FEDERAL DEPOSIT INSURANCE CORPORATION

WASHINGTON, D.C. 20429

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, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

FIRST REPUBLIC BANK

(Exact name of registrant as specified in its charter)

California	**80-0513856**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
111 Pine Street, 2nd Floor, San Francisco, CA	**94111**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(415) 392-1400**

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

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value	**New York Stock Exchange**
Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.50% Noncumulative Perpetual Series D Preferred Stock	**New York Stock Exchange**
Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.70% Noncumulative Perpetual Series F Preferred Stock	**New York Stock Exchange**
Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.50% Noncumulative Perpetual Series G Preferred Stock	**New York Stock Exchange**
Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.125% Noncumulative Perpetual Series H Preferred Stock	**New York Stock Exchange**
Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.50% Noncumulative Perpetual Series I Preferred Stock	**New York Stock Exchange**

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. 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. 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. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes ☐ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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.

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐
Emerging growth company ☐	

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. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the closing price of $96.79 as of June 30, 2018 was approximately $15.7 billion.

The number of shares outstanding of the Bank's common stock, par value $0.01 per share, as of February 14, 2019 was 167,202,253.

DOCUMENTS INCORPORATED BY REFERENCE

The following document is incorporated by reference in parts of the Form 10-K:

Portions of the Bank's definitive proxy statement for its annual meeting of shareholders to be held on May 14, 2019 (the "2019 Proxy Statement"), which will be filed within 120 days of the Bank's last fiscal year end, are incorporated in Part III of the Form 10-K.

The index to Exhibits appears on page 178.

FIRST REPUBLIC BANK

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SIGNATURES

EXPLANATORY NOTE

As used throughout this document, the terms “First Republic,” the “Bank,” “we,” “our” and “us” mean, except as the context indicates otherwise, First Republic Bank, a California-chartered commercial bank, including all its subsidiaries.

PART I

Information Regarding Forward-Looking Statements

This Annual Report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Statements in this Annual Report that are not historical facts are hereby identified as “forward-looking statements” for the purpose of the safe harbor provided by Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Any statements about our expectations, beliefs, plans, predictions, forecasts, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. These statements are often, but not always, made through the use of words or phrases such as “anticipates,” “believes,” “can,” “could,” “may,” “predicts,” “potential,” “should,” “will,” “estimates,” “plans,” “projects,” “continuing,” “ongoing,” “expects,” “intends” and similar words or phrases. Accordingly, these statements are only predictions and involve estimates, known and unknown risks, assumptions and uncertainties. Our actual results could differ materially from those expressed or anticipated in such forward-looking statements as a result of risks and uncertainties more fully described under “Item 1A. Risk Factors.”

Forward-looking statements involving such risks and uncertainties include, but are not limited to, statements regarding:

- Projections of loans, assets, deposits, liabilities, revenues, expenses, tax liabilities, net income, capital expenditures, liquidity, dividends, capital structure, investments or other financial items;
- Expectations regarding the banking and wealth management industries;
- Descriptions of plans or objectives of management for future operations, products or services;
- Forecasts of future economic conditions generally and in our market areas in particular, which may affect the ability of borrowers to repay their loans and the value of real property or other property held as collateral for such loans;
- Our opportunities for growth and our plans for expansion (including opening new offices);
- Expectations about the performance of any new offices;
- Projections about the amount and the value of intangible assets, as well as amortization of recorded amounts;
- Future provisions for loan losses, changes in nonperforming assets, impairment of investments and our allowance for loan losses;
- Projections about future levels of loan originations or loan repayments;
- Projections regarding costs, including the impact on our efficiency ratio; and
- Descriptions of assumptions underlying or relating to any of the foregoing.

Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

- Significant competition to attract and retain banking and wealth management customers, from both traditional and non-traditional financial services and technology companies;

- Our ability to recruit and retain key managers, employees and board members;
- The possibility of earthquakes, fires and other natural disasters affecting the markets in which we operate;
- Interest rate risk and credit risk;
- Our ability to maintain and follow high underwriting standards;
- Economic and market conditions, including those affecting the valuation of our investment securities portfolio, which could result in other-than-temporary impairment if the general economy deteriorates, credit ratings decline, the financial condition of issuers deteriorates, interest rates increase or the liquidity for securities is limited;
- Real estate prices generally and in our markets;
- Our geographic and product concentrations;
- Demand for our products and services;
- Developments and uncertainty related to the future use and availability of reference rates, such as the London Interbank Offered Rate ("LIBOR") and the 11th District Monthly Weighted Average Cost of Funds Index ("COFI");
- The regulatory environment in which we operate, our regulatory compliance and future regulatory requirements;
- The impact of tax reform legislation;
- Any future changes to regulatory capital requirements;
- Legislative and regulatory actions affecting us and the financial services industry, such as the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), including increased compliance costs, limitations on activities and requirements to hold additional capital, as well as changes to the Dodd-Frank Act pursuant to the Economic Growth, Regulatory Relief, and Consumer Protection Act (the "EGRRCPA");
- Our ability to avoid litigation and its associated costs and liabilities;
- The impact of new accounting standards;
- Future Federal Deposit Insurance Corporation ("FDIC") special assessments or changes to regular assessments;
- Fraud, cybersecurity and privacy risks; and
- Custom technology preferences of our customers and our ability to successfully execute on initiatives relating to enhancements of our technology infrastructure, including client-facing systems and applications.

All forward-looking statements are necessarily only estimates of future results, and there can be no assurance that actual results will not differ materially from expectations, and, therefore, you are cautioned not to place undue reliance on such statements. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this Annual Report and our other public filings under the Exchange Act. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events.

Item 1. Business.

General

Founded in 1985, we are a California-chartered commercial bank and trust company headquartered in San Francisco with deposits insured by the FDIC. We specialize in providing personalized, relationship-based services, including private banking, private business banking, real estate lending and wealth management services, including trust and custody services, to clients in selected metropolitan areas in the United States. As of December 31, 2018, we had total assets of $99.2 billion, total deposits of $79.1 billion, total equity of $8.7 billion and wealth management assets under management or administration of $126.2 billion.

As of December 31, 2018, we provided our services through 82 offices, of which 75 are Preferred Banking licensed deposit-taking offices primarily in the following areas: San Francisco, Palo Alto, Los Angeles, Santa Barbara, Newport Beach and San Diego, California; Portland, Oregon; Boston, Massachusetts; Palm Beach, Florida; Greenwich, Connecticut; New York, New York; and Jackson, Wyoming. We have 7 offices that offer exclusively lending, wealth management or trust services. Approximately 62% of our loans outstanding are in California as of December 31, 2018. We have been continuously headquartered in San Francisco since our inception.

We originate real estate-secured loans and other loans for retention in our loan portfolio, and historically have originated mortgage loans for sale to institutional investors or for securitization and sale in the secondary market.

We have an established record of meeting the credit needs of the communities where we operate and historically have met our obligations under the Community Reinvestment Act (the “CRA”). In particular, we lend to support community development projects, affordable housing programs and non-profit organizations that help economically disadvantaged individuals and to residents of low- and moderate- income census tracts, in each case consistent with prudent underwriting practices. We also make investments that benefit small businesses or low- and moderate- income communities in our footprint, including investing in small business investment companies, community development financial institutions and other similar organizations. We also donate to nonprofit organizations that offer a wide range of programs, including educational and health programs to economically disadvantaged students and families.

We also offer a broad array of internally managed investment services and, through an open architecture model, access to investments managed by unaffiliated investment advisors. Our wealth management services include a variety of investment strategies and products, online investment management services, trust and custody services, full service and online brokerage, financial and estate planning, access to alternative investments (private equity, venture capital, hedge and real estate funds), socially responsible investing, insurance and foreign exchange. We offer our wealth management services through First Republic Investment Management, Inc. (“FRIM”), a federally registered investment advisor with the U.S. Securities and Exchange Commission (“SEC”). We offer brokerage services through First Republic Securities Company, LLC (“FRSC”), a broker-dealer registered with the SEC. We offer insurance solutions through FRSC and FRIM. We provide trust services through First Republic Trust Company, a division of the Bank, and First Republic Trust Company of Delaware LLC (“FRTC Delaware”) (collectively, the “Trust Company”). FRIM, FRSC and FRTC Delaware are wholly-owned subsidiaries of the Bank.

Gradifi, Inc. (“Gradifi”) is a corporate provider of education related benefits. Through Gradifi, employers can make direct contributions to education debt repayment or savings plans for their employees in addition to providing employees access to refinance options of existing student debt. Gradifi is a wholly-owned subsidiary of the Bank.

We do not engage in proprietary trading or investment banking activities nor do we originate or trade in derivatives for our own account, and we do not have any current plans to engage in any of these activities.

We currently operate our business through two business segments: Commercial Banking and Wealth Management. For segment information, see the information in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Business Segments" and Note 23 in "Item 8. Financial Statements and Supplementary Data."

Our Business Strategy

Our core business principles and service-based culture have successfully guided our efforts over the past 33 years. We believe focusing on these principles will enable us to expand our capabilities for providing value-added services to our urban, coastal client base and generate steady, long-term growth.

Deliver Superior Client Service. We believe that stable long-term growth and profitability are the result of building strong client relationships one at a time while maintaining superior credit discipline. The most effective way to achieve this is through the continued delivery of superior, carefully coordinated client service without compromising the credit quality of our assets. Our employees strive to understand our clients' needs and identify appropriate financial solutions through our comprehensive suite of products and services. Our client-focused culture has allowed us to broaden and deepen these relationships over time. In turn, these clients do more business with us, along with the substantial portion of our new clients coming to us from "word-of-mouth" referrals from satisfied existing clients. We believe that delivering superior client service differentiates us from our competition.

Originate High Quality Loans. We have traditionally attracted new clients through our mortgage lending activities, providing an opportunity for our relationship managers to introduce other services to these clients. We remain committed to underwriting and originating high quality loans for existing and new clients. This enables us to expand our business in a disciplined manner while maintaining superior credit quality.

Grow Core Deposits. We focus on growing a high quality, low cost core deposit base. Our ability to do so has enabled us to reduce our reliance on wholesale funding, thereby resulting in a lower cost and more stable funding base. Core deposits, which include checking accounts, money market accounts, savings accounts and certificates of deposits ("CDs") (excluding CDs greater than $250,000 and all brokered deposits), represented 92% of total deposits at December 31, 2018. Our checking and savings deposits, which represent the majority of core deposits, have grown at a compounded annual growth rate of 24% for the past ten years. This growth is due to efforts across the entire business, including our relationship managers, branch office network, business bankers, Preferred Banking personnel and wealth management professionals.

Grow Our Wealth Management Business. We view our wealth management business as an opportunity for continued growth in fee income. We intend to continue to expand our wealth management business by hiring additional professionals and using our relationship-based approach to increase our assets under management or administration. We offer integrated investment management, trust, custody, financial planning, insurance, brokerage and foreign exchange services, which are an extension of our banking franchise. We believe that our brand name, superior client service and service culture will enable us to expand this business and diversify our income stream.

Attract and Retain High Quality Service Professionals. Attracting and retaining successful and high quality service professionals is critical to driving the development of our business and delivering superior financial performance. We have experienced low turnover in our client service personnel and intend to continue hiring and developing professionals who can establish and maintain long-term client relationships that are the key to our business, brand and culture. We believe our distinct business model, culture, scalable platform and incentive compensation structure enable us to attract and retain high quality service professionals.

Deposits

An important aspect of our franchise is the ability to gather deposits. As of December 31, 2018, we held $79.1 billion of total deposits. We have grown deposits at a compounded annual growth rate of 20% over the past five years. Based on the most recent publicly available regulatory filings, as of December 31, 2018, we were the 27th largest banking organization in the United States measured by total deposits. The following table presents our total deposits at the dates indicated:

($ in millions)	Total Deposits
As of December 31:	
2018	$ 79,063
2017	$ 68,919
2016	$ 58,602
2015	$ 47,893
2014	$ 37,131
2013	$ 32,083
5-year compounded annual growth rate	20%

As of December 31, 2018, our deposit base consisted of $47.1 billion, or 60%, in checking deposits, $20.6 billion, or 26%, in money market checking, savings and passbook deposits, and $11.4 billion, or 14%, in CDs.

Our deposit base reflects our value-added strategy of introducing deposits to loan clients, wealth management clients, businesses and non-profit organizations through three primary channels: (1) Preferred Banking Offices, which are our retail locations that gather deposits and service all of our clients; (2) Preferred Banking, which consists of deposits placed by clients who enter into deposit relationships directly with a relationship manager, business banker, preferred banker or wealth management professional; and (3) deposits swept from brokerage or other investment accounts. As of December 31, 2018, we held $25.8 billion of deposits associated with our Preferred Banking Offices and $45.4 billion of deposits associated with our Preferred Banking activities. In addition, we had wealth management deposits generated through our sweep programs totaling $4.5 billion at December 31, 2018.

Our Preferred Banking Offices have been a strong source of deposit growth in both established and new locations. Our Preferred Banking Offices are typically located in dense urban areas or supporting suburban areas. Of our existing offices, over half had total deposits over $200 million at December 31, 2018. Overall, deposits in our Preferred Banking Offices grew 11% during 2018. Preferred Banking Offices had average deposit balances of $356 million, representing a 10% increase in 2018. During 2018, deposit growth was driven primarily by CDs, and was the result from growth of existing client relationships, client referrals, our general marketing initiatives, growth in services offered to Bank clients and the service skills of individual employees.

Our Preferred Banking business is also a substantial source of deposits. Preferred Banking is located in our key markets with specialized personnel that primarily support the clients of our relationship managers, business bankers and wealth management professionals. Deposits associated with our Preferred Banking channel grew 14% during 2018 and have grown at a compounded annual growth rate of 20% in the last five years.

Our deposit base is also well-diversified geographically and by client type. As of December 31, 2018, 43% of our total deposits came from Northern California, 22% from New York, 12% from Southern California, 13% from Boston, 4% from other regions and 6% from wealth management sweep programs. As of December 31, 2018, 56% of our total deposits were from business clients, compared to 54% at December 31, 2017. As of December 31, 2018, 44% of our total deposits were from consumer clients, compared to 46% at December 31, 2017.

Lending Activities

Products

We offer a broad range of lending products to meet the needs of our clients. Our loan portfolio primarily consists of loans secured by single family residences, multifamily buildings and commercial real estate properties. Our strategy includes lending to borrowers who are professionals, business executives or entrepreneurs who are buying or refinancing homes in metropolitan communities, refinancing student debt, or investing in their firms, which creates the opportunity for us to offer related products and services. We emphasize the origination of single family mortgage loans and originate other real estate secured loans on a selective basis, including multifamily mortgages, commercial real estate mortgages and construction loans. We also originate business loans, including Eagle One loans and lines of credit, which are smaller loans and lines of credit to businesses, and personal loans, including Eagle Professional loans, which offer individuals the ability to borrow for capital and partnership requirements, and Student Loan Refinance loans made to individuals for refinancing existing education debt.

