash, receivables and payables, net	4				—			
Fair value of plan assets	\$ 1,799				\$ 201			
2018								
Equity securities	\$ 507	\$ 507	\$ —	\$ —	\$ 65	\$ 65	\$ —	\$ —
Equity index and exchange-traded funds	348	348	—	—	42	42	—	—
Equity investments at NAV	65	—	—	—	10	—	—	—
Total equity investments	920	855	—	—	117	107	—	—
Fixed income securities and public mutual funds	310	123	187	—	47	45	2	—
Fixed income investments at NAV	208	—	—	—	4	—	—	—
Total fixed income investments	518	123	187	—	51	45	2	—
Cash equivalents at NAV	36	—	—	—	5	—	—	—
Total	1,474	\$ 978	\$ 187	\$ —	173	\$ 152	\$ 2	\$ —
Cash, receivables and payables, net	5				1			
Fair value of plan assets	\$ 1,479				\$ 174			

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Measured at net asset value (in millions)	Pension benefits			Other benefits		
	December 31	Redemption frequency	Redemption notice period	December 31	Redemption frequency	Redemption notice period
2019						
Non U.S. equity funds (a)	\$ 78	Daily-Monthly	5-30 days	\$ 11	Daily-Monthly	5-30 days
Fixed income investments (b)	245	Monthly	15 days	4	Monthly	15 days
Cash equivalents (c)	39	Daily	0-1 day	4	Daily	0-1 day
	<u>\$ 362</u>			<u>\$ 19</u>		
2018						
Non U.S. equity funds (a)	\$ 65	Daily-Monthly	5-30 days	\$ 10	Daily-Monthly	5-30 days
Fixed income investments (b)	208	Monthly	15 days	4	Monthly	15 days
Cash equivalents (c)	36	Daily	0-1 day	5	Daily	0-1 day
	<u>\$ 309</u>			<u>\$ 19</u>		

None of the investments presented in the tables above have unfunded commitments.

- (a) Represents investments in funds that primarily invest in non-U.S., emerging markets equities. Redemption frequency for pension benefits assets as of December 31, 2019 were: daily, 60% and monthly, 40%, and as of December 31, 2018 were daily, 32% and monthly, 68%. Redemption frequency for other benefits assets as of December 31, 2019 were: daily, 59% and monthly, 41% and as of December 31, 2018 were: daily, 27% and monthly, 73%.
- (b) Represents investments in fixed income securities invested in a US-dollar denominated fund that seeks to exceed the Barclays Capital Long Corporate A or better Index through investments in US-dollar denominated fixed income securities and commingled vehicles.
- (c) Represents investments in cash equivalent funds. This class includes funds that invest primarily in securities issued or guaranteed by the U.S. government or its agencies or instrumentalities. For pension benefits, the fund may also invest in fixed income securities of investment grade issuers.

The fair values of the investments shown in the table above represent the Company's best estimates of the amounts that would be received upon sale of those assets in an orderly transaction between market participants at that date. Those fair value measurements maximize the use of observable inputs. However, in situations where there is little, if any, market activity for the asset at the measurement date, the fair value measurement reflects the Company's judgments about the assumptions that market participants would use in pricing the asset. Those judgments are developed by the Company based on the best information available in the circumstances.

The fair value of investments measured at net asset value presented in the tables above are intended to permit reconciliation to the fair value of plan assets amounts.

The Company used the following valuation methodologies for assets measured at fair value. There have been no changes in the methodologies used at December 31, 2019 and 2018.

Equity securities, equity index and exchange-traded funds, U.S. Treasury fixed income securities and public mutual funds (Level 1). Equity securities, equity index and exchange-traded funds, U.S. Treasury fixed income securities and public mutual funds are valued at the closing price reported on the active market on which the individual securities or funds are traded.

Fixed income securities (Level 2). Fixed income securities, other than those issued by the U.S. Treasury, are valued based on yields currently available on comparable securities of issuers with similar credit ratings.

The following weighted-average assumptions were used in the accounting for the plans:

December 31	Pension benefits			Other benefits		
	2019	2018	2017	2019	2018	2017
Benefit obligation						
Discount rate	3.61%	4.31%	3.74%	3.52%	4.34%	3.72%
Rate of compensation increase	3.5	3.5	3.5	NA	NA	NA
Net periodic pension/benefit cost (years ended)						
Discount rate	4.31	3.74	4.26	4.34	3.72	4.22
Expected return on plan assets ¹	7.25	7.50	7.50	7.25	7.50	7.50
Rate of compensation increase ²	3.5	3.5	3.5	NA	NA	NA

NA Not applicable

¹ HEI's and Utilities' plan assets only. For 2019, 2018 and 2017, ASB's expected return on plan assets was 4.51%, 3.94% and 4.46%, respectively.

² The Company and the Utilities use a graded rate of compensation increase assumption based on age. The rate provided above is an average across all future years of service for the current population.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The Company and the Utilities based their selection of an assumed discount rate for 2020 NPPC and NPBC and December 31, 2019 disclosure on a cash flow matching analysis that utilized bond information provided by Bloomberg for all non-callable, high quality bonds (generally rated Aa or better) as of December 31, 2019. In selecting the expected rate of return on plan assets for 2020 NPPC and NPBC: a) HEI and the Utilities considered economic forecasts for the types of investments held by the plans (primarily equity and fixed income investments), the Plans' asset allocations, industry and corporate surveys and the past performance of the plans' assets in selecting 7.25% and b) ASB considered its liability driven investment strategy in selecting 3.69%, which is consistent with the assumed discount rate as of December 31, 2019 with a 20 basis point active manager premium. For 2019, retirement benefit plans' assets of HEI and the Utilities had a net return of 24.3%.

As of December 31, 2019, the assumed health care trend rates for 2020 and future years were as follows: medical, 7%, grading down to 5% for 2028 and thereafter; dental, 5%; and vision, 4%. As of December 31, 2018, the assumed health care trend rates for 2019 and future years were as follows: medical, 7.25%, grading down to 5% for 2028 and thereafter; dental, 5%; and vision, 4%.

The components of NPPC and NPBC were as follows:

(in thousands)	Pension benefits			Other benefits		
	2019	2018	2017	2019	2018	2017
HEI consolidated						
Service cost	\$ 62,135	\$ 68,987	\$ 64,906	\$ 2,209	\$ 2,721	\$ 3,374
Interest cost	84,267	77,374	81,185	8,004	7,933	9,453
Expected return on plan assets	(111,989)	(108,953)	(102,745)	(12,356)	(12,908)	(12,326)
Amortization of net prior service gain	(42)	(42)	(55)	(1,806)	(1,805)	(1,793)
Amortization of net actuarial losses	15,479	30,084	26,496	(13)	95	1,130
Net periodic pension/benefit cost	49,850	67,450	69,787	(3,962)	(3,964)	(162)
Impact of PUC D&Os	48,143	25,828	(18,004)	3,258	3,842	1,211
Net periodic pension/benefit cost (adjusted for impact of PUC D&Os)	\$ 97,993	\$ 93,278	\$ 51,783	\$ (704)	\$ (122)	\$ 1,049
Hawaiian Electric consolidated						
Service cost	\$ 60,461	\$ 67,359	\$ 63,059	\$ 2,191	\$ 2,704	\$ 3,353
Interest cost	77,851	71,294	74,632	7,673	7,628	9,115
Expected return on plan assets	(104,632)	(102,368)	(95,892)	(12,180)	(12,713)	(12,147)
Amortization of net prior service (gain) cost	7	8	8	(1,803)	(1,803)	(1,804)
Amortization of net actuarial losses	14,658	27,302	24,392	—	98	1,102
Net periodic pension/benefit cost	48,345	63,595	66,199	(4,119)	(4,086)	(381)
Impact of PUC D&Os	48,143	25,828	(18,004)	3,258	3,842	1,211
Net periodic pension/benefit cost (adjusted for impact of PUC D&Os)	\$ 96,488	\$ 89,423	\$ 48,195	\$ (861)	\$ (244)	\$ 830

The Company recorded pension expense of \$59 million, \$59 million and \$33 million and OPEB expense of \$(0.1) million, nil and \$1.0 million in 2019, 2018 and 2017, respectively, and charged the remaining amounts primarily to electric utility plant. The Utilities recorded pension expense of \$57 million, \$55 million and \$30 million and OPEB (income) expense of \$(0.3) million, \$(0.1) million and \$0.8 million in 2019, 2018 and 2017, respectively, and charged the remaining amounts primarily to electric utility plant.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Additional information on the defined benefit pension plans' accumulated benefit obligations (ABOs), which do not consider projected pay increases (unlike the PBOs shown in the table above), and pension plans with ABOs and PBOs in excess of plan assets were as follows:

December 31 (in billions)	HEI consolidated		Hawaiian Electric consolidated	
	2019	2018	2019	2018
Defined benefit plans - ABOs	\$ 2.0	\$ 1.7	\$ 1.8	\$ 1.6
Defined benefit plans with ABO in excess of plan assets				
ABOs	1.9	1.6	1.8	1.6
Fair value of plan assets	1.7	1.4	1.6	1.3
Defined benefit plans with PBOs in excess of plan assets				
PBOs	2.2	1.9	2.1	1.8
Fair value of plan assets	1.7	1.4	1.6	1.3

HEI consolidated. The Company estimates that the cash funding for the qualified defined benefit pension plans in 2020 will be \$69 million, which should fully satisfy the minimum required contributions to those plans, including requirements of the Utilities' pension tracking mechanisms and the Plan's funding policy. The Company's current estimate of contributions to its other postretirement benefit plans in 2020 is nil.

As of December 31, 2019, the benefits expected to be paid under all retirement benefit plans in 2020, 2021, 2022, 2023, 2024 and 2025 through 2029 amount to \$91 million, \$95 million, \$99 million, \$103 million, \$107 million and \$593 million, respectively.

Hawaiian Electric consolidated. The Utilities estimate that the cash funding for the qualified defined benefit pension plan in 2020 will be \$68 million, which should fully satisfy the minimum required contributions to that Plan, including requirements of the pension tracking mechanisms and the Plan's funding policy. The Utilities' current estimate of contributions to its other postretirement benefit plans in 2020 is nil.

As of December 31, 2019, the benefits expected to be paid under all retirement benefit plans in 2020, 2021, 2022, 2023, 2024 and 2025 through 2029 amounted to \$84 million, \$87 million, \$90 million, \$93 million, \$97 million and \$544 million, respectively.

Defined contribution plans information. For 2019, 2018 and 2017, the Company's expenses for its defined contribution plans under the HEIRSP and the ASB 401(k) Plan were \$7 million, \$7 million and \$7 million, respectively, and cash contributions were \$7 million, \$7 million and \$6 million, respectively. The Utilities' expenses and cash contributions for its defined contribution plan under the HEIRSP for 2019, 2018 and 2017 were \$3 million, \$2 million and \$2 million, respectively.

Note 11 • Share-based compensation

Under the 2010 Equity and Incentive Plan, as amended, HEI can issue shares of common stock as incentive compensation to selected employees in the form of stock options, stock appreciation rights (SARs), restricted shares, restricted stock units, performance shares and other share-based and cash-based awards. The 2010 Equity and Incentive Plan (original EIP) was amended and restated effective March 1, 2014 (EIP) and an additional 1.5 million shares were added to the shares available for issuance under these programs.

As of December 31, 2019, approximately 3.2 million shares remained available for future issuance under the terms of the EIP, assuming recycling of shares withheld to satisfy minimum statutory tax liabilities relating to EIP awards, including an estimated 0.7 million shares that could be issued upon the vesting of outstanding restricted stock units and the achievement of performance goals for awards outstanding under long-term incentive plans (assuming that such performance goals are achieved at maximum levels).

Restricted stock units awarded under the 2010 Equity and Incentive Plan in 2019, 2018, 2017 and 2016 will vest and be issued in unrestricted stock in four equal annual increments on the anniversaries of the grant date and are forfeited to the extent they have not become vested for terminations of employment during the vesting period, except that pro-rata vesting is provided for terminations due to death, disability and retirement. Restricted stock units expense has been recognized in accordance with the fair-value-based measurement method of accounting. Dividend equivalent rights are accrued quarterly and are paid at the end of the restriction period when the associated restricted stock units vest.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Stock performance awards granted under the 2019-2021, 2018-2020 and 2017-2019 long-term incentive plans (LTIP) entitle the grantee to shares of common stock with dividend equivalent rights once service conditions and performance conditions are satisfied at the end of the three-year performance period. LTIP awards are forfeited for terminations of employment during the performance period, except that pro-rata participation is provided for terminations due to death, disability and retirement based upon completed months of service after a minimum of 12 months of service in the performance period. Compensation expense for the stock performance awards portion of the LTIP has been recognized in accordance with the fair-value-based measurement method of accounting for performance shares.

Under the 2011 Nonemployee Director Stock Plan (2011 Director Plan), HEI can issue shares of common stock as compensation to nonemployee directors of HEI, Hawaiian Electric and ASB. On June 26, 2019, an additional 300,000 shares were made available for issuance under the 2011 Director Plan. As of December 31, 2019, there were 310,263 shares remaining available for future issuance under the 2011 Director Plan.

Share-based compensation expense and the related income tax benefit were as follows:

(in millions)	2019	2018	2017
HEI consolidated			
Share-based compensation expense ¹	\$ 10.0	\$ 7.8	\$ 5.4
Income tax benefit	1.4	1.1	1.9
Hawaiian Electric consolidated			
Share-based compensation expense ¹	3.2	2.7	1.9
Income tax benefit	0.6	0.5	0.7

¹ For 2019, 2018 and 2017, the Company has not capitalized any share-based compensation.

Stock awards. HEI granted HEI common stock to nonemployee directors under the 2011 Director Plan as follows:

(dollars in millions)	2019	2018	2017
Shares granted	36,344	38,821	35,770
Fair value	\$ 1.6	\$ 1.3	\$ 1.2
Income tax benefit	0.4	0.3	0.5

The number of shares issued to each nonemployee director of HEI, Hawaiian Electric and ASB is determined based on the closing price of HEI common stock on the grant date.

Restricted stock units. Information about HEI's grants of restricted stock units was as follows:

	2019		2018		2017	
	Shares	(1)	Shares	(1)	Shares	(1)
Outstanding, January 1	200,358	\$ 33.05	197,047	\$ 31.53	220,683	\$ 29.57
Granted	96,565	37.82	93,853	34.12	97,873	33.47
Vested	(76,813)	32.61	(75,683)	30.56	(92,147)	28.88
Forfeited	(12,469)	34.20	(14,859)	32.35	(29,362)	31.57
Outstanding, December 31	207,641	\$ 35.36	200,358	\$ 33.05	197,047	\$ 31.53
Total weighted-average grant-date fair value of shares granted (in millions)	\$ 3.7		\$ 3.2		\$ 3.3	

(1) Weighted-average grant-date fair value per share based on the average price of HEI common stock on the date of grant.

For 2019, 2018 and 2017, total restricted stock units and related dividends that vested had a fair value of \$3.2 million, \$2.7 million and \$3.5 million, respectively, and the related tax benefits were \$0.5 million, \$0.4 million and \$1.1 million, respectively.

As of December 31, 2019, there was \$4.8 million of total unrecognized compensation cost related to the nonvested restricted stock units. The cost is expected to be recognized over a weighted-average period of 2.5 years.

Long-term incentive plan payable in stock. The 2017-2019, 2018-2020 and 2019-2021 LTIPs provide for performance awards under the EIP of shares of HEI common stock based on the satisfaction of performance goals, including a market condition goal. The number of shares of HEI common stock that may be awarded is fixed on the date the grants are made, subject to the achievement of specified performance levels and calculated dividend equivalents. The potential payout varies from 0% to 200% of the number of target shares, depending on the achievement of the goals. The market condition goal is

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

based on HEI's total shareholder return (TSR) compared to the Edison Electric Institute Index over the relevant three-year period. The other performance condition goals relate to earnings per share (EPS) growth, return on average common equity (ROACE), Hawaiian Electric's net income growth, ASB's efficiency ratio, and Pacific Current's EBITDA growth and return on average invested capital.

LTIP linked to TSR. Information about HEI's LTIP grants linked to TSR was as follows:

	2019		2018		2017	
	Shares	(1)	Shares	(1)	Shares	(1)
Outstanding, January 1	65,578	\$ 38.81	32,904	\$ 39.51	83,106	\$ 22.95
Granted	35,215	41.07	37,832	38.21	37,204	39.51
Vested (issued or unissued and cancelled)	—	—	—	—	(83,106)	22.95
Forfeited	(4,391)	39.19	(5,158)	38.84	(4,300)	39.51
Outstanding, December 31	96,402	\$ 39.62	65,578	\$ 38.81	32,904	\$ 39.51
Total weighted-average grant-date fair value of shares granted (in millions)	\$ 1.4		\$ 1.4		\$ 1.5	

(1) Weighted-average grant-date fair value per share determined using a Monte Carlo simulation model.

The grant date fair values of the shares were determined using a Monte Carlo simulation model utilizing actual information for the common shares of HEI and its peers for the period from the beginning of the performance period to the grant date and estimated future stock volatility and dividends of HEI and its peers over the remaining three-year performance period. The expected stock volatility assumptions for HEI and its peer group were based on the three-year historic stock volatility, and the annual dividend yield assumptions were based on dividend yields calculated on the basis of daily stock prices over the same three-year historical period.

The following table summarizes the assumptions used to determine the fair value of the LTIP awards linked to TSR and the resulting fair value of LTIP awards granted:

	2019	2018	2017
Risk-free interest rate	2.48%	2.29%	1.46%
Expected life in years	3	3	3
Expected volatility	15.8%	17.0%	20.1%
Range of expected volatility for Peer Group	15.0% to 73.2%	15.1% to 26.2%	15.4% to 26.0%
Grant date fair value (per share)	\$ 41.07	\$ 38.20	\$ 39.51

For 2017, total vested LTIP awards linked to TSR and related dividends had a fair value of \$1.9 million and the related tax benefits were \$0.7 million. There were no share-based LTIP awards linked to TSR with a vesting date in 2018 or 2019.

As of December 31, 2019, there was \$1.4 million of total unrecognized compensation cost related to the nonvested performance awards payable in shares linked to TSR. The cost is expected to be recognized over a weighted-average period of 1.5 years.

LTIP awards linked to other performance conditions. Information about HEI's LTIP awards payable in shares linked to other performance conditions was as follows:

	2019		2018		2017	
	Shares	(1)	Shares	(1)	Shares	(1)
Outstanding, January 1	276,169	\$ 33.80	131,616	\$ 33.47	109,816	\$ 25.18
Granted	140,855	37.78	151,328	34.12	148,818	33.47
Vested	—	—	—	—	(109,816)	25.18
Increase above target (cancelled)	4,314	33.53	13,858	33.49	—	—
Forfeited	(17,570)	34.66	(20,633)	33.80	(17,202)	33.48
Outstanding, December 31	403,768	\$ 35.15	276,169	\$ 33.80	131,616	\$ 33.47
Total weighted-average grant-date fair value of shares granted (at target performance levels) (in millions)	\$ 5.3		\$ 5.2		\$ 5.0	

(1) Weighted-average grant-date fair value per share based on the average price of HEI common stock on the date of grant.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

For 2017, total vested LTIP awards linked to other performance conditions and related dividends had a fair value of \$4.2 million and the related tax benefits were \$1.6 million. There were no share-based LTIP awards linked to other performance conditions with a vesting date in 2018 or 2019.

As of December 31, 2019, there was \$5.1 million of total unrecognized compensation cost related to the nonvested shares linked to performance conditions other than TSR. The cost is expected to be recognized over a weighted-average period of 1.5 years.

Note 12 · Income taxes

The components of income taxes attributable to net income for common stock were as follows:

Years ended December 31 (in thousands)	HEI consolidated			Hawaiian Electric consolidated		
	2019	2018	2017	2019	2018	2017
Federal						
Current	\$ 28,736	\$ 42,903	\$ 61,534	\$ 21,751	\$ 29,649	\$ 36,267
Deferred*	(4,353)	(6,099)	33,967	(7,793)	(5,245)	35,229
Deferred tax credits, net**	13,410	(12)	(20)	13,155	(12)	(20)
	37,793	36,792	95,481	27,113	24,392	71,476
State						
Current	10,472	17,361	10,076	5,579	13,210	8,947
Deferred	(10,732)	(3,269)	3,868	(8,491)	(2,737)	2,808
Deferred tax credits, net**	14,104	(87)	(32)	14,104	(87)	(32)
	13,844	14,005	13,912	11,192	10,386	11,723
Total	\$ 51,637	\$ 50,797	\$ 109,393	\$ 38,305	\$ 34,778	\$ 83,199

* The 2018 deferred income tax expense includes the final adjustment to reduce the provisional amount recorded in 2017 pursuant to Staff Accounting Bulletin No. 118 (SAB No. 118). See "Major tax developments" disclosure below for details of the accounting for the enactment of the Tax Act.

** Represents 2019 federal and state tax credits, primarily related to the West Loch PV project, deferred and amortized starting in 2020. See West Loch PV Project discussion in Note 3.

A reconciliation of the amount of income taxes computed at the federal statutory rate to the amount provided in the consolidated statements of income was as follows:

Years ended December 31 (in thousands)	HEI consolidated			Hawaiian Electric consolidated		
	2019	2018	2017	2019	2018	2017
Amount at the federal statutory income tax rate	\$ 56,996	\$ 53,437	\$ 96,796	\$ 41,399	\$ 37,889	\$ 71,801
Increase (decrease) resulting from:						
State income taxes, net of federal income tax benefit	11,658	11,832	9,789	8,703	8,080	7,584
Net deferred tax asset (liability) adjustment related to the Tax Act	(9,255)	(9,540)	13,420	(9,255)	(9,285)	9,168
Other, net	(7,762)	(4,932)	(10,612)	(2,542)	(1,906)	(5,354)
Total	\$ 51,637	\$ 50,797	\$ 109,393	\$ 38,305	\$ 34,778	\$ 83,199
Effective income tax rate	19.0%	20.0%	39.6%	19.4%	19.3%	40.6%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The tax effects of book and tax basis differences that give rise to deferred tax assets and liabilities were as follows:

December 31 (in thousands)	HEI consolidated		Hawaiian Electric consolidated	
	2019	2018	2019	2018
Deferred tax assets				
Regulatory liabilities, excluding amounts attributable to property, plant and equipment	\$ 100,427	\$ 104,868	\$ 100,427	\$ 104,868
Operating lease liabilities	51,573	—	45,608	—
Allowance for bad debts	14,858	14,647	560	659
Other ¹	54,028	46,036	41,181	26,522
Total deferred tax assets	220,886	165,551	187,776	132,049
Deferred tax liabilities				
Property, plant and equipment related	464,312	437,644	458,349	434,831
Operating lease right-of-use assets	51,542	—	45,608	—
Regulatory assets, excluding amounts attributable to property, plant and equipment	33,897	37,345	33,897	37,345
Deferred RAM and RBA revenues	—	11,278	—	11,278
Retirement benefits	9,684	20,173	13,072	25,430
Other	40,776	31,629	14,001	6,362
Total deferred tax liabilities	600,211	538,069	564,927	515,246
Net deferred income tax liability	\$ 379,325	\$ 372,518	\$ 377,151	\$ 383,197

¹ As of December 31, 2019, HEI consolidated and Hawaiian Electric consolidated have deferred tax assets of \$8.7 million and \$6.7 million respectively, relating to the benefit of state tax credit carryforwards of \$11.7 million and \$9 million respectively. These state tax credit carryforwards primarily relate to the West Loch PV project and do not expire. The Company concluded that as of December 31, 2019, a valuation allowance is not required.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences are deductible. Based upon historical taxable income and projections for future taxable income, management believes it is more likely than not the Company and the Utilities will realize substantially all of the benefits of the deferred tax assets. As of December 31, 2019 and 2018, valuation allowances for deferred tax benefits were nil. The Utilities are included in the consolidated federal and Hawaii income tax returns of HEI and are subject to the provisions of HEI's tax sharing agreement, which determines each subsidiary's (or subgroup's) income tax return liabilities and refunds on a standalone basis as if it filed a separate return (or subgroup consolidated return).

The following is a reconciliation of the Company's liability for unrecognized tax benefits for 2019, 2018 and 2017.

(in millions)	HEI consolidated			Hawaiian Electric consolidated		
	2019	2018	2017	2019	2018	2017
Unrecognized tax benefits, January 1	\$ 2.1	\$ 4.0	\$ 3.8	\$ 1.6	\$ 3.5	3.8
Additions based on tax positions taken during the year	0.5	0.3	0.9	0.5	0.3	0.4
Reductions based on tax positions taken during the year	—	—	(0.2)	—	—	(0.2)
Additions for tax positions of prior years	0.1	0.1	—	0.1	0.1	—
Reductions for tax positions of prior years	(0.2)	(0.1)	(0.5)	(0.2)	(0.1)	(0.5)
Lapses of statute of limitations	(0.3)	(2.2)	—	(0.3)	(2.2)	—
Unrecognized tax benefits, December 31	\$ 2.2	\$ 2.1	\$ 4.0	\$ 1.7	\$ 1.6	\$ 3.5

At December 31, 2019 and 2018, there were \$0.5 million of unrecognized tax benefits, if recognized, would affect the Company's annual effective tax rate. As of December 31, 2019 and 2018, the Utilities had no unrecognized tax benefits that, if recognized, would affect the Utilities' annual effective tax rate. The Company and Utilities believe that the unrecognized tax benefits will not significantly increase or decrease within the next 12 months.

HEI consolidated. The Company recognizes interest accrued related to unrecognized tax benefits in "Interest expense—other than on deposit liabilities and other bank borrowings" and penalties, if any, in operating expenses. In 2019, 2018 and 2017, the Company recognized approximately \$0.1 million, \$(0.1) million and \$0.2 million in interest expense. The Company had \$0.6 million and \$0.4 million of interest accrued as of December 31, 2019 and 2018, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Hawaiian Electric consolidated. The Utilities recognize interest accrued related to unrecognized tax benefits in “Interest expense and other charges, net” and penalties, if any, in operating expenses. In 2019, 2018 and 2017, the Utilities recognized approximately \$0.1 million in interest expense. The Utilities had \$0.4 million and \$0.3 million of interest accrued as of December 31, 2019 and 2018, respectively.

As of December 31, 2019, the disclosures above present the Company’s and the Utilities’ accruals for potential tax liabilities, which involve management’s judgment regarding the likelihood of the benefit being sustained. The final resolution of uncertain tax positions could result in adjustments to recorded amounts. Based on information currently available, the Company and the Utilities believe these accruals have adequately provided for potential income tax issues with federal and state tax authorities, and that the ultimate resolution of tax issues for all open tax periods will not have a material adverse effect on its results of operations, financial condition or liquidity.

IRS examinations have been completed and settled through the tax year 2011 and the statute of limitations has expired for years prior to 2016, leaving subsequent years subject to IRS examination. The tax years 2011 and subsequent are still subject to examination by the Hawaii Department of Taxation.

Major tax developments. The changes enacted in the 2017 Tax Cuts and Jobs Act continue to impact corporate taxpayers. The following summarizes the provisions that have a major impact on the Company.

Lower tax rate. The corporate income tax rate reduction from 35% to 21% lowered the Company’s effective tax rate in 2018 and the subsequent years. For the regulated Utilities, the excess ADIT resulting from the rate change is being returned to customers over various periods determined with the approval of the PUC.

Bonus depreciation. The Tax Act allows 100% bonus depreciation through the end of 2022 for qualified property purchased and placed in service after September 27, 2017. The Tax Act provides that property used in the trade or business of a regulated utility (including the furnishing or selling electrical energy) is not qualified property. However, property placed into service after September 27, 2017 are grandfathered under the pre-Tax Act rules allowing 50% bonus depreciation if subject to written binding purchase contracts prior to September 28, 2017.

Other applicable provisions. There are a number of other provisions in the Tax Act that have an impact on the Company, including the repeal of the domestic production activities deduction (DPAD), non-deductibility of transportation fringe benefits excluded from employees income, and the increased limitation on the deductibility of executive compensation.

SAB No. 118. On December 22, 2017, the SEC staff issued SAB No. 118 to address the application of GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act.