Single Family Residential. As of December 31, 2018, the recorded investment of single family real estate secured loans, including loans held for sale, represented $38.0 billion, or 50% of our loan portfolio. As of December 31, 2018, these loans had a weighted average loan-to-value ratio ("LTV") at origination of approximately 58%. Many of our borrowers have high liquidity and substantial net worth. Additionally, we offer specific loan programs for first-time homebuyers and also to borrowers with low to moderate incomes. Our Eagle Community loan program offers special fixed rates to borrowers in historically underserved communities. Our single family loans are secured by single family detached homes, condominiums, cooperative apartments and two-to-four unit properties. Due to our larger than average loan size ($1.0 million based on outstanding loans at December 31, 2018), the number of single family loans originated by us is relatively small (approximately 11,000 for 2018), allowing our relationship managers and the executive loan approval team of 34 Executive Loan Committee members to carefully underwrite and provide high quality service for each loan. Repeat clients or their direct referrals are the most important source of our loan originations.

Home Equity Lines of Credit ("HELOCs"). As of December 31, 2018, the recorded investment of HELOCs was $2.5 billion, or 3% of our total loan portfolio, and the unused commitments under these lines of credit were $5.3 billion. We offer HELOCs consisting of loans secured by first or second deeds of trust on primarily owner-occupied primary residences. The majority of these lines are in a secured position behind a first mortgage originated by us or in a first-lien position. As of December 31, 2018, approximately 35% of HELOCs are in first lien position, and approximately 51% of HELOCs are in second lien position behind a first residential mortgage originated by us, including loans subsequently sold to investors. As of December 31, 2018, the average commitment size of HELOCs was approximately $535,000, and the weighted average combined LTV including the first residential mortgage, if any, at origination was approximately 52%. Generally, these loans bear interest rates that vary with the prime rate. These lines have a 25-year maturity with interest-only payments for the first 10 years and are fully amortizing over the last 15 years.

Multifamily. As of December 31, 2018, the recorded investment of loans secured by multifamily properties, including loans held for sale, totaled $10.4 billion, or 14% of our total loan portfolio. The loans are predominantly for established buildings in the urban neighborhoods of our markets. The buildings securing our multifamily loans are, generally, seasoned operating properties with proven occupancy, rental rates and expense levels. The neighborhoods tend to be densely populated; the properties are close to employment opportunities; and rent levels are appropriate for the target occupants. Generally, the borrowers are property owners who are experienced at managing these properties. We typically have recourse directly against the borrower on these loans due to receiving a personal guaranty from the borrower. As of December 31, 2018, the average multifamily mortgage loan commitment size was approximately $2.8 million, and the weighted average LTV at origination was approximately 51%.

Commercial Real Estate. As of December 31, 2018, the recorded investment of commercial real estate loans was $6.7 billion, or 9% of our loan portfolio. We originate commercial real estate loans, primarily to existing clients. We typically have recourse directly against the borrower on these loans and receive a personal guaranty

from the borrower. We are primarily an urban lender. The real estate securing our existing commercial real estate loans includes a wide variety of property types, such as mixed-use residential/commercial, retail properties, office buildings, office/warehouses, hotels, motels and healthcare facilities. At the time of loan closing, the properties are generally completed and occupied. As of December 31, 2018, the average commercial real estate loan commitment size was approximately $3.2 million, and the weighted average LTV at origination was approximately 48%.

Business. As of December 31, 2018, the recorded investment of business loans and lines of credit was $11.0 billion, or 15% of total loans outstanding. Of this total, $6.4 billion was in the form of lines of credit, with additional undisbursed commitments of $10.8 billion. The business loan portfolio is comprised primarily of capital call lines to private equity and venture capital funds, loans to independent schools and other non-profit organizations, operating lines of credit to professional service firms and term loans to enable business clients to acquire capital equipment.

We offer capital call lines of credit, which are credit facilities that enable private equity and venture capital funds to bridge the timing between funding investments and receiving funds from limited partner capital calls. As of December 31, 2018, the recorded investment of capital call lines of credit was $4.8 billion, with additional undisbursed commitments of $8.2 billion. In addition, the utilization rate for these lines of credit was 37.0% at December 31, 2018.

We originate Eagle One loans, which are smaller loans or lines of credit to businesses, generally in amounts of up to $350,000. These Eagle One loans are generally made to meet the working capital needs of small businesses. Such loans are either revolving lines of credit or term loans and are adjustable based on the prime rate. These loans or lines of credit are guaranteed by the business owners personally. As of December 31, 2018, we had outstanding Eagle One loans and lines of credit of $55.2 million and had undisbursed commitments of $108.7 million.

Construction. As of December 31, 2018, the recorded investment of construction loans was $2.2 billion, or 3% of total loans outstanding. Our construction loan portfolio includes loans to individual clients for the construction and ownership of single family homes, primarily in our California and New York markets, and to construct other types of properties. These loans are typically disbursed as construction progresses, carry interest rates that vary with the prime rate and can be converted into a permanent mortgage loan once the property is occupied. We had undisbursed commitments of $2.0 billion related to our construction loan portfolio. As of December 31, 2018, the average construction loan commitment size was approximately $5.4 million, and the weighted average LTV at origination was approximately 55%.

Stock Secured. As of December 31, 2018, the recorded investment of stock secured loans was $1.4 billion, or 2% of total loans outstanding. There were additional undisbursed commitments of $2.2 billion related to stock secured loans.

Other Secured. As of December 31, 2018, the recorded investment of other secured loans was $1.1 billion, or 1% of total loans outstanding and we had undisbursed commitments of $941.7 million. These loans include Eagle Professional loans, which offer individuals an ability to borrow for capital and partnership requirements. As of December 31, 2018, we had outstanding Eagle Professional loans of $1.0 billion and had undisbursed commitments of $900.8 million.

Unsecured. As of December 31, 2018, the recorded investment of unsecured loans and lines of credit was $2.6 billion, or 3% of total loans outstanding. Unsecured loans include Student Loan Refinance loans made to individuals for refinancing existing education debt at competitive fixed rates. At December 31, 2018, the recorded investment of such loans was $2.2 billion. In addition, unsecured loans at December 31, 2018 consist of outstanding lines of credit of $295.2 million and undisbursed commitments of $607.5 million. Unsecured lines of credit are originated to meet the non-mortgage needs of our clients. Such loans generally have a shorter term to maturity, are adjustable with the prime rate or LIBOR and are subject to annual or more frequent review.

Underwriting

We have developed disciplined underwriting standards that have remained consistent through varying business cycles. We seek to diversify our loans among market areas, loan types and industries. Our underwriting standards include a matrix of approval requirements that vary depending on the size and type of loan and our aggregate exposure to the borrower. The underwriting process is intended to assess the prospective borrower's credit standing, the ability to repay and the value and adequacy of any collateral. To assess the borrower's ability to repay, we analyze the borrower's cash flow, liquidity, credit standing, employment history and overall financial condition. We evaluate our borrowers who choose adjustable-rate loans at a rate that exceeds the initial start rate. This allows us to make a determination as to whether the borrower is able to make higher loan payments in the event that interest rates increase subsequent to origination. We do not originate loans with "teaser" rates. We do not originate single family loans with the characteristics typically described as "subprime" or "high cost," such as loans made to borrowers with little or no cash reserves and poor or limited credit using limited income documentation. Over the past two years, the home loans originated by us had a weighted average credit score of 759. In addition, many of our borrowers have high liquidity and substantial net worth. We underwrite home loans using full documentation.

The median attributes of clients who have obtained home loans from us over the last two years are as follows:

	Median
Loan Size	$ 670,000
LTV	60%
Liquidity	$ 620,000
Credit Score	771

Our loan origination policies and consistent underwriting standards have resulted in a low historical loan loss experience. Since our inception in 1985, we have originated $127.0 billion of single family residential loans (including HELOCs) and have experienced cumulative net loan losses of only $39.2 million, or 3 basis points, in 33 years (including losses on loans sold).

Our loan charge-off experience on all loan types for the last fifteen years (as reported in our financial statements) is presented in the following table. From 2009 through 2018, net loan losses include charge-offs against the allowance for loan losses and charge-offs recorded as a reduction in unaccreted discounts established in purchase accounting.

	Net Charge-Offs (Recoveries)	
($ in millions)	Ratio [(1)]	Amount
Year ended December 31:		
2018	0.00%	$ 3.0
2017	0.00%	$ 0.9
2016	0.00%	$ 1.9
2015	0.01%	$ 2.1
2014	0.01%	$ 2.2
2013	0.05%	$ 14.2
2012	0.01%	$ 1.9
2011	0.03%	$ 5.2
2010	0.09%	$ 16.3
2009	0.48%	$ 84.1
2008	0.08%	$ 11.9
2007	0.01%	$ 0.9
2006	(0.06)%	$ (4.4)
2005	(0.02)%	$ (0.9)
2004	0.01%	$ 0.7

(1) Represents net charge-offs (recoveries) to average loans during each year.

Our charge-off ratio was less than 0.5% of average loans at its highest in 2009, and net charge-offs have averaged 3 basis points of average loans outstanding, per year, over the past fifteen years.

Credit Risk Management

Credit risk management involves a partnership between our relationship managers, business bankers and our credit approval, credit administration and collections personnel. We conduct weekly loan meetings, attended by nearly all of our senior management, relationship managers, related loan production staff and credit administration staff, at which asset quality and delinquencies are reviewed. Our compensation program for our relationship managers has included meaningful credit claw back provisions since 1986 on all loan originations to encourage our personnel to avoid and monitor for credit delinquency issues, which we believe leads the relationship manager to focus on high quality credit consistent with our strategic focus on asset quality.

In accordance with our procedures, we perform annual reviews of our larger multifamily, commercial real estate and business loans. As part of these review procedures, we analyze recent financial statements of the property and/or borrower to determine the current level of occupancy, revenues and expenses and to investigate any deterioration in the value of the real estate collateral or in the borrower's financial condition. Upon completion, we update the grade assigned to each loan. We maintain a list of loans that receive additional attention if we believe there may be a potential credit risk. Relationship managers are encouraged to bring potential credit issues to the attention of credit administration personnel in a timely manner.

For loans that are criticized or classified, the Bank's Special Assets Committee reviews loan grades, reserves and accrual status on a quarterly or more frequent basis. This review includes an evaluation of the market conditions, the property's trends, the borrower and guarantor status, the level of reserves required and loan accrual status. Additionally, we have an independent, third-party review performed on our loan grades and our credit administration functions each year. The results of the third-party review are presented to the Audit Committee of the Board of Directors. These asset review procedures provide management with additional information for assessing our asset quality. In addition, for business and personal loans that are not secured by real estate, we perform frequent evaluations and regular monitoring.

Mortgage Banking Activities

Secondary Market Loan Sales

We have historically and regularly accessed the capital markets to sell into the secondary markets residential and, to a lesser extent, multifamily and commercial real estate loans that we originate. We sell loans on a non-recourse basis to provide funds for additional lending and to manage our asset/liability position. We retain all the loan servicing in order to maintain the primary contact with our clients and to generate recurring fee income. Secondary marketing has allowed us to make loans to clients during periods when deposit flows decline and when clients prefer loans with characteristics that we choose not to retain in our loan portfolio.

We transact loan sales through whole loan sales on a flow basis and bulk loan sales. Whole loan sales generally focus on intermediate-term hybrid adjustable-rate mortgage ("ARM") loans and longer-term fixed-rate loans and are typically made to specific investors according to predetermined underwriting standards. We have historically sold whole loans to the Federal National Mortgage Association ("Fannie Mae"), the Federal Home Loan Mortgage Corporation ("Freddie Mac") and various institutional purchasers such as investment banks, real estate investment trusts, mortgage conduits and other financial institutions. In addition, we sold multifamily loans through a securitization with Freddie Mac in 2018.

Bulk sales provide an opportunity for us to take advantage of market opportunities for different products and are done either on an auction basis or negotiated with a single investor.

In 2018, we sold $1.2 billion of loans, compared to $2.9 billion in 2017 and $3.1 billion in 2016. We use loan sales in the ordinary course of business to help provide a full range of lending options for our clients, while also managing asset growth and interest rate risk.

Loan Servicing

We have historically retained the servicing on substantially all loans sold to institutional investors, thereby generating ongoing servicing revenues and maintaining client relationships. Loan servicing activities include collecting and remitting loan payments, accounting for principal and interest, responding to client inquiries, holding escrow (impound) funds for payment of taxes and insurance, making inspections as required of the mortgaged property, collecting amounts due from delinquent mortgagors, supervising foreclosures in the event of unremedied defaults and generally administering the loans for the investors to whom they have been sold. Management believes that the quality of our loan servicing capability is a factor that permits us to sell our loans in the secondary market.

Our mortgage loan servicing portfolio was $11.6 billion as of December 31, 2018. Approximately 64% of total loans serviced as of December 31, 2018 had outstanding balances greater than $679,650, which is the maximum conforming loan amount for a single family loan. Of the total loans serviced as of December 31, 2018, approximately 44% were hybrid ARMs with a weighted average contractual rate of 3.12%, 43% were fixed-rate loans with a weighted average contractual rate of 3.71%, and 13% were adjustable-rate loans with a weighted average contractual rate of 4.00%. The weighted average contractual rate of the total loans serviced was 3.49% as of December 31, 2018. The weighted average servicing fee collected was 0.25% for 2018. Our servicing portfolio is reduced by normal amortization and prepayment or liquidation of outstanding loans. Many of the existing servicing programs provide for principal and interest payments to be remitted by us, as servicer, to the investor, whether or not received from the borrower. Upon ultimate collection, including the sale of foreclosed property, we are entitled to recover any such advances plus late charges before paying the investor. We believe our collection and foreclosure procedures comply with all applicable laws and regulations. We currently have a relatively low number of loans in the process of foreclosure and have not needed to suspend any of our foreclosure activities.

Private Wealth Management Activities

A primary focus of our general business strategy has been to expand our capabilities for providing value-added services to a targeted client base. We attract wealth management clients by hiring additional wealth management professionals and providing superior client service. In addition, our relationship-based approach allows us to grow existing client relationships, attract referrals from existing clients and attract banking clients that have been satisfied with our mortgage loan origination products and services and deposit services, which provides us with an opportunity for our relationship managers to introduce other products and services, such as wealth management. Wealth management assets under management (“AUM”) or administration (“AUA”) were $126.2 billion at December 31, 2018.

Investment Management Services. We provide traditional full-service portfolio management and customized client portfolios through FRIM. When appropriate and desired by a client, our advisors use third-party investment managers or funds through an open architecture platform. We offer integrated financial and estate planning services, endowment management services, and 401(k) plan management for businesses. We also offer an online automated investment management service that offers an alternative to the full-service version of advisory services. AUM were $60.6 billion as of December 31, 2018.

Brokerage and Investment Activities. For full-service brokerage clients, we perform brokerage and investment activities through FRSC. We employ wealth managers to offer brokerage services for equity securities, mutual funds, exchange-traded funds, unit investment trusts, alternative investments, hedging strategies, treasury securities, municipal bonds, other fixed income securities, money market mutual funds and other shorter-term liquid investments at the request of clients or their financial advisors. We also offer online services for self-directed brokerage accounts for those clients who choose to transact in this manner. Our online brokerage services allow clients to place orders for equities, mutual funds and listed options. As of December 31, 2018, AUA were $55.4 billion. Such assets were held in brokerage or managed accounts. Customer accounts at

FRSC are cleared on a fully-disclosed basis by FRSC's clearing agent, Pershing LLC ("Pershing"), which has custody of FRSC accounts. Pershing is a wholly-owned subsidiary of The Bank of New York Mellon Corporation and is not affiliated with the Bank.