The Company applied the guidance in SAB No. 118 when accounting for enactment date effects of the Tax Act in 2017 and throughout 2018. At December 31, 2017, the Company had not completed its re-measurement of deferred tax assets and liabilities as a result of the reduction in the US federal corporate income tax rate to 21% and, in accordance with SAB No. 118, recorded a provisional amount. The Tax Act’s reduction of the corporate tax rate to 21% resulted in a net deferred tax balance that was in excess of the taxes the Company expected to pay or be refunded in the future when the temporary differences that created these deferred taxes reverse. The excess related to the Utilities’ deferred taxes that were identified to be refunded in rates was reclassified to a regulatory liability and is currently being returned to the customers over various periods of time. The remaining excess was written off through deferred tax expense. Consequently, in 2017, the Company recorded a provisional increase in deferred tax expense of \$13.4 million (\$9.2 million at the Utilities). In December 2018, the end date of the measurement period for purposes of SAB No. 118 passed, and consequently, the Company (and Utilities) completed its analysis based on available Treasury and legislative guidance relating to the Tax Act.

In 2018, the Company re-measured certain deferred tax assets and liabilities based on the rates at which they were expected to reverse in the future. For the period ended December 31, 2018, the net deferred tax liabilities decreased by \$13.9 million (\$13.6 million at the Utilities) with the corresponding net adjustment that decreased deferred tax expense by \$5.5 million (\$5.2 million at the Utilities) and increased the regulatory liability by \$11.3 million. The decrease in deferred tax expense is included as a component of income tax expense and had the effect of decreasing the effective tax rate in 2018 from 22.1% to 20.0% (22.2% to 19.3% at the Utilities).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Note 13 · Cash flows

Years ended December 31	2019	2018	2017
(in millions)			
Supplemental disclosures of cash flow information			
HEI consolidated			
Interest paid to non-affiliates, net of amounts capitalized	\$ 107	\$ 102	\$ 83
Income taxes paid (including refundable credits)	56	72	55
Income taxes refunded (including refundable credits)	4	34	1
Hawaiian Electric consolidated			
Interest paid to non-affiliates, net of amounts capitalized	68	73	63
Income taxes paid (including refundable credits)	55	64	26
Income taxes refunded (including refundable credits)	4	31	—
Supplemental disclosures of noncash activities			
HEI consolidated			
Unpaid invoices and accruals for capital expenditures, balance, end of period (investing)	64	59	38
Loans transferred from held for investment to held for sale (investing)	—	1	41
Common stock issued (gross) for director and executive/management compensation (financing) ¹	5	4	11
Obligations to fund low income housing investments, net (investing)	11	12	13
Transfer of retail repurchase agreements to deposit liabilities (financing)	—	102	—
Hawaiian Electric consolidated			
Unpaid invoices and accruals for capital expenditures, balance, end of period (investing)	62	44	38
HEI Consolidated and Hawaiian Electric consolidated			
Electric utility property, plant and equipment			
Estimated fair value of noncash contributions in aid of construction (investing)	9	14	18
Acquisition of Hawaiian Telecom's interest in joint poles (investing)	—	48	—

¹ The amounts shown represent the market value of common stock issued for director and executive/management compensation and withheld to satisfy statutory tax liabilities.

Note 14 · Regulatory restrictions on net assets

The abilities of certain of HEI's subsidiaries to pay dividends or make other distributions to HEI are subject to contractual and regulatory restrictions. Under the PUC Agreement, in the event that the consolidated common stock equity of the electric utility subsidiaries falls below 35% of the total capitalization of the electric utilities (including the current maturities of long-term debt, but excluding short-term borrowings), the electric utility subsidiaries would, absent PUC approval, be restricted in their payment of cash dividends to 80% of the earnings available for the payment of dividends in the current fiscal year and preceding five years, less the amount of dividends paid during that period. The PUC Agreement also provides that the foregoing dividend restriction shall not be construed as relinquishing any right the PUC may have to review the dividend policies of the electric utility subsidiaries. As of December 31, 2019, the consolidated common stock equity of HEI's electric utility subsidiaries was 56% of their total capitalization (as calculated for purposes of the PUC Agreement). As of December 31, 2019, Hawaiian Electric and its subsidiaries had common stock equity of \$2.0 billion of which approximately \$825 million was not available for transfer to HEI in the form of dividends, loans or advances without regulatory approval.

The ability of ASB to make capital distributions to HEI and other affiliates is restricted under federal law. Subject to a limited exception for stock redemptions that do not result in any decrease in ASB's capital and would improve ASB's financial condition, ASB is prohibited from declaring any dividends, making any other capital distributions, or paying a management fee to a controlling person if, following the distribution or payment, ASB would be deemed to be undercapitalized, significantly undercapitalized or critically undercapitalized. ASB is required to notify the FRB and OCC prior to making any capital distribution (including dividends) to HEI (through ASB Hawaii). All dividends are subject to review by the OCC and FRB and receipt of a letter from the FRB communicating the agencies' non-objection to the payment of any dividend ASB proposes to declare and pay to ASB Hawaii and HEI. Generally, the FRB and OCC may disapprove or deny ASB's request to make a capital distribution if the proposed distribution will cause ASB to become undercapitalized, or the proposed distribution raises

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

safety and soundness concerns, or the proposed distribution violates a prohibition contained in any statute, regulation or agreement between ASB and the OCC. As of December 31, 2019, in order to maintain its “well-capitalized” position, ASB could not transfer approximately \$487 million of net assets to HEI.

HEI and its subsidiaries are also subject to debt covenants, preferred stock resolutions and the terms of guarantees that could limit their respective abilities to pay dividends. The Company does not expect that the regulatory and contractual restrictions applicable to HEI and/or its subsidiaries will significantly affect the operations of HEI or its ability to pay dividends on its common stock.

Note 15 · Significant group concentrations of credit risk

Most of the Company’s business activity is with customers located in the State of Hawaii.

The Utilities are regulated operating electric public utilities engaged in the generation, purchase, transmission, distribution and sale of electricity on the islands of Oahu, Hawaii, Maui, Lanai and Molokai in the State of Hawaii. The Utilities provide the only electric public utility service on the islands they serve. The Utilities extend credit to customers, all of whom reside or conduct business in the State of Hawaii. See Note 3 of the Consolidated Financial Statements for a discussion of the Utilities’ major customers. The International Brotherhood of Electrical Workers Local 1260 represents roughly half of the Utilities’ workforce covered by a collective bargaining agreement that expires on October 31, 2021.

Most of ASB’s financial instruments are based in the State of Hawaii, except for the investment securities it owns. Substantially all real estate loans are collateralized by real estate in Hawaii. ASB’s policy is to require mortgage insurance on all real estate loans with a loan to appraisal ratio in excess of 80% at origination.

Pacific Current’s investments are in the State of Hawaii since its strategy is focused on investing in non-regulated renewable energy and sustainable infrastructure in the State of Hawaii.

Note 16 · Fair value measurements

Fair value measurement and disclosure valuation methodology. The following are descriptions of the valuation methodologies used for assets and liabilities recorded at fair value and for estimating fair value for financial instruments not carried at fair value:

Short-term borrowings—other than bank. The carrying amount of short-term borrowings approximated fair value because of the short maturity of these instruments.

Investment securities. The fair value of ASB’s investment securities is determined quarterly through pricing obtained from independent third-party pricing services or from brokers not affiliated with the trade. Non-binding broker quotes are infrequent and generally occur for new securities that are settled close to the month-end pricing date. The third-party pricing vendors ASB uses for pricing its securities are reputable firms that provide pricing services on a global basis and have processes in place to ensure quality and control. The third-party pricing services use a variety of methods to determine the fair value of securities that fall under Level 2 of ASB’s fair value measurement hierarchy. Among the considerations are quoted prices for similar securities in an active market, yield spreads for similar trades, adjustments for liquidity, size, collateral characteristics, historic and generic prepayment speeds, and other observable market factors.

To enhance the robustness of the pricing process, ASB will on a quarterly basis compare its standard third-party vendor’s price with that of another third-party vendor. If the prices are within an acceptable tolerance range, the price of the standard vendor will be accepted. If the variance is beyond the tolerance range, an evaluation will be conducted by ASB and a challenge to the price may be made. Fair value in such cases will be based on the value that best reflects the data and observable characteristics of the security. In all cases, the fair value used will have been independently determined by a third-party pricing vendor or non-affiliated broker.

The fair value of the mortgage revenue bonds is estimated using a discounted cash flow model to calculate the present value of future principal and interest payments and, therefore is classified within Level 3 of the valuation hierarchy.

Loans held for sale. Residential and commercial loans are carried at the lower of cost or market and are valued using market observable pricing inputs, which are derived from third party loan sales and, therefore, are classified within Level 2 of the valuation hierarchy.

Loans held for investment. Fair value of loans held for investment is derived using a discounted cash flow approach which includes an evaluation of the underlying loan characteristics. The valuation model uses loan characteristics which includes product type, maturity dates and the underlying interest rate of the portfolio. This information is input into the valuation models

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

along with various forecast valuation assumptions including prepayment forecasts, to determine the discount rate. These assumptions are derived from internal and third party sources. Since the valuation is derived from model-based techniques, ASB includes loans held for investment within Level 3 of the valuation hierarchy.

Impaired loans. At the time a loan is considered impaired, it is valued at the lower of cost or fair value. Fair value is determined primarily by using an income, cost or market approach and is normally provided through appraisals. Impaired loans carried at fair value generally receive specific allocations within the allowance for loan losses. For collateral-dependent loans, fair value is commonly based on recent real estate appraisals. These appraisals may utilize a single valuation approach or a combination of approaches including comparable sales and the income approach. Adjustments are routinely made in the appraisal process by the independent appraisers to adjust for differences between the comparable sales and income data available. Such adjustments typically result in a Level 3 classification of the inputs for determining fair value. Non-real estate collateral may be valued using an appraisal, net book value per the borrower's financial statements, or aging reports, adjusted or discounted based on management's historical knowledge, changes in market conditions from the time of the valuation and management's expertise and knowledge of the client and client's business, resulting in a Level 3 fair value classification. Generally, impaired loans are evaluated quarterly for additional impairment and adjusted accordingly.

Real estate acquired in settlement of loans. Foreclosed assets are carried at fair value (less estimated costs to sell) and are generally based upon appraisals or independent market prices that are periodically updated subsequent to classification as real estate owned. Such adjustments typically result in a Level 3 classification of the inputs for determining fair value. ASB estimates the fair value of collateral-dependent loans and real estate owned using the sales comparison approach.

Mortgage servicing rights. MSRIs are capitalized at fair value based on market data at the time of sale and accounted for in subsequent periods at the lower of amortized cost or fair value. MSRIs are evaluated for impairment at each reporting date. ASB's MSRIs are stratified based on predominant risk characteristics of the underlying loans including loan type and note rate. For each stratum, fair value is calculated by discounting expected net income streams using discount rates that reflect industry pricing for similar assets. Expected net income streams are estimated based on industry assumptions regarding prepayment expectations and income and expenses associated with servicing residential mortgage loans for others. Impairment is recognized through a valuation allowance for each stratum when the carrying amount exceeds fair value, with any associated provision recorded as a component of loan servicing fees included in "Revenues - bank" in the consolidated statements of income. A direct write-down is recorded when the recoverability of the valuation allowance is deemed to be unrecoverable. ASB compares the fair value of MSRIs to an estimated value calculated by an independent third-party. The third-party relies on both published and unpublished sources of market related assumptions and its own experience and expertise to arrive at a value. ASB uses the third-party value only to assess the reasonableness of its own estimate.

Deposit liabilities. The fair value of fixed-maturity certificates of deposit was estimated by discounting the future cash flows using the rates currently offered for FHLB advances of similar remaining maturities. Deposit liabilities are classified in Level 2 of the valuation hierarchy.

Other borrowings. For advances and repurchase agreements, fair value is estimated using quantitative discounted cash flow models that require the use of interest rate inputs that are currently offered for advances and repurchase agreements of similar remaining maturities. The majority of market inputs are actively quoted and can be validated through external sources, including broker market transactions and third party pricing services.

Long-term debt—other than bank. Fair value of long-term debt of HEI and the Utilities was obtained from third-party financial services providers based on the current rates offered for debt of the same or similar remaining maturities and from discounting the future cash flows using the current rates offered for debt of the same or similar risks, terms, and remaining maturities. Long-term debt-other than bank is classified in Level 2 of the valuation hierarchy.

Interest rate lock commitments (IRLCs). The estimated fair value of commitments to originate residential mortgage loans for sale is based on quoted prices for similar loans in active markets. IRLCs are classified as Level 2 measurements.

Forward sales commitments. To be announced (TBA) mortgage-backed securities forward commitments are classified as Level 1, and consist of publicly-traded debt securities for which identical fair values can be obtained through quoted market prices in active exchange markets. The fair values of ASB's best efforts and mandatory delivery loan sale commitments are determined using quoted prices in the market place that are observable and are classified as Level 2 measurements.

The following table presents the carrying or notional amount, fair value, and placement in the fair value hierarchy of the Company's financial instruments. For stock in Federal Home Loan Bank, the carrying amount is a reasonable estimate of fair value because it can only be redeemed at par.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands)	Carrying or notional amount	Estimated fair value			Total
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
December 31, 2019					
Financial assets					
HEI consolidated					
Available-for-sale investment securities	\$ 1,232,826	\$ —	\$ 1,204,229	\$ 28,597	\$ 1,232,826
Held-to-maturity investment securities	139,451	—	143,467	—	143,467
Stock in Federal Home Loan Bank	8,434	—	8,434	—	8,434
Loans, net	5,080,107	—	12,295	5,145,242	5,157,537
Mortgage servicing rights	9,101	—	—	12,379	12,379
Derivative assets	25,179	—	300	—	300
Financial liabilities					
HEI consolidated					
Deposit liabilities	769,825	—	765,976	—	765,976
Short-term borrowings—other than bank	185,710	—	185,710	—	185,710
Other bank borrowings	115,110	—	115,107	—	115,107
Long-term debt, net—other than bank	1,964,365	—	2,156,927	—	2,156,927
Derivative liabilities	51,375	33	2,185	—	2,218
Hawaiian Electric consolidated					
Short-term borrowings	88,987	—	88,987	—	88,987
Long-term debt, net	1,497,667	—	1,670,189	—	1,670,189
December 31, 2018					
Financial assets					
HEI consolidated					
Available-for-sale investment securities	\$ 1,388,533	\$ —	\$ 1,364,897	\$ 23,636	\$ 1,388,533
Held-to-maturity investment securities	141,875	—	142,057	—	142,057
Stock in Federal Home Loan Bank	9,958	—	9,958	—	9,958
Loans, net	4,792,707	—	1,809	4,800,244	4,802,053
Mortgage servicing rights	8,062	—	—	13,618	13,618
Derivative assets	10,180	—	91	—	91
Financial liabilities					
HEI consolidated					
Deposit liabilities	827,841	—	817,667	—	817,667
Short-term borrowings—other than bank	73,992	—	73,992	—	73,992
Other bank borrowings	110,040	—	110,037	—	110,037
Long-term debt, net—other than bank	1,879,641	—	1,904,261	—	1,904,261
Derivative liabilities	34,132	34	596	—	630
Hawaiian Electric consolidated					
Short-term borrowings	25,000	—	25,000	—	25,000
Long-term debt, net	1,418,802	—	1,443,968	—	1,443,968

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Fair value measurements on a recurring basis. Assets and liabilities measured at fair value on a recurring basis were as follows:

December 31 (in thousands)	2019			2018		
	Fair value measurements using			Fair value measurements using		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Available-for-sale investment securities (bank segment)						
Mortgage-backed securities — issued or guaranteed by U.S. Government agencies or sponsored agencies	\$ —	\$ 1,026,385	\$ —	\$ —	\$ 1,161,416	\$ —
U.S. Treasury and federal agency obligations	—	117,787	—	—	154,349	—
Corporate bonds	—	60,057	—	—	49,132	—
Mortgage revenue bonds	—	—	28,597	—	—	23,636
	\$ —	\$ 1,204,229	\$ 28,597	\$ —	\$ 1,364,897	\$ 23,636
Derivative assets						
Interest rate lock commitments (bank segment) ¹	\$ —	\$ 297	\$ —	\$ —	\$ 91	\$ —
Forward commitments (bank segment) ¹	—	3	—	—	—	—
	\$ —	\$ 300	\$ —	\$ —	\$ 91	\$ —
Derivative liabilities						
Interest rate lock commitments (bank segment) ¹	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Forward commitments (bank segment) ¹	33	12	—	34	9	—
Interest rate swap (Other segment) ²	—	2,173	—	—	587	—
	\$ 33	\$ 2,185	\$ —	\$ 34	\$ 596	\$ —

1 Derivatives are carried at fair value in other assets or other liabilities in the balance sheets with changes in value included in mortgage banking income.

2 Derivatives are included in Other liabilities in the balance sheets.

There were no transfers of financial assets and liabilities between Level 1 and Level 2 of the fair value hierarchy during the years ended December 31, 2019 and 2018.

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis were as follows:

(in thousands)	2019	2018
Mortgage revenue bonds		
Balance, January 1	\$ 23,636	\$ 15,427
Principal payments received	—	—
Purchases	4,961	8,209
Unrealized gain (loss) included in other comprehensive income	—	—
Balance, December 31	\$ 28,597	\$ 23,636

ASB holds two mortgage revenue bonds issued by the Department of Budget and Finance of the State of Hawaii. The Company estimates the fair value by using a discounted cash flow model to calculate the present value of estimated future principal and interest payments. The unobservable input used in the fair value measurement is the weighted average discount rate. As of December 31, 2019, the weighted average discount rate was 3.41% which was derived by incorporating a credit spread over the one month LIBOR rate. Significant increases (decreases) in the weighted average discount rate could result in a significantly lower (higher) fair value measurement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Fair value measurements on a nonrecurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis and therefore are not included in the tables above. These measurements primarily result from assets carried at the lower of cost or fair value or from impairment of individual assets. The carrying value of assets measured at fair value on a nonrecurring basis were as follows:

(in thousands)	Balance	Fair value measurements using		
		Level 1	Level 2	Level 3
December 31, 2019				
Loans	\$ 25	\$ —	\$ —	\$ 25
December 31, 2018				
Loans	77	—	—	77
Real estate acquired in settlement of loans	186	—	—	186

For 2019 and 2018, there were no adjustments to fair value for ASB's loans held for sale.

The following table presents quantitative information about Level 3 fair value measurements for financial instruments measured at fair value on a nonrecurring basis:

(dollars in thousands)	Fair value	Valuation technique	Significant unobservable input	Significant unobservable input value (1)	
				Range	Weighted Average
December 31, 2019					
Residential land	\$ 25	Fair value of property or collateral	Appraised value less 7% selling cost	N/A (2)	N/A (2)
Total loans	<u>\$ 25</u>				
December 31, 2018					
Home equity lines of credit	77	Fair value of property or collateral	Appraised value less 7% selling cost	N/A (2)	N/A (2)
Total loans	<u>\$ 77</u>				
Real estate acquired in settlement of loans	<u>\$ 186</u>	Fair value of property or collateral	Appraised value less 7% selling cost	N/A (2)	N/A (2)

(1) Represent percent of outstanding principal balance.

(2) N/A - Not applicable. There is one asset in each fair value measurement type.

Significant increases (decreases) in any of those inputs in isolation would result in significantly higher (lower) fair value measurements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Note 17 · Quarterly information (unaudited)

Selected quarterly information was as follows:

(in thousands, except per share amounts)	Quarters ended				Years ended
	March 31	June 30	Sept. 30	Dec. 31	December 31
HEI consolidated					
2019					
Revenues	\$ 661,615	\$ 715,485	\$ 771,535	\$ 725,966	\$ 2,874,601
Operating income ¹	77,937	72,634	97,308	100,795	348,674
Net income ¹	46,161	42,985	63,890	66,736	219,772
Net income for common stock ¹	45,688	42,512	63,419	66,263	217,882
Basic earnings per common share ^{1,2}	0.42	0.39	0.58	0.61	2.00
Diluted earnings per common share ^{1,3}	0.42	0.39	0.58	0.61	1.99
Dividends per common share	0.32	0.32	0.32	0.32	1.28
2018					
Revenues	\$ 645,874	\$ 685,277	\$ 768,048	\$ 761,650	\$ 2,860,849
Operating income	71,889	78,799	98,064	84,604	333,356
Net income	40,720	46,527	66,371	50,046	203,664
Net income for common stock	40,247	46,054	65,900	49,573	201,774
Basic earnings per common share ²	0.37	0.42	0.61	0.46	1.85
Diluted earnings per common share ³	0.37	0.42	0.60	0.45	1.85
Dividends per common share	0.31	0.31	0.31	0.31	1.24
Hawaiian Electric consolidated					
2019					
Revenues	\$ 578,495	\$ 633,784	\$ 688,330	\$ 645,333	\$ 2,545,942
Operating income	56,560	55,694	71,793	70,331	254,378
Net income	32,625	33,073	47,277	45,860	158,835
Net income for common stock	32,126	32,574	46,779	45,361	156,840
2018					
Revenues	\$ 570,427	\$ 608,126	\$ 687,409	\$ 680,563	2,546,525
Operating income	51,369	55,144	74,036	61,112	241,661
Net income	27,974	31,668	50,210	35,796	145,648
Net income for common stock	27,475	31,169	49,712	35,297	143,653

Note: HEI owns all of Hawaiian Electric's common stock, therefore per share data for Hawaiian Electric is not meaningful.

¹ Operating income for the fourth quarter of 2019 includes gains on property sales totaling \$10.8 million, and net income and net income for common stock includes \$7.9 million (or \$0.07 per share (basic and diluted) at ASB's 26.8% statutory tax rate).

² The quarterly basic earnings per common share are based upon the weighted-average number of shares of common stock outstanding in each quarter.

³ The quarterly diluted earnings per common share are based upon the weighted-average number of shares of common stock outstanding in each quarter plus the dilutive incremental shares at quarter end.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

HEI and Hawaiian Electric: None

ITEM 9A. CONTROLS AND PROCEDURES

HEI:

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Constance H. Lau, HEI Chief Executive Officer (CEO), and Gregory C. Hazelton, HEI Chief Financial Officer (CFO), have evaluated the disclosure controls and procedures of HEI as of December 31, 2019. Based on their evaluation, as of December 31, 2019, they have concluded that the disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) were effective in ensuring that information required to be disclosed by HEI in reports HEI files or submits under the Securities Exchange Act of 1934:

- (1) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission rules and forms, and
- (2) is accumulated and communicated to HEI management, including HEI's CEO and CFO, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) and Rule 15d-15(f) promulgated under the Securities Exchange Act of 1934, as amended. The Company's internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2019 based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2019.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2019 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in its report which appears herein.

Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Hawaiian Electric:

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Scott W. H. Seu, Hawaiian Electric CEO, and Tayne S. Y. Sekimura, Hawaiian Electric CFO, have evaluated the disclosure controls and procedures of Hawaiian Electric as of December 31, 2019. Based on their evaluation, as of December 31, 2019, they have concluded that the disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) were effective in ensuring that information required to be disclosed by Hawaiian Electric in reports Hawaiian Electric files or submits under the Securities Exchange Act of 1934:

- (1) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission rules and forms, and
- (2) is accumulated and communicated to Hawaiian Electric management, including Hawaiian Electric's CEO and CFO, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management’s Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) and Rule 15d-15(f) promulgated under the Securities Exchange Act of 1934, as amended. Hawaiian Electric’s internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the effectiveness of Hawaiian Electric’s internal control over financial reporting as of December 31, 2019 based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO. Based on this evaluation, management has concluded that Hawaiian Electric’s internal control over financial reporting was effective as of December 31, 2019.

Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, Hawaiian Electric’s internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

HEI and Hawaiian Electric: None

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

HEI:

Information regarding HEI’s executive officers is provided in the “Information about our Executive Officers” section following Item 4 of this report.

The remaining information required by this Item 10 for HEI is incorporated herein by reference to the following sections in HEI’s 2020 Proxy Statement:

- “Nominees for three Class III directors whose terms expire at the 2023 Annual Meeting”
- “Nominee for one Class I director whose term expires at the 2021 Annual Meeting”
- “Continuing Class I directors whose terms expire at the 2021 Annual Meeting”
- “Continuing Class II directors whose terms expire at the 2022 Annual Meeting”
- “Committees of the Board” (portions regarding whether HEI has an audit & risk committee and identifying its members; no other portion of the Committees of the Board section is incorporated herein by reference)
- “Audit & Risk Committee Report” (portion identifying audit & risk committee financial experts who serve on the HEI Audit & Risk Committee only; no other portion of the Audit & Risk Committee Report is incorporated herein by reference)

Family relationships; director arrangements

There are no family relationships between any HEI director or director nominee and any other HEI director or director nominee or any HEI executive officer. There are no arrangements or understandings between any HEI director or director nominee and any other person pursuant to which such director or director nominee was selected. Information required to be reported under this caption is incorporated herein by reference to the “Other relationships and related person transactions” section in HEI’s 2020 Proxy Statement.

Delinquent Section 16(a) reports

Information required to be reported under this caption is incorporated herein by reference to the “Delinquent Section 16 (a) Reports” section in HEI’s 2020 Proxy Statement.

Code of Conduct

HEI has a Corporate Code of Conduct that includes a code of ethics applicable to, among others, its principal executive officer, principal financial officer and principal accounting officer. The Corporate Code of Conduct is available on HEI's website at www.hei.com. HEI intends to disclose the information required by Form 8-K, Item 5.05, "Amendments to the Registrant's Code of Ethics, or Waiver of a Provision of the Code of Ethics," through this website and such information will remain available on this website for at least a 12-month period.

Hawaiian Electric:

The information required by this Item 10 for Hawaiian Electric is incorporated herein by reference to pages 1 to 5 of Hawaiian Electric Exhibit 99.1.

ITEM 11. EXECUTIVE COMPENSATION

HEI:

The information required by this Item 11 for HEI is incorporated herein by reference to the information relating to executive and director compensation in HEI's 2020 Proxy Statement.

Hawaiian Electric:

The information required by this Item 11 for Hawaiian Electric is incorporated herein by reference to:

- Pages 6 to 31 of Hawaiian Electric Exhibit 99.1 to this Form 10-K;
- The discussion of "2018-20 Long-Term Incentive Plan" at pages 15-16 of Hawaiian Electric's Exhibit 99.1 to Annual Report on Form 10-K for the year ended December 31, 2017; and
- Information concerning compensation paid to directors of Hawaiian Electric who are also directors of HEI under the section of HEI's 2020 Proxy Statement entitled, "Director Compensation."

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

HEI:

The information required to be reported under this caption for HEI is incorporated herein by reference to the "Compensation Committee Interlocks and Insider Participation" section in HEI's 2020 Proxy Statement.

Hawaiian Electric:

The information required to be reported under this caption for Hawaiian Electric is incorporated herein by reference to page 21 of Hawaiian Electric Exhibit 99.1.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

HEI:

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

The information required by this Item 12 for HEI is incorporated herein by reference to the “Stock Ownership Information-Security Ownership of Certain Beneficial Owners” section in HEI’s 2020 Proxy Statement.

Equity Compensation Plan Information

Information as of December 31, 2019 about HEI Common Stock that may be issued under all of the Company’s equity compensation plans was as follows:

Plan category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights (1)	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (2)
Equity compensation plans approved by shareholders	706,851	\$ —	2,759,090
Equity compensation plans not approved by shareholders	—	—	—
Total	706,851	\$ —	2,759,090

- (1) This column includes the number of shares of HEI Common Stock which may be issued under the Revised and Amended HEI 2010 Equity Incentive Plan (amended EIP) on account of awards outstanding as of December 31, 2019, including:

EIP

158,649	Restricted stock units plus estimated compounded dividend equivalents (if applicable) *
548,202	Shares to be issued in February 2020, 2021 and 2022 under the 2017-2019, 2018-2020 and 2019-2021 LTIPs, respectively, plus compounded dividend equivalents
<u>706,851</u>	

* Under the amended EIP as of December 31, 2019, RSUs count as one share against shares available for issuance less estimated shares withheld for taxes under net share settlement which again become available for the issuance of new shares on a one-to-one basis.

- (2) This represents the number of shares available as of December 31, 2019 for future awards, including 2,448,827 shares available for future awards under the amended EIP and 310,263 shares available for future awards under the 2011 Nonemployee Director Plan.

Hawaiian Electric:

The information required by this Item 12 for Hawaiian Electric is incorporated herein by reference to pages 31 to 32 of Hawaiian Electric Exhibit 99.1.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

HEI:

The information required by this Item 13 for HEI is incorporated herein by reference to the sections relating to related person transactions and director independence in HEI’s 2020 Proxy Statement.