Insurance Services. We offer insurance solutions through FRSC and FRIM. The following insurance products are offered: variable, fixed and income annuities, as well as life insurance policies. Insurance fees consist of initial commissions when a policy is sold and subsequent commissions each year that a policy is renewed. The Bank does not retain any underwriting risk from the sale of insurance products.

Trust Company. First Republic Trust Company, a division of the Bank, operates in California, Oregon, Washington, New York, Massachusetts, Florida and Connecticut and specializes in personal and estate trust activities. In addition, custody services are also provided. FRTC Delaware, a subsidiary of the Bank, operates in Delaware. First Republic Trust Company and FRTC Delaware draw new trust clients from our banking and wealth management client base, as well as from outside of our organization. The Trust Company has gathered $10.2 billion of assets under custody or administration as of December 31, 2018.

Foreign Exchange. We earn fees from transacting foreign exchange business on behalf of our clients. We execute foreign exchange trades with clients and then offset those trades with other financial institution counterparties, such as major investment banks or large commercial banks. We do not retain significant foreign exchange risk associated with these transactions, as the trades with the client and the financial institution counterparty are matched on our books. We do retain credit risk, both to the client and the counterparty institution, which is evaluated and managed by us in the normal course of our operations.

Information Technology Systems

We devote significant resources to maintain modern, efficient, secure and scalable information technology systems. We outsource most of our processing and services, which allows us to select the best provider in each market niche, reduce our costs by leveraging the vendors' economies of scale and expand our capabilities as needed. We use several different vendors for our core systems so that we are not tied to a single provider and can upgrade systems individually without significant disruption. We continue to invest in enhancing our mobile and online banking platform in order to increase our efficiency and to improve the overall client experience. In 2018, our information systems expenses were $241.8 million.

We are committed to protecting our clients' data. We closely monitor information security at First Republic and in the financial services sector generally for trends and new threats, including cybersecurity risks. We have initiatives to continuously improve the security and privacy of our systems and data. To protect against disasters, we have backup data centers on the west and east coasts. We have established a committee of the Board of Directors, which oversees our cybersecurity and general technology efforts.

Competition

We face strong competition in gathering deposits, making loans and obtaining client assets for management or administration by investment management, trust and brokerage operations. We compete for deposits and loans by seeking to provide a higher level of personal service than is generally offered by larger and non-bank competitors, by advertising, and by offering competitive interest rates. We generally do not have a dominant market share of the total deposit gathering or lending activities in the areas in which we conduct operations.

Our management believes that our most direct competition for deposits comes from commercial banks, savings and loan associations, credit unions, money market funds and brokerage firms, nationwide and regional banks specializing in private banking and service-focused community banks that target the same clients we do. In addition, our cost of funds fluctuates with market interest rates and may be affected by higher rates being offered by other financial institutions. During certain interest rate environments, additional significant competition for deposits may be expected to arise from corporate and government debt securities and money market mutual funds.

Our competition in making loans comes principally from commercial banks, mortgage companies, savings and loan associations, insurance companies and full service brokerage firms, particularly large, nationwide institutions. Many of the nation's largest commercial banks and mortgage companies have a significant number of branch offices in the areas in which we operate. Aggressive pricing policies of our competitors on new ARMs, intermediate-fixed rate and fixed-rate loans, especially during a period of declining mortgage loan originations, have in the past resulted in a decrease in our mortgage loan origination volume and a decrease in the profitability of our loan originations. We compete for loans principally through the quality of service we provide to borrowers, real estate brokers and loan agents, while seeking to maintain competitive interest rates, loan fees and other loan terms.

Our competition in wealth management services comes primarily from commercial banks, trust companies, mutual funds, investment advisory firms, brokerage firms, investment companies, insurance companies, and other financial services companies, as well as private equity firms, venture capital, hedge funds and other alternative investment strategies, and Internet-based companies. Competition is especially keen in our principal markets because numerous well-established and successful investment advisory and brokerage firms exist throughout each of the markets in which we operate. We compete for wealth management clients through the scope and quality of products and services offered, level of investment performance, price and client service.

Regulatory restrictions on interstate bank branching and acquisitions and on banks providing a broader array of financial services, such as securities underwriting and dealing and insurance, have been reduced or eliminated. The availability of banking and investment advisory services over the Internet and on mobile devices continues to expand. Changes in laws and regulations governing the financial services industry cannot be predicted; however, past legislation has served to intensify our competitive environment.

Employees

As of December 31, 2018, we had 4,480 full-time equivalent employees, including temporary employees and independent contractors. Our management believes that its relations with employees are satisfactory. We are not a party to any collective bargaining agreements.

Supervision and Regulation

Described below are the material elements of selected laws and regulations applicable to us and our subsidiaries. The descriptions are not intended to be complete and are qualified in their entirety by reference to the full text of the statutes and regulations described. Changes in applicable laws or regulations, and in their interpretation and application by regulatory agencies and other governmental authorities, cannot be predicted, but may have a material effect on our business, results of operations or financial condition of the business, or results of operations or financial condition of our subsidiaries.

Overview

We are subject to extensive federal and state banking laws, regulations and policies that are intended primarily for the protection of clients, depositors and other consumers, the FDIC's Deposit Insurance Fund (the "DIF"), and the banking system as a whole; not for the protection of our other creditors and shareholders. We are examined, supervised and regulated by the California Department of Business Oversight's Division of Financial Institutions (the "DBO") and the FDIC (our primary federal regulator) as an insured state bank without a holding company that is not a member of the Federal Reserve System (the "Federal Reserve"). The statutes enforced by, and regulations and policies of, these agencies affect most aspects of our business, including prescribing permissible types of loans and investments, the amount of required reserves, requirements for branch offices, the permissible scope of our activities and various other requirements. Although we are not a member of the Federal Reserve, we are subject to certain regulations of the Board of Governors of the Federal Reserve, such as those dealing with availability of funds and check clearing activities (Regulation CC), margin lending (Regulations T

and U) and establishment of reserves against deposits (Regulation D). Additionally, our offices in states other than California are subject to limited supervision and regulation by the applicable state bank regulatory agency. In addition, certain of our subsidiaries are subject to regulation, supervision and examination by self-regulatory organizations, such as Financial Industry Regulatory Authority ("FINRA") and the National Futures Association ("NFA"), and other regulatory authorities, including the SEC and state regulatory agencies, and our insurance activities are subject to licensing and regulation by state insurance regulatory agencies.

Our deposits are insured by the FDIC to the fullest extent permissible by law. As an insurer of deposits, the FDIC issues regulations, conducts examinations, requires the filing of reports and generally supervises the operations of all institutions to which it provides deposit insurance. The approval of the FDIC is required for certain transactions in which we may engage, including any merger or consolidation by us (including the acquisition of another bank), a change in control over us, or the establishment or relocation of any of our branch offices. In reviewing applications seeking approval of such transactions, the FDIC may consider, among other things, the competitive effect and public benefits of the transactions, the capital position, financial and managerial resources and future prospects of the organizations involved in the transaction, the risks to the stability of the U.S. banking or financial system, the applicant's performance record under the CRA (see "Community Reinvestment Act and Fair Lending" below) and the effectiveness of the organizations involved in the transaction in combating money laundering activities. The FDIC also has the power to prohibit these and other transactions even if approval is not required, and could do so if we have otherwise failed to comply with all laws and regulations applicable to us. We are also subject to supervision, regulation, examination and enforcement by the Consumer Financial Protection Bureau ("CFPB") with respect to consumer protection laws and regulations.

Proposals to change the laws and regulations governing the banking industry are frequently introduced in Congress, in the state legislatures and before the various banking regulatory agencies. The Dodd-Frank Act, which was enacted in July 2010, significantly restructured the financial regulatory regime in the United States. Provisions of the Dodd-Frank Act that have had or may have a material effect on our business include, among others, repealing the federal prohibitions on the payment of interest on demand deposits, thereby permitting depository institutions to pay interest on corporate transaction and other accounts, and imposing additional underwriting standards on mortgages and restricting so-called "high-cost mortgages," including certain mortgages with prepayment penalties. The EGRRCPA, which was enacted in May 2018, amended the Dodd-Frank Act to raise the asset threshold from $50 billion to $250 billion for automatic applicability of enhanced prudential standards for bank holding companies, made several other changes to banking laws, and mandates the federal banking agencies to make certain changes to current regulations. The federal banking agencies have issued final or proposed rules to implement the changes mandated by the EGRRCPA. Existing and future rulemakings have resulted, and may continue to result, in a significant cost of compliance.

Provisions of the Dodd-Frank Act, the EGRRCPA, and increased expectations of our banking regulators more generally, that may have a material effect on our results of operations include, among others, the imposition of additional underwriting standards on mortgages and increased expenses due to heightened regulatory requirements and standards imposed on larger institutions, including: internal audit standards, enterprise risk management standards, and enhanced compliance and standards for internal controls relating to anti-money laundering ("AML"), the Bank Secrecy Act ("BSA") and other matters. In addition, the Dodd-Frank Act, as amended by the EGRRCPA, generally subjects financial institutions with at least $250 billion in total consolidated banking assets to enhanced supervision, both formally and informally, including heightened standards relating to capital stress testing, liquidity stress testing, the establishment and maintenance of a formal resolution plan and an "enhanced" Volcker Rule compliance program. As a result of recent political developments with changes in Congress as well as changes in the leadership of the federal financial regulatory agencies in the United States, banking laws and regulations, including regulations mandated under the Dodd-Frank Act and the EGRRCPA could be further amended, although the timing and extent to which this may occur is presently uncertain.

Continued growth of the Bank may subject us to additional regulatory requirements, including those triggered by progressively larger consolidated asset thresholds, those imposed as a prudential matter by the FDIC, and those triggered by increased activities in certain areas.

California Law

California law governs the licensing and regulation of California commercial banks, including organizational and capital requirements, fiduciary powers, investment authority, branch offices and electronic terminals, declaration of dividends, changes of control and mergers, out of state activities, interstate branching and banking, debt offerings, borrowing limits, limits on loans to one obligor, liquidation, sale of shares or options in the Bank to its directors, officers, employees and others, the purchase by the Bank of its own shares, and the issuance of capital notes or debentures. The DBO is charged with our supervision and regulation.

Under California law, due to an exemption applicable to the Bank, there is no interest rate limitation on loans originated for personal, family or household purposes. However, for certain types of secured loans, California law imposes minimum collateral requirements. In addition, there are certain term and amortization restrictions on loans secured by real property.

Unsecured loans to one person generally may not exceed 15% of the sum of a bank's capital stock, allowance for loan losses and capital notes and debentures, and both secured and unsecured loans to one person (excluding certain secured lending and letters of credit) at any given time generally may not exceed 25% of the sum of a bank's capital stock, allowance for loan losses and capital notes and debentures. Except for limitations on the amount of loans to a single borrower, loans secured by real or personal property may be made to any person without regard to the location or nature of the collateral. We are required to invest our funds in accordance with limitations under California law and may only make investments that are permissible investments for banks, subject to any limitations under any other applicable law.

Under California law, the amount a bank generally may borrow may not exceed its shareholders' equity without the consent of the DBO, except for borrowings from the Federal Home Loan Bank and the Federal Reserve Bank.

In addition to remedies available to the FDIC (which are discussed below), the Commissioner of the DBO (the "Commissioner") may take possession of a bank if certain conditions exist such as insufficient shareholders' equity, unsafe or unauthorized operations, or violation of law.

Capital Requirements

The federal banking agencies have risk-based capital adequacy guidelines intended to provide a measure of capital adequacy that reflects the degree of risk associated with a banking organization's operations both for transactions reported on the balance sheet as assets and for transactions, such as letters of credit and recourse arrangements, that are recorded as off-balance sheet items. The Basel Committee on Banking Supervision (the "Basel Committee") established rules that implement the December 2010 final capital framework ("Basel III"). In July 2013, the FDIC, our primary federal regulator, approved a final rule (the "Basel III Capital Rules") that was issued jointly by the federal banking agencies, which established a new comprehensive capital framework for U.S. banking organizations. The Basel III Capital Rules generally implemented the Basel III framework and became effective as of January 1, 2015.

The Basel III Capital Rules substantially revised the risk-based capital requirements applicable to bank holding companies and depository institutions, including us, compared to the previous U.S. risk-based capital rules. The Basel III Capital Rules revised the definitions and the components of regulatory capital, and addressed other issues affecting the numerator in banking institutions' regulatory capital ratios. The Basel III Capital Rules also addressed asset risk weights and other matters affecting the denominator in banking institutions' regulatory

capital ratios and replaced the previous general risk-weighting approach, which was derived from the "Basel I" capital accords, with a more risk-sensitive approach based, in part, on the "standardized approach" in the Basel Committee's 2004 "Basel II" capital accords. In addition, the Basel III Capital Rules implemented certain provisions of the Dodd-Frank Act, including the requirements of Section 939A to remove references to credit ratings from the federal banking agencies' rules. The Basel III Capital Rules, which became effective as of January 1, 2015, are subject to phase-in periods for certain of their components and other provisions through the end of 2018. In November 2017, the FDIC adopted a final rule, the "Retention of Certain Existing Transition Provisions for Banking Organizations That Are Not Subject to the Advanced Approaches Capital Rules," that was issued jointly by the federal banking agencies, which extended the existing transition provisions under the regulatory capital rules for a targeted set of items, including certain regulatory capital deductions and risk weights as well as certain minority interest requirements for banking organizations not subject to the advanced approaches capital rules, such as the Bank. As such, the transition provisions for certain items will not be fully phased-in until the simplifications notice of proposed rulemaking, the "Simplifications to the Capital Rule Pursuant to the Economic Growth and Regulatory Paperwork Reduction Act of 1996," is completed or the agencies otherwise determine.

Among other matters, the Basel III Capital Rules: (i) introduced a new capital measure called "Common Equity Tier 1" ("CET1") and related regulatory capital ratio of CET1 to risk-weighted assets; (ii) specified that Tier 1 capital consists of CET1 and "Additional Tier 1 capital" instruments, which are instruments treated as Tier 1 instruments under the prior capital rules that meet certain revised requirements; (iii) mandated that most deductions or adjustments to regulatory capital measures be made to CET1 and not to the other components of capital; and (iv) expanded the scope of the deductions from and adjustments to capital as compared to existing regulations. Under the Basel III Capital Rules, for most banking organizations, including us, the most common form of Additional Tier 1 capital is noncumulative perpetual preferred stock and the most common form of Tier 2 capital is subordinated notes and a portion of the allowance for loan and lease losses, in each case, subject to the Basel III Capital Rules' specific requirements.