Hawaiian Electric:

The information required by this Item 13 for Hawaiian Electric is incorporated herein by reference to pages 32 to 33 of Hawaiian Electric Exhibit 99.1.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

HEI:

The information required by this Item 14 for HEI is incorporated herein by reference to the relevant information in the Audit & Risk Committee Report in HEI's 2020 Proxy Statement (but no other part of the "Audit & Risk Committee Report" is incorporated herein by reference).

Hawaiian Electric:

The information required by this Item 14 for Hawaiian Electric is incorporated herein by reference to page 34 of Hawaiian Electric Exhibit 99.1.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) Financial statements

See Item 8 for the Consolidated Financial Statements of HEI and Hawaiian Electric.

(a)(2) and (c) Financial statement schedules

The following financial statement schedules for HEI and Hawaiian Electric are included in this report on the pages indicated below:

		<u>Page/s in Form 10-K</u>	
		<u>HEI</u>	<u>Hawaiian Electric</u>
Schedule I	Condensed Financial Information of Registrant, Hawaiian Electric Industries, Inc. (Parent Company) at December 31, 2019 and 2018 and for the years ended December 31, 2019, 2018 and 2017	171-173	NA
Schedule II	Valuation and Qualifying Accounts, Hawaiian Electric Industries, Inc. and subsidiaries and Hawaiian Electric Company, Inc. and subsidiaries for the years ended December 31, 2019, 2018 and 2017	175	175
NA Not applicable.			

Certain schedules, other than those listed, are omitted because they are not required, or are not applicable, or the required information is shown in the Consolidated Financial Statements.

ITEM 16. FORM 10-K SUMMARY

None.

Hawaiian Electric Industries, Inc.
SCHEDULE I — CONDENSED FINANCIAL INFORMATION OF REGISTRANT
HAWAIIAN ELECTRIC INDUSTRIES, INC. (PARENT COMPANY)
CONDENSED BALANCE SHEETS

December 31	2019	2018
(dollars in thousands)		
Assets		
Cash and cash equivalents	\$ 953	\$ 3,742
Accounts receivable	779	2,604
Notes receivable from subsidiaries	22,598	20,789
Property, plant and equipment, net	2,931	3,456
Deferred income tax assets	10,754	10,147
Other assets and intercompany receivables	21,770	11,963
Investments in subsidiaries, at equity	2,761,802	2,605,038
Total assets	\$ 2,821,587	\$ 2,657,739
Liabilities and shareholders' equity		
Liabilities		
Accounts payable	\$ 1,509	\$ 2,001
Interest payable	3,041	3,476
Notes payable to subsidiaries	—	34
Commercial paper	96,723	48,992
Long-term debt, net	399,064	398,874
Retirement benefits liability	29,367	29,565
Other	11,623	12,517
Total liabilities	541,327	495,459
Shareholders' equity		
Preferred stock, no par value, authorized 10,000,000 shares; issued: none	—	—
Common stock, no par value, authorized 200,000,000 shares; issued and outstanding: 108,973,328 shares and 108,879,245 shares at December 31, 2019 and 2018, respectively	1,678,257	1,669,267
Retained earnings	622,042	543,623
Accumulated other comprehensive loss	(20,039)	(50,610)
Total shareholders' equity	2,280,260	2,162,280
Total liabilities and shareholders' equity	\$ 2,821,587	\$ 2,657,739

Hawaiian Electric Industries, Inc.
SCHEDULE I — CONDENSED FINANCIAL INFORMATION OF REGISTRANT (continued)
HAWAIIAN ELECTRIC INDUSTRIES, INC. (PARENT COMPANY)
CONDENSED STATEMENTS OF INCOME

Years ended December 31 (in thousands)	2019	2018	2017
Revenues	\$ 777	\$ 429	\$ 798
Equity in net income of subsidiaries	246,005	226,972	187,097
Expenses:			
Operating, administrative and general	19,195	19,515	16,578
Depreciation of property, plant and equipment	570	597	548
Taxes, other than income taxes	570	509	496
Total expenses	20,335	20,621	17,622
Income before interest expense and income (taxes) benefits	226,447	206,780	170,273
Retirement defined benefits expense—other than service costs	442	674	1,119
Interest expense	17,930	12,664	9,389
Income before income benefits	208,075	193,442	159,765
Income benefits	9,807	8,332	5,532
Net income	\$ 217,882	\$ 201,774	\$ 165,297

HAWAIIAN ELECTRIC INDUSTRIES, INC. (PARENT COMPANY)
STATEMENTS OF COMPREHENSIVE INCOME
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

Incorporated by reference are HEI and Subsidiaries' Statements of Consolidated Comprehensive Income and Consolidated Statements of Changes in Shareholders' Equity in Part II, Item 8.

Hawaiian Electric Industries, Inc.
SCHEDULE I — CONDENSED FINANCIAL INFORMATION OF REGISTRANT (continued)
HAWAIIAN ELECTRIC INDUSTRIES, INC. (PARENT COMPANY)
CONDENSED STATEMENTS OF CASH FLOWS

Years ended December 31 (in thousands)	2019	2018	2017
Net cash provided by operating activities	\$ 131,120	\$ 135,470	\$ 99,600
Cash flows from investing activities			
Increase in note receivable from subsidiary	(1,187)	(20,596)	(70,000)
Decrease in note receivable from subsidiary	—	—	66,391
Capital expenditures	(47)	(143)	(317)
Investments in subsidiaries	(38,935)	(71,970)	(22,353)
Other	(1,001)	140	(177)
Net cash used in investing activities	(41,170)	(92,569)	(26,456)
Cash flows from financing activities			
Net increase (decrease) in notes payable to subsidiaries with original maturities of three months or less	—	(30)	98
Net increase (decrease) in short-term borrowings with original maturities of three months or less	47,731	(14,000)	62,993
Proceeds from issuance of short-term debt	—	—	125,000
Repayment of short-term debt	—	(50,000)	(75,000)
Proceeds from issuance of long-term debt	—	150,000	150,000
Repayment of long-term debt	—	—	(200,000)
Withheld shares for employee taxes on vested share-based compensation	(997)	(996)	(3,828)
Common stock dividends	(139,463)	(134,987)	(134,873)
Other	(10)	(848)	(756)
Net cash used in financing activities	(92,739)	(50,861)	(76,366)
Net decrease in cash and equivalents	(2,789)	(7,960)	(3,222)
Cash and cash equivalents, January 1	3,742	11,702	14,924
Cash and cash equivalents, December 31	\$ 953	\$ 3,742	\$ 11,702

NOTES TO CONDENSED FINANCIAL INFORMATION

Basis of Presentation

The “Notes to Consolidated Financial Statements” in Part II, Item 8 should be read in conjunction with the above HEI (Parent Company) financial statements. All HEI subsidiaries are reflected in the Condensed Financial Statements under the equity method. Income taxes for equity method investments are included in “Equity in net income of subsidiaries.”

Long-term debt

The components of long-term debt, net, were as follows:

December 31	2019		2018	
(dollars in thousands)				
HEI 2.99% term loan, due 2022	\$	150,000	\$	150,000
HEI 5.67% senior note, due 2021		50,000		50,000
HEI 3.99% senior note, due 2023		50,000		50,000
HEI 4.58% senior notes, due 2025		50,000		50,000
HEI 4.72% senior notes, due 2028		100,000		100,000
Less unamortized debt issuance costs		(936)		(1,126)
Long-term debt, net	\$	399,064	\$	398,874

The aggregate payments of principal required within five years after December 31, 2019 on long-term debt are nil in 2020, \$50 million in 2021, \$150 million in 2022, \$50 million in 2023, nil for 2024, and \$150 million thereafter.

Indemnities

As of December 31, 2019, HEI has a General Agreement of Indemnity in favor of both Liberty Mutual Insurance Company (Liberty) and Travelers Casualty and Surety Company of America (Travelers) for losses in connection with any and all bonds, undertakings or instruments of guarantee and any renewals or extensions thereof executed by Liberty or Travelers, including, but not limited to, a \$0.6 million self-insured United States Longshore & Harbor bond and a \$0.7 million self-insured automobile bond.

Income taxes

The Company’s financial reporting policy for income tax allocations is based upon a separate entity concept whereby each subsidiary provides income tax expense (or benefits) as if each were a separate taxable entity. The difference between the aggregate separate tax return income tax provisions and the consolidated financial reporting income tax provision is charged or credited to HEI’s separate tax provision.

Dividends from HEI subsidiaries

In 2019, 2018 and 2017, cash dividends received from subsidiaries were \$157 million, \$154 million and \$125 million, respectively.

Supplemental disclosures of noncash activities

In 2019, 2018 and 2017, \$2.3 million, \$2.3 million and \$2.8 million, respectively, of HEI accounts receivable from ASB Hawaii were reduced with a corresponding reduction in HEI notes payable to ASB Hawaii in noncash transactions.

In 2019, 2018 and 2017, \$2.3 million, \$2.3 million and \$2.8 million, respectively, were contributed as equity by HEI into ASB Hawaii with a corresponding increase in HEI notes payable to ASB Hawaii in noncash transactions.

In 2017, \$3.6 million of HEI notes receivable from Hamakua Energy, LLC were converted to equity in a noncash transaction.

Under the HEI DRIP, common stock dividends reinvested by shareholders in HEI common stock in noncash transactions was immaterial for 2019, 2018 and 2017 as HEI satisfied the share purchase requirements of the DRIP in 2019, 2018 and 2017 through open market purchases of its common stock rather than new issuances.

Hawaiian Electric Industries, Inc. and subsidiaries
and Hawaiian Electric Company, Inc. and subsidiaries
SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS
Years ended December 31, 2019, 2018 and 2017

Col. A	Col. B	Col. C		Col. D	Col. E
(in thousands)	Additions				
Description	Balance at beginning of period	Charged to costs and expenses	Charged to other accounts	Deductions	Balance at end of period
2019					
Allowance for uncollectible accounts – electric utility	\$ 1,480	\$ 2,106	\$ 795 (a)	\$ 3,004 (b)	\$ 1,377
Allowance for uncollectible interest – bank	\$ 373	\$ —	\$ (99)	\$ —	\$ 274
Allowance for losses for loans – bank	\$ 52,119	\$ 23,480 (c)	\$ 6,418 (a)	\$ 28,662 (b)	\$ 53,355
2018					
Allowance for uncollectible accounts – electric utility	\$ 1,178	\$ 2,474	\$ (4,099) (a), (d)	\$ (1,927) (b), (d)	\$ 1,480
Allowance for uncollectible interest – bank	\$ 367	\$ —	\$ 6	\$ —	\$ 373
Allowance for losses for loans – bank	\$ 53,637	\$ 14,745 (c)	\$ 4,254 (a)	\$ 20,517 (b)	\$ 52,119
2017					
Allowance for uncollectible accounts – electric utility	\$ 1,121	\$ 1,810	\$ 785 (a)	\$ 2,538 (b), (d)	\$ 1,178
Allowance for uncollectible interest – bank	\$ 1,834	\$ —	\$ —	\$ 1,467	\$ 367
Allowance for losses for loans – bank	\$ 55,533	\$ 10,901 (c)	\$ 4,016 (a)	\$ 16,813 (b)	\$ 53,637
Deferred tax valuation allowance – HEI	\$ 38	\$ —	\$ —	\$ 38	\$ —

(a) Primarily recoveries.

(b) Bad debts charged off.

(c) Represents provision for loan losses.

(d) Reclass (reversal) of allowance for one customer account into other long term assets in 2018 and 2017 were \$(4,934), and \$841, respectively.

(a)(3) and (b) Exhibits

The exhibits listed for HEI and Hawaiian Electric are listed in the index under the headings “HEI” and “Hawaiian Electric,” respectively, except that the exhibits listed under “Hawaiian Electric” are also exhibits for HEI.

EXHIBIT INDEX

The exhibits designated by an asterisk (*) are filed herewith. The exhibits not so designated are incorporated by reference to the indicated filing. A copy of any exhibit may be obtained upon written request for a \$0.20 per page charge from the HEI Shareholder Services Division, P.O. Box 730, Honolulu, Hawaii 96808-0730.

<u>Exhibit no.</u>	<u>Description</u>	<u>Form</u>	<u>File Number</u>	<u>Exhibit #</u>	<u>Filing date</u>
<u>HEI:</u>					
3(i)	HEI’s Amended and Restated Articles of Incorporation.	8-K	1-8503	3(i)	5/6/09
3(ii)	Amended and Restated Bylaws of HEI effective February 14, 2019.	8-K	1-8503	3.1	2/19/19
* 4	Description of HEI Common Stock				
4.1	Agreement to provide the SEC with instruments which define the rights of holders of certain long-term debt of HEI and its subsidiaries.	10-K	1-8503	4.1	3/31/93
4.2	Master Note Purchase Agreement among HEI and the Purchasers thereto, dated March 24, 2011.	8-K	1-8503	4(a)	3/28/11
4.2(a)	First Supplement to Note Purchase Agreement among HEI and the Purchasers thereto, dated March 6, 2013.	8-K	1-8503	4(a)	3/6/13
4.3	Hawaiian Electric Industries Retirement Savings Plan, restatement effective January 1, 2013.	10-K	1-8503	4.5	2/19/13
4.3(a)	Amendment 2014-1 to Hawaiian Electric Industries Retirement Savings Plan, effective as of January 1, 2015	S-8	333-232360	4.4	6/26/19
4.3(b)	Amendment 2015-1 to Hawaiian Electric Industries Retirement Savings Plan, effective as of February 1, 2015	S-8	333-232360	4.5	6/26/19
4.3(c)	Amendment 2015-2 to Hawaiian Electric Industries Retirement Savings Plan, effective as of February 1, 2015	S-8	333-232360	4.6	6/26/19
4.3(d)	Amendment 2019-1 to Hawaiian Electric Industries Retirement Savings Plan, effective as of May 6, 2019	S-8	333-232360	4.7	6/26/19
* 4.3(e)	Amendment 2019-1 to the Hawaiian Electric Industries Retirement Savings Plan, effective as of May 6, 2019				
4.3(f)	Amendment 2019-2 to the Hawaiian Electric Industries Retirement Savings Plan, effective as of August 1, 2019	10-Q	1-8503	4.2	11/1/19
4.4	Master Trust Agreement dated as of September 4, 2012 between HEI and ASB and Fidelity Management Trust Company, as Trustee	10-Q	1-8503	4	11/8/12
4.4(a)	Letter Amendment effective November 28, 2012 to Master Trust Agreement dated as of September 4, 2012 between HEI and ASB and Fidelity Management Trust Company.	10-K	1-8503	4.6(a)	2/19/13
4.4(b)	Letter Amendment effective October 1, 2014 to Master Trust Agreement dated as of September 4, 2012 between HEI and ASB and Fidelity Management Trust Company.	10-Q	1-8503	4	11/6/14
4.4(c)	First Amendment to Master Trust Agreement (dated as of September 4, 2012) effective March 1, 2015 between HEI and ASB and Fidelity Management Trust Company.	10-Q	1-8503	4	5/6/15
4.4(d)	Letter Amendment effective August 3, 2015 to Master Trust Agreement (dated as of September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.	10-K	1-8503	4.4(d)	3/1/18
4.4(e)	Letter Amendment effective August 15, 2017 to Master Trust Agreement (dated September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.	10-Q	1-8503	4	11/2/17
4.4(f)	Second Amendment effective January 1, 2018 to Master Trust Agreement (dated September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.	10-K	1-8503	4.4(f)	3/1/18
4.4(g)	Letter of Direction effective January 2, 2018 to Master Trust Agreement (dated September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.	10-K	1-8503	4.4(g)	3/1/18

<u>Exhibit no.</u>	<u>Description</u>	<u>Form</u>	<u>File Number</u>	<u>Exhibit #</u>	<u>Filing date</u>
4.4(h)	Third Amendment effective July 1, 2018 to Master Trust Agreement (dated September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.	10-Q	1-8503	4	8/3/18
4.4(i)	Fourth Amendment effective June 26, 2019 to Master Trust Agreement (dated September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.	S-8	333-232360	4.15	6/26/19
* 4.4(j)	Letter Amendment effective November 1, 2019 to Master Trust Agreement (dated September 4, 2012) between HEI and ASB and Fidelity Management Trust Company.				
4.5	Hawaiian Electric Industries, Inc. Dividend Reinvestment and Stock Purchase Plan, as amended and restated effective October 5, 2017.	S-3	333-220842	4.3	10/5/17
4.5(a)	Hawaiian Electric Industries, Inc. Dividend Reinvestment and Stock Purchase Plan, as amended and restated.	S-3	333-234591	4.3	11/8/19
4.6	American Savings Bank 401(k) Plan, restatement effective January 1, 2013.	10-K	1-8503	4.8	2/19/13
4.6(a)	Amendment 2013-1 to the American Savings Bank 401(k) Plan, effective January 1, 2014.	10-K	1-8503	4.7(a)	2/23/16
4.6(b)	Amendment 2019-1 to the American Savings Bank 401(k) Plan, effective as of May 6, 2019.	S-8	333-232361	4.5	6/26/19
* 4.6(c)	Amendment 2020-1 to the American Savings Bank 401(k) Plan, effective as of January 1, 2020.				
10.1	Conditions for the Merger and Corporate Restructuring of Hawaiian Electric Company, Inc. dated September 23, 1982.	10-K	1-8503	10.1	2/28/07
10.2	Regulatory Capital Maintenance/Dividend Agreement dated May 26, 1988, between HEI, HEIDI and the Federal Savings and Loan Insurance Corporation (by the Federal Home Loan Bank of Seattle).	8-K	1-8503	(28)-2	5/26/88**
10.3	OTS letter regarding release from Part II.B. of the Regulatory Capital Maintenance/Dividend Agreement dated May 26, 1988.	10-K	1-8503	10.3(a)	3/31/93

HEI Exhibits 10.4 through 10.21 are management contracts or compensatory plans or arrangements required to be filed as exhibits pursuant to Item 15(b) of this report. HEI Exhibits 10.4 through 10.19 are also management contracts or compensatory plans or arrangements with Hawaiian Electric participants.

10.4	HEI Executive Incentive Compensation Plan amended as of February 4, 2013.	10-K	1-8503	10.4	2/19/13
10.5	HEI Executives' Deferred Compensation Plan amended and restated effective January 1, 2019.	10-K	1-8503	10.5	2/28/19
10.6	Hawaiian Electric Industries, Inc. 2010 Equity and Incentive Plan, as amended and restated November 16, 2010.	10-K	1-8503	10.6	2/18/11
10.7	Hawaiian Electric Industries, Inc. 2010 Equity and Incentive Plan, as amended and restated February 14, 2014.	Proxy (DEF 14A)	1-8503	Appendix D	3/25/14
10.7(a)	Form of Non-Qualified Stock Option Agreement pursuant to 2010 Equity and Incentive Plan.	S-8	333-166737	4.4	5/11/10
10.7(b)	Form of Stock Appreciation Right Agreement pursuant to 2010 Equity and Incentive Plan.	S-8	333-166737	4.5	5/11/10
10.7(c)	Form of Restricted Shares Agreement pursuant to 2010 Equity and Incentive Plan.	S-8	333-166737	4.6	5/11/10
10.7(d)	Form of Performance Shares Agreement pursuant to 2010 Equity and Incentive Plan.	S-8	333-166737	4.7	5/11/10
10.7(e)	Form of Restricted Stock Unit Agreement, amended as of December 15, 2016, pursuant to 2010 Equity and Incentive Plan, as amended and restated February 14, 2014.	10-K	1-8503	10.7(e)	2/24/17
10.8	HEI Long-Term Incentive Plan amended as of February 4, 2013.	10-K	1-8503	10.8	2/19/13
10.9	HEI Supplemental Executive Retirement Plan amended and restated as of January 1, 2009.	10-Q	1-8503	10.3	11/5/08
10.9(a)	Amendments to the HEI Supplemental Executive Retirement Plan Freezing Benefit Accruals Effective December 31, 2008.	10-K	1-8503	10.9(a)	2/27/09
10.10	HEI Excess Pay Plan amended and restated as of January 1, 2009.	10-K	1-8503	10.10	2/27/09
10.10(a)	HEI Excess Pay Plan Addendum for Constance H. Lau.	10-K	1-8503	10.10(a)	2/27/09

<u>Exhibit no.</u>	<u>Description</u>	<u>Form</u>	<u>File Number</u>	<u>Exhibit #</u>	<u>Filing date</u>
10.10(b)	Amendment No. 1 dated December 13, 2010 to January 1, 2009 Restatement of HEI Excess Pay Plan.	10-K	1-8503	10.10(c)	2/19/13
10.11	Form of Change in Control Agreement.	10-K	1-8503	10.11	2/27/09
10.12	Nonemployee Director Retirement Plan, effective as of October 1, 1989.	10-K	1-8503	10.15	3/27/90**
* 10.13	HEI 2011 Nonemployee Director Stock Plan, as amended effective October 31, 2019.				
10.14	Nonemployee Director's Compensation Schedule effective January 1, 2019.	10-K	1-8503	10.5	2/28/19
10.15	HEI Non-Employee Directors' Deferred Compensation Plan.	10-Q	1-8503	10.5	11/5/08
10.16	Executive Death Benefit Plan of HEI and Participating Subsidiaries restatement effective as of January 1, 2009.	10-Q	1-8503	10.6	11/5/08
10.16(a)	Resolution of the Compensation Committee of the Board of Directors of Hawaiian Electric Industries, Inc. Re: Adoption of Amendment No. 1 to January 1, 2009 Restatement of the Executive Death Benefit Plan.	10-Q	1-8503	10.1	11/5/09
10.17	Amended and Restated Severance Pay Plan for Management Employees of Hawaiian Electric Industries, Inc. and Executive Employees of Affiliates, effective as of April 2, 2018.	10-Q	1-8503	10	8/3/18
10.18	Hawaiian Electric Industries, Inc. Executives' Deferred Compensation Plan effective on January 1, 2009.	10-Q	1-8503	10.2	11/5/08
10.19	Form of Indemnity Agreement (HEI, Hawaiian Electric and ASB with their respective directors and HEI with certain of its senior officers).	10-Q	1-8503	10.1	11/8/12
10.20	American Savings Bank Select Deferred Compensation Plan (Restatement Effective January 1, 2009).	10-Q	1-8503	10.7	11/5/08
10.20(a)	Amendment No. 1 to January 1, 2009 Restatement of American Savings Bank Select Deferred Compensation Plan dated December 30, 2009.	10-K	1-8503	10.20(a)	2/23/16
10.20(b)	Amendment No. 2 to January 1, 2009 Restatement of American Savings Bank Select Deferred Compensation Plan dated December 29, 2010.	10-K	1-8503	10.20(b)	2/23/16
10.20(c)	Amendment No. 3 to January 1, 2009 Restatement of American Savings Bank Select Deferred Compensation Plan dated December 3, 2014.	10-K	1-8503	10.20(c)	2/23/16
10.20(d)	Amendment No. 4 to January 1, 2009 Restatement of American Savings Bank Select Deferred Compensation Plan dated December 4, 2017.	10-K	1-8503	10.20(d)	3/1/18
* 10.20(e)	Amendment No. 5 to January 1, 2009 Restatement of American Savings Bank Select Deferred Compensation Plan dated December 5, 2018.				
10.21	American Savings Bank Supplemental Executive Retirement, Disability, and Death Benefit Plan, effective January 1, 2009.	10-Q	1-8503	10.8	11/5/08
10.21(a)	Amendments to the American Savings Bank Supplemental Executive Retirement, Disability, and Death Benefit Plan Freezing Benefit Accruals Effective December 31, 2008.	10-K	1-8503	10.19(b)	2/27/09
10.22	Second Amended and Restated Credit Agreement, dated as of June 30, 2017, among HEI, as Borrower, the Lenders Party Thereto and Wells Fargo Bank, National Association, as Syndication Agent, and Bank of America, N.A., MUFG Union Bank, N.A., Barclays Bank PLC, U.S. Bank National Association and Bank of Hawaii as Co-Documentation Agents, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swingline Lender and Issuing Bank, and JPMorgan Chase Bank, N.A. and Wells Fargo Securities, LLC, as Joint Lead Arrangers and Joint Book Runners.	10-Q	1-8503	10.1	8/3/17
* 11	HEI - Computation of Earnings per Share of Common Stock.				
* 21.1	HEI - Subsidiaries of the Registrant.				
* 23.1	Consent of Independent Registered Public Accounting Firm (Deloitte & Touche LLP).				
* 31.1	Certification Pursuant to Section 13a-14 of the Securities Exchange Act of 1934 of Constance H. Lau (HEI Chief Executive Officer).				
* 31.2	Certification Pursuant to Section 13a-14 of the Securities Exchange Act of 1934 of Gregory C. Hazelton (HEI Chief Financial Officer).				
* 32.1	HEI Certification Pursuant to 18 U.S.C. Section 1350.				
* 101.INS	XBRL Instance Document.				
* 101.SCH	XBRL Taxonomy Extension Schema Document.				
* 101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.				
* 101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.				

<u>Exhibit no.</u>	<u>Description</u>	<u>Form</u>	<u>File Number</u>	<u>Exhibit #</u>	<u>Filing date</u>
* 101.LAB	XBRL Taxonomy Extension Label Linkbase Document.				
* 101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				
Hawaiian Electric:					
3(i).1	Hawaiian Electric's Certificate of Amendment of Articles of Incorporation.	10-K	1-4955	3.1	3/31/89
3(i).2	Articles of Amendment to Hawaiian Electric's Amended Articles of Incorporation.	10-K	1-4955	3.1(b)	3/27/90**
3(i).3	Articles of Amendment to Hawaiian Electric's Amended Articles of Incorporation.	10-K	1-4955	3(i).4	3/23/99
3(i).4	Articles of Amendment amending Article V of Hawaiian Electric's Amended Articles of Incorporation effective August 6, 2009.	10-Q	1-4955	3(i).4	8/7/09
3(ii)	Hawaiian Electric's Amended and Restated Bylaws (as last amended August 6, 2010).	8-K	1-4955	3(ii)	8/9/10
* 4	Description of Hawaiian Electric's Preferred Stock				
4.1	Agreement to provide the SEC with instruments which define the rights of holders of certain long-term debt of Hawaiian Electric, Hawaii Electric Light and Maui Electric	10-K	1-4955	4.1	3/19/03
4.2	Note Purchase Agreement among Hawaiian Electric and the Purchasers that are parties thereto, dated April 19, 2012.	8-K	1-4955	4(a)	4/23/12
4.3	Note Purchase and Guaranty Agreement among Hawaiian Electric, Maui Electric and the Purchasers that are parties thereto, dated April 19, 2012.	8-K	1-4955	4(b)	4/23/12
4.4	Note Purchase and Guaranty Agreement among Hawaiian Electric, Hawaii Electric Light and the Purchasers that are parties thereto, dated April 19, 2012.	8-K	1-4955	4(c)	4/23/12
4.5	Note Purchase Agreement among Hawaiian Electric and the Purchasers that are parties thereto, dated September 13, 2012.	8-K	1-4955	4	9/14/12
4.6	Note Purchase Agreement among Hawaiian Electric Company, Inc. and the Purchasers that are parties thereto, dated as of October 3, 2013.	8-K	1-4955	4(a)	10/7/13
4.7	Note Purchase and Guaranty Agreement among Hawaiian Electric, Maui Electric Company, Limited and the Purchasers that are parties thereto, dated as of October 3, 2013.	8-K	1-4955	4(b)	10/7/13
4.8	Note Purchase and Guaranty Agreement among Hawaiian Electric, Hawaii Electric Light Company, Inc. and the Purchasers that are parties thereto, dated as of October 3, 2013.	10-Q	1-4955	4	11/7/13
4.9	Note Purchase Agreement among Hawaiian Electric Company, Inc. and the Purchasers that are parties thereto, dated as of October 15, 2015.	8-K	1-4955	4(a)	10/16/15
4.10	Note Purchase and Guaranty Agreement among Hawaiian Electric, Maui Electric Company, Limited and the Purchasers that are parties thereto, dated as of October 15, 2015.	8-K	1-4955	4(b)	10/16/15
4.11	Note Purchase and Guaranty Agreement among Hawaiian Electric, Hawaii Electric Light Company, Inc. and the Purchasers that are parties thereto, dated as of October 15, 2015.	8-K	1-4955	4(c)	10/16/15
4.12	Note Purchase Agreement among Hawaiian Electric Company, Inc. and the Purchasers that are parties thereto, dated as of December 15, 2016.	8-K	1-4955	4	12/19/16
10.1(a)	Power Purchase Agreement between Kalaeloa Partners, L.P., and Hawaiian Electric dated October 14, 1988.	10-Q	1-4955	10(a)	11/14/88
10.1(b)	Amendment No. 1 to Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated June 15, 1989.	10-Q	1-4955	10(c)	8/14/89
10.1(c)	Lease Agreement between Kalaeloa Partners, L.P., as Lessor, and Hawaiian Electric, as Lessee, dated February 27, 1989.	10-Q	1-4955	10(d)	8/14/89
10.1(d)	Restated and Amended Amendment No. 2 to Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated February 9, 1990.	10-K	1-4955	10.2(c)	3/27/90**
10.1(e)	Amendment No. 3 to Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated December 10, 1991.	10-K	1-4955	10.2(e)	3/24/92
10.1(f)	Amendment No. 4 to Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated October 1, 1999.	10-Q	1-4955	10.1	11/8/00