A "capital conservation buffer" is also required under the Basel III Capital Rules. The capital conservation buffer is designed to absorb losses during periods of economic stress. Banking institutions with a ratio of CET1 to risk-weighted assets above the minimum requirement but below the capital conservation buffer will face constraints on dividends, equity repurchases and compensation based on the amount of the shortfall. The implementation of the capital conservation buffer began on January 1, 2016 at 0.625% and was phased in over a four-year period (increasing by that amount on each subsequent January 1, until it reached 2.5% on January 1, 2019). Thus, effective January 1, 2019, the Bank is required to maintain this additional capital conservation buffer of 2.5% of risk-weighted assets. The following table presents the minimum capital ratios applicable to us under the Basel III Capital Rules as of the dates indicated:

	January 1,				
Capital Measure	**2015**	**2016**	**2017**	**2018**	**2019**
Capital conservation buffer	—	0.625%	1.25%	1.875%	2.5%
CET1 including capital conservation buffer	4.5%	5.125%	5.75%	6.375%	7.0%
Tier 1 risk-based capital including capital conservation buffer	6.0%	6.625%	7.25%	7.875%	8.5%
Total risk-based capital including capital conservation buffer	8.0%	8.625%	9.25%	9.875%	10.5%
Tier 1 leverage	4.0%	4.0%	4.0%	4.0%	4.0%

The Basel III Capital Rules provide for a number of deductions from and adjustments to CET1. These include, for example, the requirement that (i) mortgage servicing rights ("MSRs"), (ii) deferred tax assets ("DTAs") arising from temporary differences that could not be realized through net operating loss carrybacks and (iii) significant investments in non-consolidated financial entities be deducted from CET1 to the extent that any one such category exceeds 10% of CET1 or all such items, in the aggregate, exceed 15% of CET1. Implementation of the deductions and other adjustments to CET1 began on January 1, 2015 and will be phased in over a four-year period (beginning at 40% on January 1, 2015 and an additional 20% per year thereafter) except for certain items for which existing transition provisions in effect for 2017 have been extended.

Under the Basel III Capital Rules, the effects of certain accumulated other comprehensive income or loss items are not excluded from determining regulatory capital ratios; however, non-advanced approaches banking organizations, including the Bank, may make a one-time permanent election to continue to exclude these items. The Bank has elected to exclude these items in order to avoid significant variations in the level of capital depending upon the impact of interest rate fluctuations on the fair value of its available-for-sale securities portfolio.

The Basel III Capital Rules prescribe a standardized approach for risk weightings that depend on the nature of the assets, generally ranging from 0% for U.S. government and agency securities, to 600% for certain equity exposures, and result in higher risk weights for a variety of asset classes, including certain commercial real estate mortgages.

In determining the capital level that we are required to maintain, the federal banking agencies do not follow accounting principles generally accepted in the United States ("GAAP") in all respects and have special rules that may have the effect of reducing the amount of capital they will recognize for purposes of determining our capital adequacy.

In connection with the capital requirements, the FDIC has adopted regulations and guidance that mandate consideration of concentrations of credit risk and risks from non-traditional activities, as well as an institution's ability to manage those risks, when determining the adequacy of an institution's capital. This evaluation is part of the institution's regular safety and soundness examination. The FDIC also adopted regulations requiring consideration of general market risk, including interest rate risk (when the interest rate sensitivity of an institution's assets does not match the sensitivity of its liabilities or its off-balance sheet position), in the evaluation of a financial institution's capital adequacy.

Current Expected Credit Losses Transitional Provisions

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-13, "Financial Instruments—Credit Losses (Accounting Standards Codification ("ASC") 326): Measurement of Credit Losses on Financial Instruments," which revises the methodology for estimating credit losses on loans receivable, held-to-maturity debt securities, and unfunded loan commitments. Under this guidance, the current expected credit losses ("CECL") model is based on lifetime expected losses, rather than incurred losses, and requires the recognition of credit loss expense in the statement of income and a related allowance for credit losses on the balance sheet at the time of origination or purchase of a loan receivable or held-to-maturity debt security. The Bank will adopt this new guidance effective January 1, 2020.

On December 21, 2018, the federal banking agencies approved a final rule modifying their regulatory capital rules, which allow financial institutions that experience a reduction in retained earnings due to the adoption of CECL the option to phase in the effects on regulatory capital over a three-year period. A financial institution that elects to phase in the day-one adverse effects of CECL adoption will phase in the impacts of CECL transitional amounts to its regulatory capital calculations over a three-year period beginning on the first day of the fiscal year in which the financial institution adopts CECL. The transition schedule is as follows: 25% for year one; 50% for year two; 75% for year three; and 100% at the beginning of year four. The transitional CECL amounts relate to the following items: retained earnings, temporary difference deferred tax assets and credit loss allowances eligible for inclusion in regulatory capital. Transitional CECL amounts are equal to the difference between the electing financial institution's closing balance sheet amounts for the fiscal year-end immediately prior to its adoption of CECL and its balance sheet amounts as of the beginning of the fiscal year in which it adopts CECL.

Prompt Corrective Action and Other Enforcement Mechanisms

The Federal Deposit Insurance Act, as amended ("FDIA"), as added by the Federal Deposit Insurance Corporation Improvement Act of 1991, requires the appropriate federal banking agency to take prompt corrective action to resolve the problems of insured depository institutions, including those that fall below one or more prescribed minimum capital ratios. The law requires each federal banking agency to promulgate regulations defining the following five categories in which an insured depository institution will be placed, based on the level of its capital ratios: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.

Under the prompt corrective action provisions of the FDIA, an insured depository institution generally will be classified in the applicable category based on the capital measures indicated in the table below:

Capital Measure	Well-Capitalized	Adequately Capitalized	Undercapitalized	Significantly Undercapitalized
Tier 1 leverage ratio	5% or greater	4% or greater	Less than 4%	Less than 3%
CET1 ratio	6.5% or greater	4.5% or greater	Less than 4.5%	Less than 3%
Tier 1 risk-based capital ratio	8% or greater	6% or greater	Less than 6%	Less than 4%
Total risk-based capital ratio	10% or greater	8% or greater	Less than 8%	Less than 6%

An institution that is classified as "well-capitalized" based on its capital levels may be classified as "adequately capitalized," and an institution that is "adequately capitalized" or "undercapitalized" based upon its capital levels may be treated as though it were undercapitalized or significantly undercapitalized, respectively, if the appropriate federal banking agency, after notice and opportunity for hearing, determines that an unsafe or unsound condition or an unsafe or unsound practice warrants such treatment. At each successive lower capital category, an insured depository institution is subject to progressively more restrictive constraints on operations, management and capital distributions, as the capital category of an institution declines. Failure to meet the capital requirements could also subject a depository institution to capital raising requirements. Ultimately, critically undercapitalized institutions (with tangible equity to total assets of 2% or less) are subject to the appointment of a receiver or conservator.

As of December 31, 2018, the Bank was "well-capitalized" under the prompt corrective action requirements currently in effect, based on the aforementioned ratios.

In addition to measures taken under the prompt corrective action provisions, commercial banking organizations may be subject to potential enforcement actions by the federal banking agencies for unsafe or unsound practices in conducting their businesses or for violations of any law, rule, regulation, condition imposed in writing by the agency or written agreement with the agency. Enforcement actions may include the issuance of formal and informal agreements, the issuance of a cease-and-desist order that can be judicially enforced, the issuance of directives to increase capital, the imposition of civil money penalties, the issuance of removal and prohibition orders against institution-affiliated parties, the termination of insurance of deposits, the imposition of a conservator or receiver, and the enforcement of such actions through injunctions or restraining orders based upon a judicial determination that the agency would be harmed if such equitable relief was not granted.

Stress Testing

In October 2012, as required by Section 165(i) of the Dodd-Frank Act, the FDIC issued final rules regarding bank-run stress testing. The rules required certain financial companies with average total consolidated assets greater than $10 billion, including FDIC-insured state non-member banks such as us, to conduct annual company-run stress tests. Implementation of the rules for covered institutions with total consolidated assets between $10 billion and $50 billion began in 2013. The EGRRCPA amended the Dodd- Frank Act to eliminate company-run stress testing requirements for financial institutions with less than $250 billion in total consolidated

assets, effective as of November 2019. However, bank holding companies with less than $100 billion in total consolidated assets were exempt from such requirements as of the date of enactment of the law. In July 2018, the federal banking agencies, including the FDIC, issued an interagency statement (the “2018 Interagency Statement”), which, among other things, states that the agencies are extending the deadlines for all regulatory requirements related to company-run stress testing for depository institutions with average total consolidated assets of less than $100 billion until November 25, 2019, at which point, under EGRRCPA, such depository institutions, which includes the Bank, would no longer by subject to the Dodd-Frank Act’s requirement to conduct annual company-run stress tests.

Liquidity Rules

Historically, the regulation and monitoring of bank holding companies and bank liquidity has been addressed as a supervisory matter, without required formulaic measures. The Basel III framework requires bank holding companies and banks to measure their liquidity against specific liquidity tests that, although similar in some respects to liquidity measures historically applied by banks and regulators for management or supervisory purposes, going forward would be required explicitly by regulation. One test from the Basel III framework, referred to as the liquidity coverage ratio (“LCR”), is designed to ensure that a banking entity maintains an adequate level of unencumbered high-quality liquid assets (“HQLA”) equal to the entity’s expected net cash outflow for a 30-day time horizon under a liquidity stress scenario. EGRRCPA and the implementing FDIC rule expanded the definition of HQLA to include liquid and readily-marketable municipal obligations. The other test, referred to as the net stable funding ratio (“NSFR”), is designed to promote more medium- and long-term funding of the assets and activities of banking entities over a one-year time horizon. The Basel III Capital Rules and the liquidity coverage ratio rule (“LCR Rule”) do not address the NSFR requirement called for by the final Basel III framework. In 2014, the Basel Committee published the final NSFR rule for internationally active banking organizations and expected such financial institutions to be subject to the rule by January 1, 2018. The U.S. federal banking agencies have proposed but not yet adopted a final NSFR rule.

The federal banking agencies’ LCR Rule imposes standardized minimum liquidity requirements for large, internationally active banking organizations (those with at least $250 billion in total assets or at least $10 billion in on-balance sheet foreign exposure). The Federal Reserve has modified standardized minimum liquidity requirements for bank holding companies and savings and loan holding companies with $50 billion or more in total consolidated assets, however, following the asset threshold amendments under EGRRCPA for application of enhanced prudential standards, the Federal Reserve has proposed to raise the applicability threshold for the modified requirements to banking holding companies and savings and loan holding companies with total consolidated assets above $250 billion or that have $100 billion in consolidated assets and $75 billion or more in nonbank assets, weighted short-term wholesale funding or off-balance sheet exposure.

Because we are a California-chartered, non-member bank without a bank holding company, we are not subject to the LCR Rule or the proposed NSFR. Nevertheless, we maintain on-balance sheet liquidity and a portfolio of HQLA.

Safety and Soundness Standards

Guidelines adopted by the federal banking agencies pursuant to the FDIA establish general safety and soundness standards for depository institutions related to internal controls, vendor management, information security and cybersecurity, loan underwriting and documentation, and asset growth. Among other things, the FDIA limits the interest rates paid on deposits by undercapitalized institutions, restricts the use of brokered deposits, and limits the aggregate extensions of credit by a depository institution to an executive officer, director, principal shareholder or related interest. These standards have not limited our operations in any material way to date.

The federal banking agencies may require an institution to submit an acceptable compliance plan as well as have the flexibility to pursue other more appropriate or effective courses of action given the specific circumstances and severity of an institution's noncompliance with one or more standards.

The FDIC may terminate deposit insurance upon a finding that the institution has engaged in unsafe and unsound practices, is in an unsafe or unsound condition to continue operations, or has violated any applicable law, regulation, rule, order or condition imposed by the FDIC.

Resolution Plans

Under a rule adopted by the FDIC (commonly referred to as the "covered insured depository institution" or "CIDI" Rule), an insured depository institution with $50 billion or more in total assets, such as First Republic Bank, is required to submit periodically to the FDIC a contingency plan for the resolution of such institution in the event of its failure. The rule requires a covered insured depository institution to submit a resolution plan that should enable the FDIC, as receiver, to resolve the institution under applicable receivership provisions of the FDIA in a manner that ensures that depositors receive access to their insured deposits within one business day of the institution's failure (two business days if the failure occurs on a day other than Friday), maximizes the net present value return from the sale or disposition of its assets and minimizes the amount of any loss to be realized by the institution's creditors. If the FDIC determines that a plan is not credible, the insured depository institution will have 90 days to submit a revised plan that addresses the deficiencies identified by the FDIC and discusses revisions made to address such deficiencies. First Republic Bank submitted its initial resolution plan pursuant to this rule in December 2016 and its second such plan in June 2018, and will periodically revise its plan as required.

The FDIC has indicated that it will review its CIDI Rule, including the asset applicability threshold of $50 billion, and undergo a formal rulemaking to amend the CIDI Rule in light of EGRRCPA and any changes made to its joint resolution planning rules with the Federal Reserve for large bank holding companies.

Premiums for Deposit Insurance and Assessments

Our deposits are insured by the FDIC to the fullest extent permissible by law, and we are subject to deposit insurance assessments to maintain the DIF. Deposit insurance assessments are based on average total assets, less average tangible equity. For larger institutions, such as First Republic, the FDIC uses a performance score and a loss-severity score to calculate an initial assessment rate. In calculating these scores, the FDIC uses a bank's capital level and supervisory ratings (its CAMELS ratings) and certain financial measures to assess an institution's ability to withstand asset-related stress and funding-related stress. The FDIC has the ability to make discretionary adjustments to the total score based upon significant risk factors that are not adequately captured in the calculations.

The Dodd-Frank Act increased the minimum for the DIF reserve ratio, which is the ratio of the amount in the DIF to insured deposits, from 1.15% to 1.35% and required that the ratio reach 1.35% by September 30, 2020. Insured depository institutions with $10 billion or more in total assets are responsible for funding this increase. The FDIC has set the long-range, minimum target reserve ratio at 2.0%. At least semi-annually, the FDIC will update its loss and income projections for the DIF and, if needed, will increase or decrease assessment rates, following notice-and-comment rulemaking, if required.

In March 2016, the FDIC approved a final rule to impose a surcharge on insured depository institutions with $10 billion or more in total assets in order to reach a DIF reserve ratio of 1.35%. The surcharge became effective in the third quarter of 2016. On November 20, 2018, the FDIC announced that, as of September 30, 2018, the DIF reserve ratio had reached 1.36%, exceeding the target of 1.35%, which resulted in the third quarter of 2018 being the last quarter that the surcharge is in effect. This resulted in a decrease in our FDIC assessment expense beginning in the fourth quarter of 2018.

Anti-Money Laundering, the USA Patriot Act and Office of Foreign Assets Control Regulation

A major focus of governmental policy on financial institutions is combating money laundering and terrorist financing. The USA PATRIOT Act of 2001 substantially broadened the scope of United States anti-money laundering laws and regulations by imposing significant new compliance and due diligence obligations, creating new crimes and penalties and expanding the extra-territorial jurisdiction of the United States. Financial institutions are also prohibited from entering into specified financial transactions and account relationships and must use enhanced due diligence procedures in their dealings with certain types of high-risk customers and implement a written customer identification program. Financial institutions must also take certain steps to assist government agencies in detecting and preventing money laundering and to report certain types of suspicious transactions.

In addition, the United States has imposed economic sanctions that affect transactions with designated foreign countries, nationals and others which are administered by the U.S. Treasury Department Office of Foreign Assets Control.

Failure of a financial institution to maintain and implement adequate programs to combat money laundering and terrorist financing and to prohibit transactions with targets of sanctions, or to comply with all of the relevant laws or regulations, could have serious legal and reputational consequences for the institution.

Consumer Financial Protection Bureau Supervision

The CFPB, created by the Dodd-Frank Act, is directed to prevent unfair, deceptive and abusive practices and ensure that all consumers have access to markets for consumer financial products and services, and that such markets are fair, transparent and competitive. The CFPB has authority under the Dodd-Frank Act to enforce and issue rules and regulations implementing existing consumer protection laws and is responsible for all such existing laws and regulations. Depository institutions with assets exceeding $10 billion (such as us), their affiliates, and other “larger participants” in the markets for consumer financial services (as determined by the CFPB) are subject to direct supervision by the CFPB, including any applicable examination, enforcement and reporting requirements the CFPB may establish.