<u>Exhibit no.</u>	<u>Description</u>	<u>Form</u>	<u>File Number</u>	<u>Exhibit #</u>	<u>Filing date</u>
10.1(g)	Confirmation Agreement Concerning Section 5.2B(2) of Power Purchase Agreement and Amendment No. 5 to Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated October 12, 2004.	10-Q	1-4955	10.3	11/5/04
10.1(h)	Agreement for Increment Two Capacity and Amendment No. 6 to Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated October 12, 2004.	10-Q	1-4955	10.4	11/5/04
10.1(i)	Letter agreement dated July 28, 2016 and executed August 1, 2016 extending the term of the Power Purchase Agreement between Hawaiian Electric and Kalaeloa Partners, L.P., dated October 14, 1988 (as amended).	10-Q	1-4955	10	11/4/16
10.2(a)	Power Purchase Agreement between AES Barbers Point, Inc. and Hawaiian Electric, entered into on March 25, 1988.	10-Q	1-4955	10(a)	5/16/88
10.2(b)	Agreement between Hawaiian Electric and AES Barbers Point, Inc., pursuant to letters dated May 10, 1988 and April 20, 1988.	10-K	1-4955	10.4	3/31/89
10.2(c)	Amendment No. 1, entered into as of August 28, 1988, to Power Purchase Agreement between AES Barbers Point, Inc. and Hawaiian Electric.	10-Q	1-4955	10	11/13/89
10.2(d)	Hawaiian Electric's Conditional Notice of Acceptance to AES Barbers Point, Inc. dated January 15, 1990.	10-K	1-4955	13(c)	3/27/90**
10.2(e)	Amendment No. 2, entered into as of May 8, 2003, to Power Purchase Agreement between AES Hawaii, Inc. and Hawaiian Electric.	10-K	1-4955	10.2(e)	3/9/04
10.2(f)	Amendment No. 4, entered into as of February 14, 2018, to Power Purchase Agreement between AES Hawaii, Inc. and Hawaiian Electric Company, Inc. (subject to PUC approval).	10-Q	1-4955	10	5/10/18
10.3(a)	Purchase Power Contract between Hawaii Electric Light and Thermal Power Company dated March 24, 1986.	10-Q	1-4955	10(a)	8/14/89
10.3(b)	Firm Capacity Amendment between Hawaii Electric Light and Puna Geothermal Venture (assignee of AMOR VIII, who is the assignee of Thermal Power Company) dated July 28, 1989 to Purchase Power Contract between Hawaii Electric Light and Thermal Power Company dated March 24, 1986.	10-Q	1-4955	10(b)	8/14/89
10.3(c)	Amendment made in October 1993 to Purchase Power Contract between Hawaii Electric Light and Puna Geothermal Venture dated March 24, 1986, as amended.	10-K	1-4955	10.5(b)	3/27/98
10.3(d)	Third Amendment dated March 7, 1995 to the Purchase Power Contract between Hawaii Electric Light and Puna Geothermal Venture dated March 24, 1986, as amended.	10-K	1-4955	10.5(c)	3/27/98
10.3(e)	Performance Agreement and Fourth Amendment dated February 12, 1996 to the Purchase Power Contract between Hawaii Electric Light and Puna Geothermal Venture dated March 24, 1986, as amended.	10-K	1-4955	10.5(b)	3/25/96
10.3(f)	Fifth Amendment dated February 7, 2011 to the Purchase Power Contract between Hawaii Electric Light and Puna Geothermal Venture dated March 24, 1986, as amended.	10-K	1-4955	10.4(f)	2/17/12
10.3(g)	Power Purchase Agreement between Puna Geothermal Venture and Hawaii Electric Light dated February 7, 2011.	10-K	1-4955	10.4(g)	2/17/12
* 10.3(h)	Amended and Restated Power Purchase Agreement between Puna Geothermal Venture and Hawaii Electric Light dated December 31, 2019 (subject to PUC approval).				
10.4(a)	Power Purchase Agreement between Encogen Hawaii, L.P. and Hawaii Electric Light dated October 22, 1997 (but with the following attachments omitted: Attachment C, "Selected portions of the North American Electric Reliability Council Generating Availability Data System Data Reporting Instructions dated October 1996" and Attachment E, "Form of the Interconnection Agreement between Encogen Hawaii, L.P. and Hawaii Electric Light," which is provided in final form as Exhibit 10.6(b)).	10-K	1-4955	10.7	3/27/98
10.4(b)	Interconnection Agreement between Encogen Hawaii, L.P. and Hawaii Electric Light dated October 22, 1997.	10-K	1-4955	10.7(a)	3/27/98
10.4(c)	Amendment No. 1, executed on January 14, 1999, to Power Purchase Agreement between Encogen Hawaii, L.P. and Hawaii Electric Light dated October 22, 1997.	10-K	1-4955	10.7(b)	3/23/99
10.4(d)	Notice and acknowledgment under power purchase agreement effective November 24, 2017 by Hamakua Energy, LLC and acknowledged by Hawaii Electric Light.	10-K	1-4955	10.4(d)	3/1/18

<u>Exhibit no.</u>	<u>Description</u>	<u>Form</u>	<u>File Number</u>	<u>Exhibit #</u>	<u>Filing date</u>
10.5	Supply Contract for Low Sulfur Fuel Oil, High Sulfur Fuel Oil, No. 2 Diesel, and Ultra-Low Sulfur Diesel by and between Hawaiian Electric, Hawaii Electric Light, and Maui Electric and PAR Hawaii Refining, LLC dated January 21, 2019 (certain confidential information has been omitted)	10-Q	1-4955	10	5/7/19
10.6(a)	Contract of private carriage by and between HITI and Hawaii Electric Light dated December 4, 2000.	10-K	1-4955	10.13	3/23/01
10.6(b)	Consent to Change of Ownership/Control of Carrier by and between K-Sea Operating Partnership, L.P., and Hawaii Electric Light, dated July 1, 2011.	10-K	1-4955	10.13(b)	2/19/13
10.7(a)	Contract of private carriage by and between HITI and Maui Electric dated December 4, 2000.	10-K	1-4955	10.14	3/23/01
10.7(b)	Consent to Change of Ownership/Control of Carrier by and between K-Sea Operating Partnership, L.P., and Maui Electric, dated July 1, 2011.	10-K	1-4955	10.14(b)	2/19/13
10.8	Amended and Restated Power Purchase Agreement between Hawaiian Electric and Hu Honua Bioenergy, LLC dated May 9, 2017.	10-K	1-4955	10.11(a)	3/1/18
10.9	Second Amended and Restated Credit Agreement, dated as of June 30, 2017, among Hawaiian Electric Company, Inc., as Borrower, the Lenders Party Hereto and Wells Fargo Bank, National Association, as Syndication Agent, and Bank of America, N.A., MUFG Union Bank, N.A., Barclays Bank PLC, U.S. Bank National Association and Bank of Hawaii as Co-Documentation Agents, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swingline Lender and Issuing Bank, and JPMorgan Chase Bank, N.A. and Wells Fargo Securities, LLC, as Joint Lead Arrangers and Joint Book Runners.	10-Q	1-4955	10.2	8/3/17
11	Computation of Earnings Per Share of Common Stock (See note on Hawaiian Electric's Item 6. Selected Financial Data).				
* 21.2	Hawaiian Electric - Subsidiaries of the Registrant.				
* 31.3	Certification Pursuant to Section 13a-14 of the Securities Exchange Act of 1934 of Scott W. H. Seu (Hawaiian Electric Chief Executive Officer).				
* 31.4	Certification Pursuant to Section 13a-14 of the Securities Exchange Act of 1934 of Tayne S. Y. Sekimura (Hawaiian Electric Chief Financial Officer).				
* 32.2	Hawaiian Electric Certification Pursuant to 18 U.S.C. Section 1350.				
* 99.1	Hawaiian Electric's Directors, Executive Officers and Corporate Governance; Hawaiian Electric's Executive Compensation; Hawaiian Electric's Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters; Hawaiian Electric's Certain Relationships and Related Transactions, and Director Independence; and Hawaiian Electric's Principal Accounting Fees and Services.				

** Date of transmittal letter to SEC.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrants have duly caused this report to be signed on their behalf by the undersigned, thereunto duly authorized. The execution of this report by registrant Hawaiian Electric Company, Inc. shall be deemed to relate only to matters having reference to such registrant and its subsidiaries.

HAWAIIAN ELECTRIC INDUSTRIES, INC.

(Registrant)

By /s/ Gregory C. Hazelton
 Gregory C. Hazelton
 Executive Vice President and Chief Financial Officer
 (Principal Financial Officer of HEI)

Date: February 28, 2020

HAWAIIAN ELECTRIC COMPANY, INC.

(Registrant)

By /s/ Tayne S. Y. Sekimura
 Tayne S. Y. Sekimura
 Senior Vice President and Chief Financial Officer
 (Principal Financial Officer of Hawaiian Electric)

Date: February 28, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrants and in the capacities indicated on February 28, 2020. The execution of this report by each of the undersigned who signs this report solely in such person's capacity as a director or officer of Hawaiian Electric Company, Inc. shall be deemed to relate only to matters having reference to such registrant and its subsidiaries.

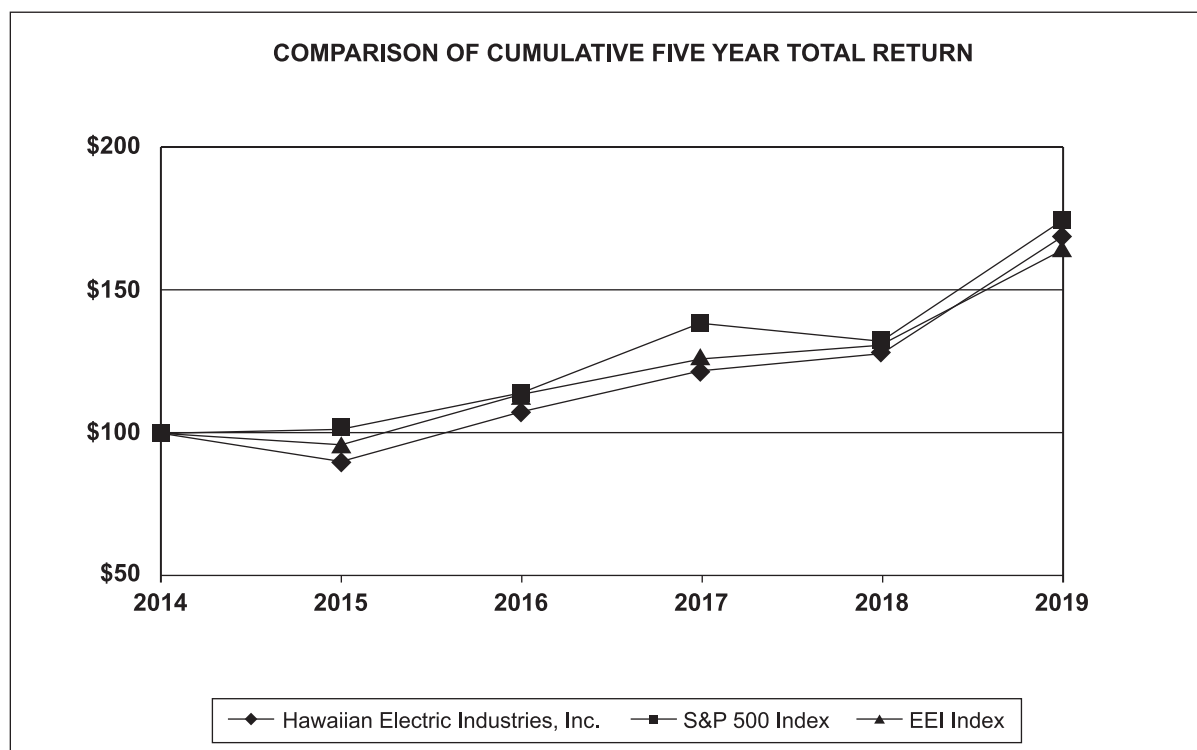
Signature	Title
<u>/s/ Constance H. Lau</u> Constance H. Lau	President & Chief Executive Officer of HEI and Director of HEI (Principal Executive Officer of HEI)
<u>/s/ Scott W. H. Seu</u> Scott W. H. Seu	President & Chief Executive Officer of Hawaiian Electric and Director of Hawaiian Electric (Principal Executive Officer of Hawaiian Electric)
<u>/s/ Gregory C. Hazelton</u> Gregory C. Hazelton	Executive Vice President and Chief Financial Officer of HEI (Principal Financial Officer of HEI)
<u>/s/ Tayne S. Y. Sekimura</u> Tayne S. Y. Sekimura	Senior Vice President and Chief Financial Officer of Hawaiian Electric (Principal Financial Officer of Hawaiian Electric)
<u>/s/ Paul K. Ito</u> Paul K. Ito	Vice President, Tax, Controller and Treasurer of HEI (Principal Accounting Officer of HEI)
<u>/s/ Patsy H. Nanbu</u> Patsy H. Nanbu	Controller of Hawaiian Electric (Principal Accounting Officer of Hawaiian Electric)

Signature	Title
<u>/s/ Kevin M. Burke</u> Kevin M. Burke	Director of Hawaiian Electric
<u>/s/ Celeste A. Connors</u> Celeste A. Connors	Director of HEI
<u>/s/ Richard J. Dahl</u> Richard J. Dahl	Director of HEI
<u>/s/ Thomas B. Fargo</u> Thomas B. Fargo	Director of HEI
<u>/s/ Peggy Y. Fowler</u> Peggy Y. Fowler	Director of HEI
<u>/s/ Timothy E. Johns</u> Timothy E. Johns	Chairman of the Board of Directors of Hawaiian Electric
<u>/s/ Micah A. Kane</u> Micah A. Kane	Director of HEI
<u>/s/ Bert A. Kobayashi, Jr.</u> Bert A. Kobayashi, Jr.	Director of Hawaiian Electric
<u>/s/ Mary G. Powell</u> Mary G. Powell	Director of HEI
<u>/s/ Keith P. Russell</u> Keith P. Russell	Director of HEI
<u>/s/ William James Scilacci, Jr.</u> William James Scilacci, Jr.	Director of HEI
<u>/s/ Kelvin H. Taketa</u> Kelvin H. Taketa	Director of Hawaiian Electric
<u>/s/ Jeffrey N. Watanabe</u> Jeffrey N. Watanabe	Chairman of the Board of Directors of HEI
<u>/s/ Eva T. Zlotnicka</u> Eva T. Zlotnicka	Director of HEI

Appendix A

Shareholder Return Performance Graph

The graph below compares the cumulative total shareholder return on HEI Common Stock against the cumulative total return of the companies listed on the S&P 500 Stock Index and the Edison Electric Institute (EEI) Index of Investor-Owned Electric Companies (40 companies were included as of December 31, 2019). The graph is based on the market price of common stock for all companies in the indices at December 31 each year and assumes that \$100 was invested on December 31, 2014, in HEI Common Stock and the common stock of all companies in the indices and that dividends were reinvested.



Source: S&P Global Inc.

Appendix B

Explanation of HEI's Use of Certain Unaudited Non-GAAP Measures

HEI and Hawaiian Electric Company management use certain non-GAAP measures to evaluate the performance of HEI and the utility. Management believes these non-GAAP measures provide useful information and are a better indicator of the companies' core operating activities given the non-recurring nature of certain items. Core earnings and other financial measures as presented here may not be comparable to similarly titled measures used by other companies. The accompanying tables provide a reconciliation of reported GAAP¹ earnings to non-GAAP (core) earnings and the adjusted return on average common equity (ROACE) for HEI.

The reconciling adjustments from GAAP earnings to core earnings exclude the 2017 impact of the federal tax reform act due to the adjustment of the deferred tax balances and the \$1,000 employee bonuses paid by the bank related to federal tax reform. Management does not consider these items to be representative of the company's fundamental core earnings. Management has shown adjusted non-GAAP (core) net income, adjusted non-GAAP (core) diluted earnings per common share and adjusted non-GAAP (core) ROACE in order to provide better comparability of core net income, EPS and ROACE between periods.

RECONCILIATION OF GAAP¹ TO NON-GAAP MEASURES

Hawaiian Electric Industries, Inc. and Subsidiaries (HEI)				
Unaudited				
(\$ in millions, except per share amounts)				
	2019	2018	2017	
HEI CONSOLIDATED NET INCOME				
GAAP (as reported)	\$ 217.9	\$ 201.8	\$ 165.3	
Excluding special items (after-tax):				
Bonus related to enactment of federal tax reform ²	-	-	0.7	
Federal tax reform impacts ³	-	-	13.4	
Non-GAAP (core) net income	\$ 217.9	\$ 201.8	\$ 179.5	
HEI CONSOLIDATED DILUTED EARNINGS PER COMMON SHARE				
GAAP (as reported)	\$ 1.99	\$ 1.85	\$ 1.52	
Excluding special items (after-tax):				
Bonus related to enactment of federal tax reform ²	-	-	0.01	
Federal tax reform impacts ³	-	-	0.12	
Non-GAAP (core) diluted earnings per common share	\$ 1.99	\$ 1.85	\$ 1.65	
HEI CONSOLIDATED RETURN ON AVERAGE COMMON EQUITY (ROACE) (simple average)				
Based on GAAP	9.8%	9.5%	7.9%	
Based on non-GAAP (core)⁴	9.8%	9.5%	8.6%	

Note: Columns may not foot due to rounding

1 Accounting principles generally accepted in the United States of America

2 Bonus paid by American Savings Bank related to enactment of federal tax reform

3 Reflects the lower rates enacted by federal tax reform, primarily the adjustments to reduce the unregulated net deferred tax asset balances

4 Calculated as non-GAAP (core) net income divided by average GAAP common equity

Executive Management (as of March 1, 2020)

Hawaiian Electric Industries (HEI)

Constance H. Lau

President and Chief Executive Officer
Chair,
American Savings Bank, F.S.B.

Greg C. Hazelton

Executive Vice President and
Chief Financial Officer

Kurt K. Murao

Executive Vice President,
General Counsel, Chief
Administrative Officer and
Corporate Secretary

Hawaiian Electric

Scott W. H. Seu

President and Chief Executive Officer

Ronald R. Cox

Senior Vice President,
Operations

Sharon M. Suzuki

President,
Maui County and Hawai'i Island Utilities*

Jimmy D. Alberts

Senior Vice President,
Business Development and Strategic Planning

Shelee M. T. Kimura

Senior Vice President,
Customer Service

Colton K. Ching

Senior Vice President,
Planning and Technology

Tayne S. Y. Sekimura

Senior Vice President and
Chief Financial Officer

*Hawaiian Electric Subsidiaries

Maui Electric Company, Ltd. and Hawai'i Electric Light Company, Inc.

American Savings Bank (ASB)

Richard F. Wacker

President and Chief Executive Officer

Steven R. Nakahara

Executive Vice President and
Chief Credit Officer

Dane A. Teruya

Executive Vice President and
Chief Financial Officer

Brian M. Yoshii

Executive Vice President and
Chief Information Officer

Danielle K. N. Aiu

Executive Vice President,
Consumer Banking

Natalie M. H. Taniguchi

Executive Vice President,
Enterprise Risk and Regulatory Relations

John S. Ward

Executive Vice President and
Chief Experience Officer

Gabriel S. H. Lee

Executive Vice President,
Commercial Markets

Ann C. Teranishi

Executive Vice President,
Operations

K. Elizabeth Whitehead

Executive Vice President,
Chief Administrative Officer and
Assistant Secretary

Pacific Current

Scott A. Valentino

President

Board of Directors



Jeffrey N. Watanabe
Chair, HEI
Chair, HEI Executive Committee
 Retired Founder,
 Watanabe Ing LLP



Constance H. Lau
President and CEO, HEI
Director, HEI
Chair, ASB



Admiral Thomas B. Fargo, USN (Retired)
Vice Chair, HEI
Chair, HEI Compensation Committee
 Chairman, Huntington Ingalls Industries, Inc.
 Former Commander of the U.S. Pacific Command



Peggy Y. Fowler
Chair, HEI Nominating & Corporate Governance Committee
Director, HEI
 Chairman, Umpqua Holdings Corp.
 Former President and CEO, Portland General Electric Company



William James Scilacci, Jr.
Chair, Audit & Risk Committee
Director, HEI
 Former Executive Vice President and Chief Financial Officer, Edison International



Celeste A. Connors
Director, HEI
 Executive Director, Hawai'i Green Growth Local2030 Hub



Richard J. Dahl
Director, HEI
 Non-Executive Chairman, Dine Brands Global, Inc.
 Chairman, IDACORP, Inc.
 Former President and CEO, James Campbell Company, LLC



Micah A. Kāne
Director, HEI
 President and CEO, Hawai'i Community Foundation



Mary G. Powell
Director, HEI
Director, ASB
 Former President and CEO, Green Mountain Power



Keith P. Russell
Director, HEI
Chair, ASB Risk Committee
Director, ASB
 President, Russell Financial, Inc.



Eva T. Zlotnicka
Director, HEI
 Managing Director, ValueAct Spring Fund
 Head of Stewardship, ValueAct Capital



James A. Ajello
Director, ASB
 Former Executive Vice President and Chief Financial Officer, HEI



Kevin M. Burke
Director, Hawaiian Electric
 Former Chief Marketing Officer, Square, Inc.



Shirley J. Daniel, Ph.D.
Director, ASB
 Professor of Accountancy, Shidler College of Business, University of Hawai'i-Mānoa



Elisia K. Flores
Chair, ASB Audit Committee
Director, ASB
 CEO and Vice Chair, L&L Franchise, Inc.
 Former Senior Finance Manager, General Electric Company



Timothy E. Johns
Chair, Hawaiian Electric
Chair, Hawaiian Electric Audit & Risk Committee
 President and CEO, Zephyr Insurance Company, Inc.



Michael J. Kennedy
Director, ASB
 CEO, Interstellar



Bert A. Kobayashi, Jr.
Director, Hawaiian Electric
 Chairman, CEO and Managing Partner, BlackSand Capital, LLC



Bert A. Kobayashi, Sr.
Director, ASB
 Chairman and CEO, Kobayashi Development Group LLC



James K. Scott, Ed.D.
Director, ASB
 Former President, Punahou School



Scott W. H. Seu
President and CEO, Hawaiian Electric
Director, Hawaiian Electric



Kelvin H. Taketa
Director, Hawaiian Electric
 Former President and CEO, Hawai'i Community Foundation



Richard F. Wacker
President and CEO, ASB
Director, ASB

HEI

Jeffrey N. Watanabe, Chair (1)
 Celeste A. Connors (2)
 Richard J. Dahl (2, 3)
 Admiral Thomas B. Fargo, USN (Retired) (1, 3, 4)
 Peggy Y. Fowler (1, 3, 4)

Micah Kāne (4)
 Constance H. Lau (1)
 Mary G. Powell (3)
 Keith P. Russell (1, 2)
 William James Scilacci, Jr. (1, 2)
 Eva T. Zlotnicka (3)

HEI Board Committees:

- (1) Executive
 Jeffrey N. Watanabe, Chair
- (2) Audit & Risk
 William James Scilacci, Jr., Chair
- (3) Compensation
 Admiral Thomas B. Fargo, USN (Retired), Chair
- (4) Nominating & Corporate Governance
 Peggy Y. Fowler, Chair

Hawaiian Electric

Timothy E. Johns, Chair (5)
 Kevin M. Burke (5)
 Bert A. Kobayashi, Jr.

Scott W. H. Seu
 Kelvin H. Taketa

Hawaiian Electric Board Committees:

- (5) Audit & Risk
 Timothy E. Johns, Chair

ASB

Constance H. Lau, Chair (7)
 James A. Ajello (7)
 Shirley J. Daniel, Ph.D. (6)
 Elisia K. Flores (6)
 Michael J. Kennedy (7)

Bert A. Kobayashi, Sr.
 Keith P. Russell (6, 7)
 James K. Scott, Ed.D.
 Richard F. Wacker

ASB Board Committees:

- (6) Audit
 Elisia K. Flores, Chair
- (7) Risk
 Keith P. Russell, Chair



Catalyst for a better Hawai'i



Shareholder Information

Corporate Headquarters

Hawaiian Electric Industries, Inc.
1001 Bishop Street, Suite 2900
Honolulu, Hawai'i 96813
Telephone: 808-543-5662

Mailing address:

Investor Relations
P.O. Box 730
Honolulu, Hawai'i 96808-0730

New York Stock Exchange

Common stock symbol: HE

Shareholder Services

c/o Broadridge Corporate Issuer Solutions
P.O. Box 1342
Brentwood, NY 11717
Telephone: 808-206-7529
Toll Free: 866-672-5841
M-F 9 a.m. to 9:30 p.m. EST
E-mail: shareholder@broadridge.com

Correspondence about common stock and utility preferred stock ownership, dividend payments, transfer requirements, changes of address, lost stock certificates, duplicate mailings, and account status may be directed to Shareholder Services.

A copy of the 2019 Form 10-K Annual Report for Hawaiian Electric Industries, Inc. and Hawaiian Electric Company, Inc., including financial statements and schedules, will be provided by HEI without charge upon written request directed to Shareholder Services at the above address for Shareholder Services or through HEI's website.

Website

Internet users can access information about HEI and its subsidiaries at <http://www.hei.com>.

Dividends and Distributions

Common stock quarterly dividends are customarily paid on or about the 10th of March, June, September, and December to shareholders of record on the dividend record date.

Utility company preferred stock quarterly dividends are paid on the 15th of January, April, July, and October to preferred shareholders of record on the 5th of these months.



To minimize our environmental impact, this report was printed on paper containing fibers from socially and environmentally responsible forestry products.

Direct Registration

HEI common stock can be issued in direct registration (book entry) form. The stock is DRS (Direct Registration System) eligible.

Dividend Reinvestment and Stock Purchase Plan

Any individual of legal age or any entity may buy HEI common stock at market prices directly from HEI. The minimum initial investment is \$250. Additional optional cash investments may be as small as \$25. The annual maximum investment is \$300,000. After your account is open, you may reinvest all of your dividends to purchase additional shares or elect to receive some or all of your dividends in cash. You may instruct HEI to electronically debit a regular amount from a checking or savings account. HEI can also deposit dividends automatically to your checking or savings account. A prospectus describing the plan may be obtained through HEI's website or by contacting Shareholder Services.

Annual Meeting

Tuesday, May 5, 2020 at 10:00 a.m.
American Savings Bank Tower
1001 Bishop Street
8th Floor, Room 805
Honolulu, Hawai'i 96813

Please direct inquiries to:
Kurt K. Murao
Executive Vice President,
General Counsel, Chief
Administrative Officer
and Corporate Secretary
Telephone: 808-543-5884
Facsimile: 808-203-1992

To protect the health and safety of our shareholders, the 2020 annual meeting will be held virtually rather than in person. Please refer to our proxy statement for details on how to participate.

Independent Registered Public Accounting Firm

Deloitte & Touche LLP
999 Bishop Street, Suite 2700
Honolulu, Hawai'i 96813
Telephone: 808-543-0700
Facsimile: 855-214-5030

Institutional Investor and Securities

Analyst Inquiries

Please direct inquiries to:
Julie R. Smolinski
Director, Investor Relations & Strategic Planning
Telephone: 808-543-7300
Facsimile: 808-695-3201
E-mail: ir@hei.com

Transfer Agent

Common stock and utility company preferred stock:
Shareholder Services
c/o Broadridge Corporate Issuer Solutions

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