The CFPB has finalized a number of significant rules, which impact nearly every aspect of the lifecycle of a residential mortgage loan. These rules implement the Dodd-Frank Act amendments to the Equal Credit Opportunity Act, the Truth-in-Lending Act (“TILA”) and the Real Estate Settlement Procedures Act (“RESPA”). Among other things, the rules adopted by the CFPB require banks to: (i) develop and implement procedures to ensure compliance with a “reasonable ability-to-repay” test (as discussed below); (ii) implement new or revised disclosures, policies and procedures for originating and servicing mortgages, including, but not limited to, pre-loan counseling, early intervention with delinquent borrowers and specific loss mitigation procedures for loans secured by a borrower’s principal residence, and mortgage origination disclosures, which integrate existing requirements under TILA and RESPA; (iii) comply with additional restrictions on mortgage loan originator hiring and compensation; and (iv) comply with new disclosure requirements and standards for appraisals and certain financial products.

Banking regulators take into account compliance with consumer protection laws when considering approval of a proposed transaction.

Ability-to-Repay Requirement

The Dodd-Frank Act amended the TILA to require that mortgage lenders show that they have verified the borrower’s ability to repay a residential mortgage loan (which does not include HELOCs). Borrowers who bring actions within three years of a violation of the ability-to-repay requirement could be entitled to statutory damages equal to the sum of all financing charges and fees. In addition, a borrower can assert a violation of the ability-to-repay

requirement in a foreclosure proceeding as a matter of defense by recoupment or setoff against the lender or any assignee of the lender, without time limit. In January 2013, the CFPB issued a final rule establishing the underwriting practices that are required by the ability-to-repay requirement. The rule further provides that lenders of mortgages that meet a "qualified mortgage" standard, however, may have a safe harbor or a presumption of compliance with the requirement.

Qualified mortgages cannot have negative amortization, interest-only payments, or balloon payments, terms over 30 years, or points and fees over certain thresholds. Qualified mortgages also have underwriting requirements that include verification of income, underwriting based on a fully amortizing payment schedule and the maximum interest rate during the first five years, and a 43% debt-to-income ratio. Lenders of qualified mortgages are granted either a safe harbor or a rebuttable presumption of compliance, depending on whether the qualified mortgage is a "higher priced" mortgage as compared to the average rates for comparable transactions. The final rule also prohibits prepayment penalties for residential mortgage loans, except for qualified mortgages that are not higher priced. The qualifying mortgage rule became effective in January 2014.

Incentive Compensation

Guidelines adopted by the federal banking agencies pursuant to the FDIA prohibit excessive compensation as an unsafe and unsound practice and describe compensation as excessive when the amounts paid are unreasonable or disproportionate to the services performed by an executive officer, employee, director or principal shareholder.

In June 2010, the federal banking agencies issued comprehensive guidance on incentive compensation policies intended to ensure that the incentive compensation policies of banking organizations do not undermine the safety and soundness of such organizations by encouraging excessive risk-taking. This guidance, which covers all employees who have the ability to materially affect the risk profile of an organization, either individually or as part of a group, is based upon the key principles that a banking organization's incentive compensation arrangements should (i) provide incentives that do not encourage risk-taking beyond the organization's ability to effectively identify and manage risks, (ii) be compatible with effective internal controls and risk management, and (iii) be supported by strong corporate governance, including active and effective oversight by the organization's board of directors. Any deficiencies in compensation practices that are identified may be incorporated into the organization's supervisory ratings, which can affect its ability to make acquisitions or perform other actions. These three principles are incorporated into the proposed joint compensation regulations under the Dodd-Frank Act, discussed below. The guidance provides that enforcement actions may be taken against a banking organization if its incentive compensation arrangements or related risk-management control or governance processes pose a risk to the organization's safety and soundness and the organization is not taking prompt and effective measures to correct the deficiencies.

The Dodd-Frank Act requires the federal banking agencies and the SEC to establish joint regulations or guidelines for specified regulated entities, such as us, having at least $1 billion in total assets, to prohibit incentive-based payment arrangements that encourage inappropriate risk-taking by providing an executive officer, employee, director or principal shareholder with excessive compensation, fees, or benefits or that could lead to material financial loss to the entity. In addition, these regulators must establish regulations or guidelines requiring enhanced disclosure to regulators of incentive-based compensation arrangements. The agencies initially proposed such regulations in April 2011, and in April 2016, proposed a new rule to implement such regulations. Although final rules have not yet been adopted as of February 2019, and if finalized, would not be effective until the first day of the calendar quarter that begins at least 540 days after publication of the final rule in the Federal Register, if these or other regulations are adopted in a form similar to that proposed, they will impose limitations on the manner in which we may structure compensation for our executives and certain other employees.

The scope and content of the federal banking agencies' policies on incentive compensation are continuing to develop and are likely to continue evolving.

Community Reinvestment Act and Fair Lending

We are subject to certain fair lending requirements and reporting obligations involving home mortgage lending operations. We are also subject to the CRA. The CRA generally requires the federal banking agencies to evaluate the record of a financial institution in meeting the credit needs of its local communities, including low- and moderate- income neighborhoods in a safe and sound manner. In addition to substantive penalties and corrective measures that may be required for a violation of certain fair lending laws, the federal banking agencies may take compliance with such laws and CRA into account when regulating and supervising other activities. Federal regulators are required to provide a written examination report of an institution's CRA performance using a four-tiered descriptive rating system. We received a rating of "Satisfactory" in our most recent CRA examination. These ratings and written examination reports are available to the public.

Fair lending laws prohibit discrimination in the provision of banking services. The enforcement of these laws has been an increasing focus for bank regulators. Fair lending laws include the Equal Credit Opportunity Act (and Regulation B thereunder) and the Fair Housing Act, which outlaw discrimination in credit transactions and residential real estate transactions on the basis of prohibited factors including, among others, race, color, national origin, sex, and religion. A lender may be liable under these laws through administrative enforcement or private civil actions for policies that result in a disparate treatment of, or have a disparate impact on, a protected class of applicants or borrowers. We are required to have a fair lending program that is of sufficient scope to monitor the inherent fair lending risk of the institution and that appropriately remediates issues which are identified.

Permissible Financial Activities

The Bank conducts certain of its activities through wholly-owned subsidiary companies with activities limited to "bank eligible" activities that are permissible for a bank to conduct directly. These include securities brokerage, dealing in U.S. government and municipal securities, investment advisory, insurance agency, trust company, lending, payment processing and certain other activities. These subsidiaries are subject to regulation and supervision of the FDIC and DBO as well as various other state and federal financial regulators. The Bank also invests in small business investment companies ("SBICs"), low income housing tax credit funds ("LIHTC funds") and other companies or funds that engage in lending or investment activities consistent with the CRA and the public welfare investment powers of FDIC-insured California state chartered banks, subject to the investment limits specified under applicable banking laws.

Insured state non-member banks, including us, are also permitted to engage through "financial subsidiaries" in certain activities which have been determined by the Federal Reserve to be financial in nature or incidental to financial activity. To engage in such activities, the bank must be well-managed and the bank and its insured depository institution affiliates must each be well-capitalized and have received at least a "Satisfactory" rating in its most recent CRA examination. The Bank must also deduct the aggregate amount of its outstanding equity investment in financial subsidiaries, including retained earnings, from the bank's capital and assets for purposes of calculating regulatory capital ratios and must disclose this fact in any published financial statements. Additionally, the Bank must comply with Sections 23A and 23B of the Federal Reserve Act, which place quantitative and qualitative limits on transactions with a depository institution's affiliates, including restrictions on extensions of credit to affiliates, and comply with certain financial and operational standards as though the financial subsidiaries were subsidiaries of a national bank. At the present time, the Bank has no "financial subsidiaries."

The Dodd-Frank Act prohibits banks and their affiliates from engaging in proprietary trading and investing in and sponsoring hedge funds and private equity funds and other private funds that are offered within specified exemptions to the Investment Company Act, known as "covered funds," subject to certain detailed exemptions. The statutory provision is commonly called the "Volcker Rule." In December 2013, federal regulators adopted final rules to implement the Volcker Rule. Due to our consolidated assets exceeding $50 billion, we have

implemented an "enhanced" compliance program as required by the Volcker Rule, but are not required to report quantitative metrics under the Volcker Rule due to the limited size of our trading assets and liabilities.

Financial Privacy

Under federal and state statutes and FDIC and SEC regulations, we are limited in our ability to disclose non-public information about consumers to nonaffiliated third parties. These limitations require disclosure of privacy policies to consumers and, in some circumstances, allow consumers to prevent disclosure of certain personal information to a nonaffiliated third party or to affiliates for marketing to that consumer. These regulations affect how consumer information is transmitted through diversified financial companies or conveyed to outside vendors. Changes or additions to these regulations, including the California consumer privacy legislation adopted in 2018, may result in implementation and risk management costs, as well as risk to the Bank.

In connection with the regulations governing the privacy of consumer financial information, the federal banking agencies, including the FDIC, have also adopted guidelines for establishing information security standards and programs to protect such information under the supervision of the board of directors.

Restrictions on Dividends and Other Distributions

The power of the board of directors of an insured depository institution to declare a cash dividend or other distribution with respect to capital is subject to statutory and regulatory restrictions that limit the amount available for such distribution depending upon earnings, financial condition and cash needs of the institution, as well as general business conditions. Insured depository institutions are also prohibited from paying management fees to any controlling persons or, with certain limited exceptions, making capital distributions, including dividends, if after such transaction the institution would be less than adequately capitalized.

Under California law, we may not make a distribution to shareholders that exceeds the lesser of (i) our retained earnings or (ii) our net income for the last three fiscal years, less the amount of any distributions made during that period. With the Commissioner's approval, however, we may make a distribution that does not exceed the greater of (i) our retained earnings, (ii) our net income for our last fiscal year or (iii) our net income for our current fiscal year. The Commissioner may otherwise limit our distributions to shareholders if the Commissioner finds that the shareholders' equity is not adequate or that such distributions would be unsafe or unsound for us.

The federal banking agencies also have authority to prohibit depository institutions from engaging in business practices that are considered unsafe or unsound, possibly including payment of dividends or other payments under certain circumstances even if such payments are not expressly prohibited by statute.

It is anticipated that our capital planning and risk management will be considered by the FDIC in evaluating whether proposed payments of dividends or stock repurchases may be an unsafe or unsound practice.

Change in Bank Control

Under the Change in Bank Control Act (the "CIBCA"), a notice must be submitted to the FDIC if any person (including a company), or group acting in concert, seeks to acquire "control" of us. Control is defined as the power, directly or indirectly, to direct our management or policies or to vote 25% or more of any class of our outstanding voting securities. Additionally, a rebuttable presumption of control arises when any person (including a company), or group acting in concert, seeks to acquire 10% or more, but less than 25%, of any class of our outstanding voting securities which are publicly traded. When reviewing a notice under the CIBCA, the FDIC will take into consideration the financial and managerial resources of the acquirer, the convenience and needs of the communities served by us, the anti-trust effects of the acquisition and other factors. California law similarly requires prior approval of the Commissioner of any change in control. Under the Bank Holding

Company Act of 1956, as amended (the "BHCA"), any company that is not an existing bank holding company would be required to obtain prior approval from the Federal Reserve before it could obtain "control" of us (and thereby become a bank holding company) within the meaning of the BHCA. Control generally is defined to mean the ownership or power to vote 25% or more of any class of our voting securities, the ability to control in any manner the election of a majority of our directors or the ability to exercise a controlling influence over our management and policies. An existing bank holding company would be required to obtain the Federal Reserve's prior approval under the BHCA before acquiring more than 5% of any class of our voting securities.

Other Regulatory Matters

Insured depository institutions of our size must undergo a full-scope, on-site examination by their primary federal banking agency at least once every 12 months. The cost of examinations of insured depository institutions and any affiliates may be assessed by the appropriate federal banking agency against each institution or affiliate, as it deems necessary or appropriate. As a result of our current asset size, our regulators, the FDIC and DBO, now utilize an exam team that remains on site throughout the year, as is consistent with their large bank supervision practices.

Regulations require insured depository institutions to adopt written policies establishing appropriate limits and standards, consistent with such guidelines adopted by the federal banking agencies, for extensions of credit secured by real estate or made for purposes of financing permanent improvements to real estate.

The FDIC has also adopted regulations imposing minimum requirements on us with respect to appraisals obtained in connection with certain real estate related financial transactions. Appraisals by state-certified or state-licensed appraisers are required for all such transactions unless an exemption applies. The more common exceptions relate to smaller transactions and transactions that are not secured by real estate. Appraisals must comply with the FDIC's appraisal standards, and appraisal reports must be issued in writing.

Tax Reform

In December 2017, tax reform legislation (the "Tax Reform Act"), was enacted into law. The Tax Reform Act includes a number of provisions, such as the following:

- Reduced the federal tax rate for corporations from 35% to 21%, effective January 1, 2018.
- Disallowed the federal income tax deduction of FDIC deposit insurance premiums for banking organizations with total consolidated assets of $50 billion or more. As a result, we no longer deduct our FDIC deposit insurance premiums beginning in 2018.
- Limited mortgage interest, home equity interest and state and property tax deductions for homeowners.

For additional discussion of the impact of the Tax Reform Act, refer to "Item 1A. Risk Factors" and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

Future Legislation

Congress may enact legislation from time to time that affects the regulation of the financial services industry, and state legislatures may enact legislation from time to time affecting the regulation of financial institutions chartered by or operating in those states. Federal and state regulatory agencies also periodically propose and adopt changes to their regulations or change the manner in which existing regulations are applied. The substance or impact of pending or future legislation or regulation, or the application thereof, cannot be predicted, although enactment of the proposed legislation could impact the regulatory structure under which we operate and may significantly increase our costs, impede the efficiency of our internal business processes, require us to increase our regulatory capital and modify our business strategy, and limit our ability to pursue business

opportunities in an efficient manner. Recent political developments have added additional uncertainty to the implementation, scope and timing of regulatory reforms, including potential deregulation in some areas. The passage of the EGRRCPA is consistent with these developments and we may see continued legislative efforts at deregulation going forward.

Available Information

We are subject to the information reporting requirements of the Exchange Act, as administered and enforced by the FDIC, and we are subject to FDIC rules promulgated thereunder. Consequently, we file annual, quarterly and current reports, proxy statements and other information with the FDIC, copies of which are made available to the public over the Internet at https://efr.fdic.gov/fcxweb/efr/index.html.

We make available, free of charge through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, definitive proxy statements and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after such reports are filed with or furnished to the FDIC. Additionally, we have adopted and posted on our website a code of ethics that applies to our principal executive officer, principal financial officer and principal accounting officer. Within the required time period, we will post on our website any amendment to the code of ethics and any waiver applicable to any executive officer, director or senior financial officer. Our website also includes our corporate governance guidelines and the charters for our audit committee, our compensation committee, and our corporate governance and nominating committee. The address for our website is firstrepublic.com.

You may also request a copy of any of the aforementioned documents at no cost by writing or by telephoning us at the following address or telephone number:

First Republic Bank
111 Pine Street, 2nd Floor
San Francisco, CA 94111
Attention: Investor Relations
(415) 392-1400

Item 1A. Risk Factors.

We are subject to a variety of risks, some of which are specific to us and some of which are inherent to the financial services industry. There are risks, many beyond our control, that could cause our financial condition, liquidity or results of operations to differ materially from management's expectations. This Annual Report on Form 10-K may not describe all of those risks. Some of the risks that may affect us are described below. Any of the risks described below, by itself or together with one or more other factors, may materially and adversely affect our business, results of operations, liquidity or financial condition or the market price or liquidity of our common stock. The risks presented below are not the only risks that we face. Additional risks that we do not presently know or that we currently deem immaterial may also materially and adversely affect our business, results of operations, liquidity or financial condition or the market price or liquidity of our common stock. Further, to the extent that any of the information contained in this Annual Report on Form 10-K constitutes forward-looking statements, the risk factors below also are cautionary statements identifying important factors that could cause actual results to differ materially from those expressed in any such forward-looking statements. *See "Information Regarding Forward-Looking Statements" on page 3.*

Risks Related to Our Business

We face significant competition to attract and retain banking clients.

We operate in the highly competitive banking industry and face significant competition for banking clients from other banks and financial institutions located both within and beyond our principal markets. We compete with commercial banks, savings and loan associations, mortgage companies, insurance companies, credit unions, non-bank financial services companies, money market funds, brokerage firms and other financial institutions operating within or near the areas we serve, particularly service-focused community banking institutions that target the same clients we do. We also face competition for home loans from large, nationwide banks and for deposits from nationwide and regional banks specializing in private banking. Additionally, we compete with companies that solicit loans and deposits or offer asset management services in our principal markets or over the Internet.

Many of our non-bank competitors are not subject to the same extensive regulations that govern our activities and may have greater flexibility in competing for business. Many of our competitors are also larger and have significantly more resources, greater name recognition and larger market shares than we do, enabling them to maintain more banking locations, mount extensive promotional and advertising campaigns and be more aggressive than we are in competing for loans and deposits. Certain of our similarly sized competitors may be acquired by larger institutions, thus giving them certain incremental competitive advantages. We expect competition to continue to intensify due to the continuing consolidation of many financial institutions. The financial services industry could become even more competitive as a result of legislative, regulatory and technological changes. Additionally, some of our current commercial banking clients may seek alternative banking sources as they develop needs for credit facilities larger than we may be able to accommodate.

In addition, technology has lowered barriers to entry and made it possible for non-banks to offer products and services traditionally provided by banks, such as automatic transfer and automatic payment systems. In addition, we compete with other alternative lenders, including "marketplace" lenders, peer-to-peer lenders, and other financial technology ("FinTech") lenders. Our ability to compete successfully will depend on a number of factors, including, among other things:

- Our ability to build and maintain long-term client relationships while ensuring safe and sound banking practices;
- The scope, relevance and pricing of products and services offered to meet client needs and demands;
- The regulatory environment for FinTech lenders as compared to traditional banks;
- Client satisfaction with our products and services; and
- Industry and general economic trends.

Our failure to perform or weakness in any of these areas could significantly and negatively impact our competitive position, which could adversely affect our growth and profitability, which, in turn, could have a material adverse effect on our business, results of operations or financial condition. See "Item 1. Business—Competition."

The markets in which we operate are subject to the risk of earthquakes and other natural disasters.

A significant number of our properties, and real estate properties currently securing loans made by us and our borrowers in general, are located in California. California has had and will continue to have major earthquakes in many areas, including the San Francisco Bay Area, where a significant portion of the collateral and assets of our borrowers is concentrated, and the Southern California coastal regions. At December 31, 2018, approximately 50% of our loans outstanding were secured by real estate located in California.

California is also prone to brush and forest fires, mudslides and other natural disasters, the frequency and severity of which have increased in recent years and may be impacted by climate change. A number of these properties are not insured against such occurrences. Borrowers are not required to and may not insure for these hazards other than fire damage. In addition to possibly sustaining damage to our premises and disruption of our operations, if there is a major earthquake, flood, fire or other natural disaster in California or elsewhere in our markets, we will face the risk that many of our borrowers may experience uninsured property losses or sustained job interruption or loss that may materially impair their ability to meet the terms of their loan obligations. A major earthquake, flood, drought, fire, pandemic or other natural disaster in our California markets or our other markets could materially and adversely affect our business, results of operations or financial condition.

We are subject to interest rate risk.

Fluctuations in interest rates may negatively impact our banking business. Our primary source of income from operations is net interest income, which is the difference between the interest income received on interest-earning assets (primarily loans and investment securities) and the interest expense incurred on interest-bearing liabilities (usually deposits and borrowings). The level of net interest income is primarily a function of the average balance of interest-earning assets, the average balance of interest-bearing liabilities and the spread between the yield on such assets and the cost of such liabilities during a given period. These factors are influenced by the pricing and mix of both interest-earning assets and interest-bearing liabilities which, in turn, are impacted by external factors such as the local economy, client demand and product preferences, competition for loans and deposits, the monetary policy of the Federal Open Market Committee of the Federal Reserve System (the "FOMC") and market interest rates. In December 2015, the FOMC began tightening monetary policy and has since increased the Federal Funds rate to a target range of 2.25% to 2.50% in December 2018.

The rate paid on our deposits and short-term borrowings is largely based on short-term interest rates, the level of which is driven primarily by the FOMC's monetary policy actions. However, the yields generated by our loans and securities may also be driven by medium- and longer-term interest rates, which are set by the market and at times, the FOMC's actions. The level of net interest income is therefore influenced by movements in such interest rates and the pace at which such movements occur. If the interest rates on our interest-bearing liabilities increase faster than the interest rates on our interest-earning assets, our net interest income may decline and with it, a decline in our earnings may occur. As a result, our business, results of operations or financial condition may be adversely affected, perhaps materially.

Furthermore, our securities portfolio includes long-term municipal bonds with fixed interest rates. The yields on these bonds do not change with prevailing interest rates. In a rising rate environment, the prices of such securities would likely decline, which may result in unrealized losses for the Bank. Although most of our long-term municipal bonds are held-to-maturity, if we were to sell these securities we would have to recognize such losses in earnings, which could be material.

Changes in interest rates can also affect the slope of the yield curve and could also impact the net interest margin. A negative shift in the yield curve or a flatter or inverted yield curve could cause our net interest income and net interest margin to contract, which could have a material adverse effect on our net interest income, as well as the value of our assets. Changes in the yield curve may also adversely affect the expected cash flows of certain investment securities or loans by increasing prepayment risk.

An increase in interest rates could also have a negative impact on our results of operations by reducing the ability of borrowers to make payments under their current adjustable-rate loan obligations. These circumstances could not only result in increased loan defaults, foreclosures and charge-offs, but also necessitate further increases to the allowance for loan losses, which may materially and adversely affect our business, results of operations or financial condition.

Our operations are concentrated geographically in California, particularly San Francisco, and the Northeastern United States, and poor economic conditions in these areas could adversely affect the demand for our products and our credit quality.

Our operations are located primarily in Northern and Southern California and the New York City and Boston metropolitan areas. Local economic conditions in these areas can have a significant impact on the demand for our products and services, our loans and wealth management business, the ability of borrowers to pay interest on and repay the principal of these loans, and the value of the collateral securing these loans. Adverse changes in economic conditions in these markets may negatively affect our business, results of operations or financial condition. Our loan portfolio, in particular, is concentrated in California in general and the San Francisco Bay Area in particular. As of December 31, 2018, approximately 50% of our loans outstanding were secured by real estate located in California and approximately 32% of our loans outstanding were secured by real estate in and around the San Francisco Bay Area. Declines in values in the California real estate market could have an adverse impact on our borrowers and on the value of the collateral securing many of our loans, which in turn could adversely affect our currently performing loans, leading to future delinquencies or defaults and increases in our provision for loan losses. Furthermore, weak employment trends in our markets could negatively impact our clients' ability to repay their loans.

Our business may be adversely affected by conditions in the financial markets and economic conditions generally.

Our financial performance generally, and in particular, the ability of borrowers to pay interest on and repay the principal of outstanding loans and the value of collateral securing those loans, as well as demand for loans and other products and services we offer and whose success we rely on to drive our future growth, is highly dependent on the business environment in the markets in which we operate and in the United States as a whole. Some elements of the business environment that affect our financial performance include short-term and long-term interest rates, the prevailing yield curve, inflation, consumer spending, employment levels, home prices, bankruptcies, U.S. fiscal and monetary policies, fluctuations in the debt and equity capital markets, and the strength of the domestic economy and the local economies in the markets in which we operate. Unfavorable market conditions can result in a deterioration of the credit quality of borrowers, an increase in the number of loan delinquencies, defaults and charge-offs, additional provisions for loan losses, adverse asset values and a reduction in assets under management or administration. The majority of our loan portfolio is secured by real estate. A decline in real estate values can negatively impact our ability to recover our investment should the borrower become delinquent. Loans secured by stock or other collateral may be adversely impacted by a downturn in the economy and other factors that could reduce the recoverability of our investment. Unsecured loans are dependent on the solvency of the borrower, which can deteriorate, leaving us with a risk of loss. Unfavorable or uncertain economic and market conditions can be caused by declines in economic growth, business activity or investor or business confidence, limitations on the availability of or increases in the cost of credit and capital, increases in inflation or interest rates, high unemployment, natural disasters, state or local government insolvency, or a combination of these or other factors. Economic slowdown and instability outside of the United States may adversely affect economic and market conditions in the United States.

Uncertainty about the federal fiscal policymaking process, the medium and long-term fiscal outlook of the federal government, future tax rate changes and employment costs is a concern for businesses, consumers and investors in the United States. Any unfavorable impacts of recently enacted tax reform, unfavorable changes in the general business environment in which we operate, or in the United States as a whole or abroad, could adversely affect our business, results of operations or financial condition.

We face significant competition to attract and retain wealth management clients.

We face significant competition to attract and retain wealth management clients primarily from commercial banks, trust companies, mutual funds, investment advisory firms, brokerage firms, investment companies, insurance companies, and other financial services companies. We also compete with private equity firms, venture capital, hedge funds and other alternative investment firms, and Internet-based companies. Competition is especially keen in our principal markets because numerous well-established and successful investment advisory and brokerage firms exist throughout each of the markets in which we operate. In addition, the Bank faces increased competition from firms offering lower-priced investment products and services, including automated investment management services and index funds. Our ability to successfully attract and retain wealth management clients will depend on, among other things, our ability to compete with our competitors' scope and quality of investment products and services offered, level of investment performance, price, client services, marketing and distribution capabilities. In addition, our ability to retain wealth management clients may be impaired by the fact that investment advisory and brokerage contracts are typically terminable at will. Most of our clients may withdraw funds from accounts under management or administration at their discretion or close accounts at any time for any reason, including the performance of the investment account, a change in an investment strategy, change in investment advisor or any other reason in their discretion. If we cannot effectively compete to attract and retain clients, our business, results of operations or financial condition may be adversely affected.

The profitability of our wealth management business has been impacted in the past several years as a result of investments in acquiring assets and key personnel and the costs of maintaining and improving a business platform that can support a substantial asset base. Profitability in this area is also a function of the incurrence of legal and compliance costs and the management of lower-margin assets, such as sub-advisory, brokerage, money market and custody assets that support our overall client service and relationship model. Further increased costs in our wealth management business could materially and adversely affect our business, results of operations or financial condition.

We must maintain and follow high underwriting standards to grow safely.

Our ability to grow our assets safely depends on maintaining disciplined and prudent underwriting standards and ensuring that our relationship managers and business bankers follow those standards. The weakening of these standards for any reason, such as to seek higher yielding loans, or a lack of discipline or diligence by our employees in underwriting and monitoring loans, may result in loan defaults, foreclosures and additional charge-offs and may necessitate that we significantly increase our allowance for loan losses, each of which could adversely affect our net income. As a result, our business, results of operations or financial condition could be adversely affected.

Our ability to maintain, attract and retain client relationships is highly dependent on our reputation.

Our clients rely on us to deliver superior, highly personalized financial services with the highest standards of ethics, performance, professionalism and compliance. A significant source of new clients has been, and we expect will continue to be, the reputation we maintain and the recommendations of satisfied clients. Damage to our reputation could undermine the confidence of our current and potential clients in our ability to provide financial services. Such damage could also impair the confidence of our counterparties and business partners, and ultimately affect our ability to effect transactions. Maintenance of our reputation depends not only on our success

in maintaining our service-focused culture and controlling and mitigating our various risk exposures, including those described in this Annual Report on Form 10-K, but also on our success in identifying and appropriately addressing issues that may arise in areas such as potential conflicts of interest, anti-money laundering, client personal information, cybersecurity and privacy issues, record-keeping, regulatory investigations and any litigation that may arise from our failure or perceived failure to comply with legal and regulatory requirements.

Maintaining our reputation also depends on our ability to successfully prevent third-parties from infringing on the "First Republic" brand and associated trademarks. In addition, adverse or misleading publicity or information distributed on social media websites or other media, whether or not factually correct, may harm our reputation and affect our ability to attract and retain client relationships. Defense of our reputation and our trademarks, including through litigation, could result in costs adversely affecting our business, results of operations or financial condition.

Our wealth management business may be negatively impacted by changes in economic and market conditions, and clients have sought and may continue to seek legal remedies for investment performance.

Our wealth management business may be negatively impacted by changes in general economic and market conditions because the performance of such business is directly affected by conditions in the financial and securities markets.

The financial markets and businesses operating in the securities industry are highly volatile (meaning that performance results can vary greatly within short periods of time) and are directly affected by, among other factors, domestic and foreign economic conditions, general trends in business and finance, and changes to the securities laws and regulations, all of which are beyond our control. We cannot guarantee that broad market performance will be favorable in the future. Declines in the financial markets or a lack of sustained growth may result in declines in the performance of our wealth management business and the level of assets under management or administration.

The investment advisory contracts of FRIM, our investment advisory subsidiary, generally provide for fees payable for investment advisory services based on the market value of assets under management. Because most contracts provide for fees based on the market values of securities, declines in securities prices may reduce our wealth management fees and have an adverse effect on our business, results of operations or financial condition.

In addition, following periods of volatile or declining market conditions, investment advisory or brokerage clients may seek legal remedies for investment performance. We may be required to defend against lawsuits involving our broker-dealer and investment management subsidiaries arising from clients' investment losses. These types of lawsuits may result in significant legal expenses or other costs that may not be covered by insurance. We may also face reputational risks with regard to such suits which could impair our ability to effectively compete to attract and retain clients. As a result, any such current or future lawsuits could adversely affect our business, results of operations or financial condition.

Our operations and clients are concentrated in the United States' largest metropolitan areas, which could be the target of terrorist attacks.

The vast majority of our operations and our clients and 87% of the properties securing our real estate loans outstanding are located in the San Francisco Bay Area and the New York City, Los Angeles, and Boston metropolitan areas. These areas have been and may continue to be the target of terrorist attacks. A successful, major terrorist attack in one of these areas could severely disrupt our operations and the ability of our clients to do business with us and cause losses to loans secured by properties in these areas. Such an attack would therefore adversely affect our business, results of operations or financial condition.

Reforms of Fannie Mae and Freddie Mac and the Federal Home Loan Banks could reduce demand for residential mortgage loans, limit our ability to sell residential mortgage loans in the secondary market and affect our funding sources.

The U.S. Congress may consider reforms to the federal government's involvement in the housing market. Reforms could include reducing the scale of Fannie Mae's and Freddie Mac's secondary purchases of residential mortgage loans or winding down these entities entirely. This could significantly reduce the amount of residential mortgage loans that we can sell in the secondary market, which would limit the amount of loans we can originate and in turn limit our ability to create new relationships, manage our growth and earn revenue from loan sales and servicing. Reforms could also include cutting back or eliminating the Federal Home Loan Bank system, which could remove a significant source of term funding for our lending activities and likewise limit our ability to originate loans and manage our interest rate risk. Such reforms could also raise interest rates for residential mortgage loans, thereby reducing demand for our primary lending products, and could have an adverse effect on our business, results of operations or financial condition.

The reduction or elimination of the home mortgage interest income tax deduction could reduce demand for our residential mortgage loans.

Under federal income tax law prior to the Tax Reform Act, homeowners could deduct from their taxable income interest on mortgage loans with a principal amount of up to $1 million secured by first or certain second homes. Under the Tax Reform Act, beginning in 2018, homeowners who purchased a home on or after December 15, 2017 may deduct interest on mortgage loans with a principal amount of up to $750,000 that are secured by such homes. The impact of this change will increase the after-tax cost of mortgage loans to certain home buyers and owners, particularly those with higher incomes, and could therefore reduce demand for residential mortgage loans and depress housing prices. The U.S. Congress may consider further reducing the benefit of this deduction, such as by limiting total itemized deductions, allowing deductible expenses to be deducted only at rates less than the highest marginal tax rate, phasing out deductions over specified income thresholds, or eliminating the deduction entirely. Single family mortgage lending constitutes a majority of our lending business. Our most popular mortgage loan product has an initial interest-only period. The reduction in the benefit of the home mortgage interest deduction implemented by the Tax Reform Act and any further reductions to this benefit in the future could materially and adversely affect our business, results of operations or financial condition.

The repeal of federal prohibitions on payment of interest on demand deposits could increase our interest expense.

As of December 31, 2018, we had $29.4 billion of noninterest-bearing business checking accounts and $2.4 billion of interest-bearing business checking accounts. Since July 2011 when the prohibition of depository institutions offering interest-bearing demand deposits was repealed by the Dodd-Frank Act, we have offered interest-bearing corporate checking accounts. If we need to offer higher interest rates on checking accounts to maintain current clients or attract new clients, our interest expense will increase, perhaps materially. Furthermore, if we fail to offer interest in a sufficient amount to keep these demand deposits, our core deposits may be reduced, which would require us to obtain funding in other ways or risk slowing our future asset growth.

Downgrades of the U.S. government's credit rating could have a material adverse effect on our business, financial condition and liquidity.

Future uncertainty over U.S. fiscal policy could result in a downgrade or a reduction in the outlook of the U.S. long-term sovereign credit rating by one or more credit ratings agencies. Any downgrade, or perceived future downgrade, in the U.S. sovereign credit rating or outlook could adversely affect global financial markets and economic conditions. Prices of U.S. Treasury securities and debt securities issued by Fannie Mae, Freddie Mac and other government-sponsored or government-related entities may be adversely affected by past or future

credit rating downgrades. Further, the Federal Home Loan Banks, Fannie Mae and Freddie Mac may face higher costs of capital that could reduce their lending and secondary mortgage market activities, respectively, or increase the cost of any future advances which we may borrow from the Federal Home Loan Bank of San Francisco. As a member of the Federal Home Loan Bank of San Francisco, we are required to maintain stock ownership at least equal to 2.7% of outstanding advances.

The investments we currently own that may be impacted by such a downgrade totaled $8.3 billion at December 31, 2018, or approximately 8% of our total assets. These investments consisted of $8.0 billion of U.S. Government-sponsored agency securities, and mortgage-backed securities ("MBS") issued by government agencies or collateralized by MBS issued by government agencies and $273.2 million of Federal Home Loan Bank stock. See Note 2 in "Item 8. Financial Statements and Supplementary Data" for information on our investment securities. Negative credit rating actions with respect to U.S. government obligations may have unpredictable impacts on financial markets and economic conditions in the United States and abroad, which could in turn have a material adverse effect on our business, results of operations, financial condition or liquidity.

We may not be able to manage our growth successfully.

We seek to grow safely and consistently. Successful and safe growth requires that we follow adequate loan underwriting standards, balance loan, investment portfolio and deposit growth without increasing interest rate risk or compressing our net interest margin, maintain satisfactory regulatory capital at all times, raise capital in advance of growth, scale our operations and systems to support our growth, employ an effective risk management framework and hire and retain qualified employees. If we do not manage our growth successfully, then our business, results of operations or financial condition may be adversely affected. There is no assurance that any new office that we open in connection with our growth will be successful or will otherwise satisfy expectations. In addition, any plans to open new offices may change or become limited.

The loss of our deposit clients could force us to fund our business with more expensive and less stable sources of capital.

Over the past five years, our deposits have increased from $32.1 billion as of December 31, 2013 to $79.1 billion as of December 31, 2018. This growth has been driven by several factors, including many investors' desire for safer, more stable investments, such as insured deposits. In addition, at December 31, 2018, we had uninsured deposits in excess of the $250,000 FDIC insurance limit of $51.7 billion, which represented 65% of total deposits. Most deposit accounts do not have significant restrictions on withdrawal, and these clients can generally withdraw some or all of the funds in their accounts with us upon little or no notice.

We have traditionally obtained funds principally through deposits and borrowings, with the interest rates paid for borrowings generally fixed and medium to long-term in nature, typically exceeding the interest rates paid on deposits. An outflow of deposits because clients seek investments with higher yields or greater financial stability, prefer to do business with our competitors, or for other reasons could force us to rely more heavily on borrowings and other sources of funding to fund our business and meet withdrawal demands, adversely affecting our net interest margin. We may also be forced, as a result of any outflow of deposits, to rely more heavily on equity to fund our business, resulting in greater dilution of our existing shareholders. The occurrence of any of these events could materially and adversely affect our business, results of operations or financial condition.

Our loan portfolio is concentrated in single family residential mortgage loans, including non-conforming, adjustable-rate, initial interest-only period and jumbo mortgages.

As of December 31, 2018, our single family mortgage loans, including loans held for sale, represented $38.0 billion, or 50% of our loan portfolio. As of December 31, 2018, approximately 74% of single family mortgage loans are hybrid ARMs that will adjust within one to ten years in the future, 15% are adjustable-rate loans and 11% are fixed-rate loans. Any increase in prevailing market interest rates may result in increased

payments for borrowers who have ARMs. Also, as of December 31, 2018, approximately 82% of our single family mortgage loans are jumbo loans (over $679,650 in size), and approximately 68% are loans with an initial interest-only period of generally ten years. In the case of interest-only loans, a borrower's monthly payment is subject to change when the loan converts to fully-amortizing status. Since the borrower's monthly payment may increase by a substantial amount, even without an increase in prevailing market interest rates, the borrower might not be able to afford the increased monthly payment. The adjustment of these loans to higher payment requirements can be a substantial factor in higher loan delinquency levels because the borrowers may not be able to make the higher payments. Also, real estate values may decline, and credit standards may tighten in concert with the higher payment requirement, making it difficult for borrowers to sell their homes or refinance their loans to pay off their mortgage obligations. For these reasons, interest-only loans are considered to have an increased risk of delinquency, default and foreclosure than conforming loans and may result in higher levels of realized losses. This could, consequently, adversely affect our business, results of operations or financial condition. In addition, the secondary market for jumbo mortgages has historically been less liquid compared to conforming loans.

Our loan portfolio possesses increased risk due to our level of adjustable-rate loans.

A portion of our real estate secured loans are adjustable-rate loans. Any rise in prevailing market interest rates may result in increased payments for some borrowers who have adjustable-rate mortgage loans, increasing the possibility of defaults. This could have an adverse effect on our business, results of operations or financial condition.

Weakness in the commercial real estate and construction markets could adversely affect our performance.

As of December 31, 2018, commercial real estate loans outstanding represented 9% of our loan portfolio and non-single family construction loans represented 2% of our loan portfolio. The valuation of these loans, and the valuation of the underlying commercial real estate or undeveloped land, is more complicated than the valuation of single family mortgage loans. Commercial real estate loans and loans secured by undeveloped land also tend to have shorter maturities than residential mortgage loans and usually are not fully amortizing, meaning that they may have a significant principal balance or "balloon" payments due on 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 commercial tenants in default under the terms of their leases. For example, tenants may seek the protection of bankruptcy laws, which could result in termination of lease contracts.

The borrower's ability to repay a commercial real estate loan depends on leasing to tenants through the life of the loan or the borrower's successful operation of a business. Weak economic conditions may impair a borrower's business operations and typically slows the execution of new leases. Such economic conditions may also lead to greater existing lease turnover. Increased vacancies could result in rents falling further over the next several quarters. The combination of these factors could result in further deterioration in the fundamentals underlying the stability of the commercial real estate market and result in the deterioration in value of some of our loans. Any such deterioration could adversely affect the ability of our borrowers to repay the amounts due under their loans. As a result, our business, results of operations or financial condition may be adversely affected.

In the case of construction loans, borrowers face the additional risks that construction may take longer or be more expensive than expected, and that when completed, the value of the property, and therefore rents or sale proceeds, may be less than expected. Any of these circumstances could significantly impair borrowers' cash flows and their ability to repay the amounts due under their loans, and, as a result, our business, results of operations or financial condition may be adversely affected.

We have increased our lending to businesses, and these loans expose us to greater risk than mortgages.

In the past several years, we have expanded our lending to businesses and have increased the size of individual commercial loans. As of December 31, 2018, business loans and lines of credit outstanding were $11.0 billion, or 15% of total loans outstanding. In addition, the undisbursed commitments for business lines of credit amounted to an additional $10.8 billion. Business loans inherently have more risk of loss than real estate secured loans, in part because business loans may be larger or more complex to underwrite than mortgages, some of the loans or portions thereof may be unsecured, and the value of any collateral may be severely impacted by the performance of the business. If a decline in economic conditions or other issues cause difficulties for our business borrowers or we fail to evaluate the credit of the loan accurately when we underwrite the loan, it could result in delinquencies or defaults and a material adverse effect on our business, results of operations or financial condition.

We may not be able to sell loans in the secondary market.

We sell a portion of our loans that we originate in the secondary market. If secondary mortgage market conditions were to deteriorate in the future and we cannot sell loans at our desired levels, our loan origination volume may be limited. As a result, our ability to create new relationships and manage our growth, as well as our revenue from loan sales and servicing, would be limited, and our business, results of operations or financial condition may be adversely affected.

Our financial results depend on management's selection of accounting methods and certain assumptions and estimates.

Our accounting policies and methods are fundamental to how we record and report our results of operations and financial condition. Our management must exercise judgment in selecting and applying many of these accounting policies and methods so they comply with GAAP and reflect management's judgment of the most appropriate manner to report our financial condition and results. In some cases, management must select the accounting policy or method to apply from two or more alternatives, any of which may be reasonable under the circumstances, yet may result in our reporting materially different results than would have been reported under a different alternative.

Certain accounting policies are critical to presenting our financial condition and results. They require management to make difficult, subjective or complex judgments about matters that are uncertain. Materially different amounts could be reported under different conditions or using different assumptions or estimates. These accounting policies include the allowance for loan losses and the accounting for income taxes. Because of the uncertainty of estimates involved in these matters, we may be required to do one or more of the following: significantly increase the allowance for loan losses or sustain loan losses that are significantly higher than the reserve provided, or significantly increase our accrued tax liability or decrease the value of deferred tax assets. Any of these could adversely affect our business, results of operations or financial condition.

Changes in accounting standards could materially impact how we report our financial results.

The FASB, the SEC and other bodies that establish and/or interpret accounting standards periodically change the financial accounting and reporting standards that govern the preparation of our consolidated financial statements or may change prior interpretations or positions on how these standards should be applied. These changes may be difficult to predict and may materially affect how we record and report our financial condition and results of operations. In some cases, we could be required to apply a new or revised standard retroactively, which would result in changes to previously reported financial results.

The Bank will adopt new guidance for estimating credit losses on loans receivable, held-to-maturity debt securities, and unfunded loan commitments effective January 1, 2020. The CECL model is based on lifetime

expected losses, rather than incurred losses, and requires the recognition of credit loss expense in the statement of income and a related allowance for credit losses on the balance sheet at the time of origination or purchase of a loan receivable or held-to-maturity debt security. The CECL model requires the use of not only relevant historical experience and current conditions, but also reasonable and supportable forecasts of future events and circumstances, thus incorporating a broad range of information in developing credit loss estimates, which could result in significant changes to both the timing and amount of credit loss expense and allowance. Adoption of this guidance may cause our allowance for loan losses to change materially.

Our allowance for loan losses may be inadequate.

Our management periodically determines the allowance for loan losses based on available information, including the quality of the loan portfolio, the types of loans composing the loan portfolio, economic conditions, the value of the underlying collateral and the level of nonaccrual loans. Increases in this allowance will result in an expense for the period reducing our reported net income. If, as a result of general economic conditions, a decrease in asset quality or growth in the loan portfolio, our management determines that additional increases in the allowance for loan losses are necessary, we may incur additional expenses which will reduce our net income, and our business, results of operations or financial condition may be materially and adversely affected.

Although our management will establish an allowance for loan losses it believes is adequate to absorb probable and reasonable estimable losses in our loan portfolio, this allowance may not be adequate. In particular, if an earthquake or other natural disaster were to occur in one of our principal markets or if economic conditions in those markets were to deteriorate unexpectedly, additional loan losses not incorporated in the then-current allowance for loan losses may occur. Losses in excess of the existing allowance for loan losses would reduce our net income and could adversely affect our business, results of operations or financial condition, perhaps materially.

In addition, federal banking agencies will periodically review our allowance for loan losses and the value attributed to nonaccrual loans or to real estate acquired through foreclosure. Such regulatory agencies may require us to adjust our determination of the amount of allowance for loan losses, nonaccrual loans, troubled debt restructurings or other real estate owned. These adjustments could adversely affect our business, results of operations or financial condition.

The value of our securities in our investment portfolio may decline in the future.

As of December 31, 2018, we owned $1.8 billion of securities available for sale, which had gross unrealized losses of $31.7 million, and $14.4 billion of securities in our held-to-maturity portfolio, which had gross unrealized losses of $368.3 million. We analyze our securities on a quarterly basis to determine if any are subject to an other-than-temporary impairment. The process for determining whether impairment is other-than-temporary usually requires complex, subjective judgments about the future financial performance of the issuer in order to assess the probability of receiving all contractual principal and interest payments on the security. Because of changing economic and market conditions affecting issuers, we may be required to recognize other-than-temporary impairment in future periods, which could adversely affect our business, results of operations or financial condition.

We may not be able to attract and retain key personnel.

Our Chairman and Chief Executive Officer has significant involvement and experience with our operations, having been our founding CEO and having worked with us since First Republic was founded in 1985. As a result, the loss of our Chairman and CEO could have an adverse effect on our business, results of operations or financial condition. Although we have been successful in hiring and promoting experienced professionals on our management team, we need to continue to develop and retain senior management and have the ability to attract qualified individuals to succeed existing key personnel to ensure the continued growth and successful operation

of our business. Because we specialize in providing relationship-based banking and wealth management services, we need to continue to attract and retain qualified private banking personnel and wealth managers to expand. Competition for such personnel can be intense, and we may not be able to hire or retain such personnel. The loss of the services of any senior management personnel, relationship managers or wealth managers, or the inability to recruit and retain qualified personnel in the future, including to succeed key personnel, could have an adverse effect on our business, results of operations or financial condition. Additionally, to attract and retain personnel with appropriate skills and knowledge to support our business or succeed key personnel, we may offer a variety of benefits which may reduce our earnings or adversely affect our business, results of operations or financial condition.

We may take actions to maintain client satisfaction that result in losses or reduced earnings.

We may find it necessary to take actions or incur expenses in order to maintain client satisfaction even though we are not required to do so by law. The risk that we will need to take such actions and incur the resulting losses or reductions in earnings is greater in periods when financial markets and the broader economy are performing poorly or are particularly volatile. As a result, such actions may adversely affect our business, results of conditions, or financial condition perhaps materially.

We may be adversely affected by the soundness of other financial institutions.

As a result of trading, clearing or other relationships, we have exposure to many different counterparties and routinely execute transactions with counterparties in the financial services industry, including commercial banks, brokers, dealers and investment banks. Many of these transactions expose us to credit risk in the event of a default by a counterparty. In addition, our credit risk may be exacerbated when the collateral we hold cannot be realized upon or is liquidated at prices not sufficient to recover the full amount of the credit or derivative exposure due to us. Any such losses could have a material adverse effect on our business, results of operations or financial condition.

Adverse changes in the ratings for our debt securities or preferred stock could have a material adverse effect on our business, financial condition and liquidity and may increase our funding costs or impair our ability to effectively compete for business and clients.

The major rating agencies regularly evaluate us and their ratings of our long-term debt and preferred stock based on a number of factors, including our financial strength and conditions affecting the financial services industry generally. In general, rating agencies base their ratings on many quantitative and qualitative factors, including capital adequacy, liquidity, asset quality, business mix and level and quality of earnings, and we may not be able to maintain our current credit ratings and preferred stock ratings. Our ratings remain subject to change at any time, and it is possible that any rating agency will take action to downgrade us in the future.

The ratings for our debt securities and preferred stock impact our ability to obtain funding. Reductions in any of the ratings for our debt securities or preferred stock could adversely affect our ability to borrow funds and raise capital. Downgrades in our ratings could trigger additional collateral or funding obligations, which may adversely impact our liquidity. Therefore, any negative credit rating actions could have a material adverse effect on our business, results of operations, financial condition or liquidity.

Furthermore, our clients and counterparties may be sensitive to the risks posed by a downgrade to our ratings and may terminate their relationships with us, may be less likely to engage in transactions with us, or may only engage in transactions with us at a substantially higher cost. We cannot predict the extent to which client relationships or opportunities for future relationships could be adversely affected due to a downgrade in our ratings. The inability to retain clients or to effectively compete for new business may have a material and adverse effect on our business, results of operations or financial condition.

Additionally, rating agencies themselves have been subject to scrutiny arising from the financial crisis. As a result or for unrelated reasons, the rating agencies may make or may be required to make substantial changes to their ratings policies and practices. Such changes may, among other things, adversely affect the ratings of our securities or other securities in which we have an economic interest.

We may be adversely affected by risks associated with completed and potential acquisitions.

We plan to continue to grow our business organically, although, from time to time, we may consider potential acquisition opportunities that we believe complement our activities and have the ability to enhance our profitability, including acquisitions of wealth management and related businesses. Acquisitions involve numerous risks, including:

- The risk that the acquired business will not perform to our expectations;
- Difficulties, inefficiencies or cost overruns in integrating the personnel, operations, services and products of the acquired business with ours;
- The diversion of management’s attention from other aspects of our business;
- Entering geographic and product markets in which we have limited or no direct prior experience;
- The potential loss of key employees; and
- The potential for liabilities and claims arising out of the acquired businesses.

If we were to consider acquisition opportunities, we expect to face significant competition from numerous other financial services institutions, many of which will have greater financial resources than we do. Accordingly, attractive acquisition opportunities may not be available. We may not be successful in identifying or completing any future acquisitions, integrating any acquired business into our operations or realizing any projected cost savings or other benefits associated with any such acquisition.

We must generally satisfy a number of meaningful conditions prior to completing any acquisition, including, in certain cases, federal and state bank and other regulatory approvals. Bank regulators consider a number of factors when determining whether to approve a proposed transaction, including the ratings and compliance history of all institutions involved, the AML and BSA compliance history of all institutions involved, CRA examination results and the effect of the transaction on financial stability. The process for obtaining required regulatory approvals has become substantially more difficult as a result of the financial crisis, which could affect our future business. We may fail to pursue, evaluate or complete strategic and competitively significant business opportunities as a result of our inability, or our perceived inability, to obtain required regulatory approvals in a timely manner or at all.

We could be held responsible for environmental liabilities of properties acquired through foreclosure.

If we are forced to foreclose on a defaulted mortgage loan to recover our investment, we may be subject to environmental liabilities related to the underlying real property. Hazardous substances or wastes, contaminants, pollutants or sources thereof may be discovered on properties during our ownership or after a sale to a third-party. The amount of environmental liability could exceed the value of real property. We could be fully liable for the entire cost of any removal and clean-up on an acquired property. In addition, we may find it difficult or impossible to sell the property before or after any environmental remediation. As a result, our business, results of operations or financial condition may be adversely affected.

Our operations could be interrupted if our third-party service providers experience difficulty, terminate their services or fail to comply with banking regulations.

We depend to a significant extent on a number of relationships with third-party service providers, including Internet, mobile technology and cloud service providers. Specifically, we receive core systems processing, essential web hosting and other Internet systems, deposit processing, wire processing and other processing services from third-party service providers. If these third-party service providers experience difficulties, do not perform the relevant services properly or terminate their services and we are unable to replace them with other service providers, our operations could be interrupted. If an interruption were to continue for a significant period of time, our business, results of operations or financial condition could be adversely affected, perhaps materially. Even if we are able to replace them, it may be at higher cost to us, which could adversely affect our business, results of operations or financial condition.

We face risks related to the ability of our information technology systems to support our existing operations and future growth.

We have developed, and are continuously developing, information technology and other systems and processes to support our business operations. As our business grows, we continue to invest in and enhance these systems and processes. These investments and enhancements entail significant costs and create risks associated with implementing new systems and integrating them with existing ones. If not implemented effectively, these changes may result in business interruptions, client losses, or damage to our reputation. Any failure in our information technology systems as a result of such changes could have an adverse effect on our business, results of operations or financial condition, perhaps materially.

The network and computer systems on which we depend could fail or experience a security breach.

Our computer systems are vulnerable to unforeseen problems. Because we conduct part of our business over the Internet and outsource several critical functions to third-parties, our operations depend on our ability, as well as that of third-party service providers, to protect computer systems and network infrastructure against damage from fire, power loss, telecommunications failure, physical break-ins or similar catastrophic events. Any damage or failure that causes interruptions in operations could have a material adverse effect on our business, results of operations or financial condition.

We also rely heavily on communications and information systems to conduct our business. Any failure, interruption or breach in security of these systems could result in failures or disruptions in our client relationship management, general ledger, deposit, loan and other systems. While we have policies and procedures designed to prevent or limit the effect of the possible failure, interruption or security breach of our information systems, there can be no assurance that any such failure, interruption or security breach will not occur or, if it does occur, that it will be adequately addressed. The occurrence of any failure, interruption or security breach of our information systems could damage our reputation, result in a loss of client business, subject us to additional regulatory scrutiny, or expose us to civil litigation and possible financial liability, any of which could adversely affect our business, results of operations or financial condition.

We may be adversely affected by disruptions to our network and computer systems or to those of our service providers as a result of denial-of-service or other cyber attacks.

We may experience disruptions or failures in our computer systems and network infrastructure or in those of our service providers as a result of denial-of-service or other cyber attacks in the future. In recent years, federal and state regulators, including the FDIC, SEC, and FINRA, have made statements concerning cybersecurity risk management, preparedness and resiliency for financial institutions such as us. These statements range from issues with respect to client account protections to business continuity, and represent the regulators' expectations for financial institutions to have more robust cybersecurity risk management, preparedness and resiliency programs

for themselves and their service providers. A financial institution is also expected to develop processes to enable recovery of data and business operations and address rebuilding network capabilities and restoring data if the institution, or its critical service providers, fall victim to this type of cyber attack. We have developed and continue to invest in, systems and processes that are designed to detect, prevent and minimize the impact of security breaches and cyber attacks. Due to the increasing sophistication of such attacks, we may not be able to prevent denial-of-service or other cyber attacks that could compromise our normal business operations or the normal business operations of our clients, or result in the unauthorized use of clients' confidential and proprietary information. The occurrence of any failure, interruption or security breach of network and computer systems resulting from denial-of-service or other cyber attacks could impact our ability to operate and serve our clients, damage our reputation, result in a loss of client business, subject us to additional regulatory scrutiny, or expose us to civil litigation and possible financial liability, any of which could adversely affect our business, results of operations or financial condition.

Our internal control systems could fail to detect certain events.

We are subject to certain operational risks, including, but not limited to, data processing system failures and errors and client or employee fraud. We maintain a system of internal controls designed to prevent, detect and mitigate against such occurrences and maintain insurance coverage for such risks. However, should such an event occur that is not prevented or detected by our internal controls, or is uninsured or in excess of applicable insurance limits, such an event could have a significant adverse effect on our business, results of operations or financial condition.

If we fail to maintain internal controls over financial reporting, we may not be able to accurately report our financial results, which could harm our reputation and have a negative effect on the price of our common stock.

The Sarbanes-Oxley Act of 2002 requires our management to evaluate the Bank's disclosure controls and procedures and its internal control over financial reporting and requires our auditors to issue a report on our internal control over financial reporting. Failure to maintain effective controls over financial reporting or implement new or improved controls may harm our operating results or cause us to fail to meet our reporting obligations. We are required to disclose, in our Annual Report on Form 10-K, the existence of any "material weaknesses" in our internal controls. The identification of one or more material weaknesses as of the end of any given quarter or year could have a negative impact on our reputation, results of operations or financial condition, as well as the price of our common stock.

We rely on the accuracy and completeness of information about our clients and counterparties.

In deciding whether to extend credit or enter into other transactions with clients and counterparties, we may rely on information furnished by or on behalf of clients and counterparties, including financial statements and other financial information. We may also rely on representations of clients and counterparties as to the accuracy and completeness of that information and, with respect to financial statements, on reports of independent auditors. If this information is inaccurate or incomplete, we may be subject to loan losses, regulatory action, reputational harm or other adverse effects on the operation of our business, results of operations or financial condition.

The value of our goodwill and other intangible assets may decline in the future.

As of December 31, 2018, we had $328.4 million of goodwill and other intangible assets, including MSRs. A significant decline in our expected future cash flows, a significant adverse change in the business climate, slower growth rates, a significant and sustained decline in the price of our common stock or the poor performance of an acquired business may require us to take charges in the future related to the impairment of our goodwill and other intangible assets. An increase in the rate at which our borrowers prepay their loans could

result in a decline in the value of our MSRs, resulting in a charge for the impairment of those rights. The loss of several of our relationship managers to a competitor may also result in a charge against our goodwill and other intangible assets. If we were to conclude that a future write-down of our goodwill and other intangible assets is necessary, we would record the appropriate charge, which could have a material adverse effect on our business, results of operations or financial condition.

We are subject to liquidity risk.

We require liquidity to meet our deposit and debt obligations as they come due. Our access to funding sources in amounts adequate to finance our activities or on terms that are acceptable to us could be impaired by factors that affect us specifically or the financial services industry or economy generally. Factors that could detrimentally impact our access to liquidity sources include a downturn in the geographic markets in which our loans are concentrated, difficult credit markets or adverse regulatory actions against us. Our access to deposits may also be affected by the liquidity needs of our depositors. In particular, a majority of our liabilities on average during 2018 were checking accounts, money market checking and savings deposits, which are payable on demand or upon several days' notice, while by comparison, a substantial majority of our assets were loans, which cannot be called or sold in the same time frame. Although we have been able to replace maturing deposits and advances historically as necessary, we might not be able to replace such funds in the future, especially if a large number of our depositors or those depositors with significant balances of deposits sought to withdraw their accounts, regardless of the reason. A failure to maintain adequate liquidity could materially and adversely affect our business, results of operations or financial condition.

We are subject to legal and litigation risk.

Because the Bank is extensively regulated by a variety of federal and state agencies, and because we are subject to a wide range of business, consumer and employment laws and regulations at the federal, state and local levels, we are at risk of governmental investigations and lawsuits as well as claims and litigation from private parties. We are from time to time involved in disputes with and claims from clients, government agencies, vendors, employees and other business parties, and such disputes and claims may result in litigation or settlements. Such litigation, alone or in the aggregate, may have an adverse impact on the Bank's operations, reputation, employee or customer relations, financial condition or results of operations as a result of the costs of any judgment, the terms of any settlement and/or the expenses incurred in defending the applicable claim.

We may take filing positions or follow tax strategies that may be subject to challenge.

The amount of income taxes that we are required to pay on our earnings is based on federal and state legislation and regulations. We provide for current and deferred taxes in our financial statements based on our results of operations, business activity, legal structure and interpretation of tax statutes. We may take filing positions or follow tax strategies that are subject to audit and may be subject to challenge. Our net income may be reduced if a federal, state or local authority assessed charges for taxes that have not been provided for in our consolidated financial statements. Taxing authorities could change applicable tax laws, challenge filing positions or assess taxes and interest charges. If taxing authorities take any of these actions, our business, results of operations or financial condition could be adversely affected, perhaps materially.

The impact of recent U.S. tax reform remains uncertain.

As of December 31, 2018, the Bank had deferred tax assets of $336.5 million, and the Bank's effective tax rate for 2018 was 18.8%. The Tax Reform Act resulted in significant changes, including the taxation of business entities, allowable business expense deductions, limitations to mortgage interest, home equity interest and state and property tax deductions. The short- and long-term impact of the Tax Reform Act on the economic conditions in the markets in which we operate, and in the United States as a whole, is also uncertain, and any unfavorable change in the general business environment in which we operate could adversely affect our business, results of operation or financial condition.

Uncertainty about the future of reference rates may adversely affect our business.

Many of the products that we own or that we offer, such as variable-rate loans, determine the amount of interest by reference to certain benchmark rates or indices. The future of certain reference rates is uncertain as certain reference rates have become subject to recent regulatory guidance and reforms, and proposals for future reforms.

For example, in July 2017, the United Kingdom's Financial Conduct Authority ("FCA"), which regulates LIBOR, announced that it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR to the administrator of LIBOR after 2021. It is likely that banks will not continue to provide submissions for the calculation of LIBOR after 2021 and possible that they may not provide submissions before then. It is impossible to predict whether LIBOR will continue to be an acceptable market benchmark as banks stop providing submissions.

In addition, in December 2018, the Federal Home Loan Bank of San Francisco, which calculates and publishes COFI, announced that it will no longer calculate and publish COFI after the publication of the December 2019 COFI on January 31, 2020 due to a decline in the number of financial institutions eligible to report the data used to calculate COFI.

If and when reference rates, such as LIBOR and COFI, are no longer available or an acceptable market benchmark, we will be required, or we may exercise discretion, to implement one or more substitute reference rate(s) for the calculation of interest rates under our loan agreements with our borrowers. We may incur significant expenses in effecting the transition, and may be subject to disputes or litigation with customers over the appropriateness or comparability to the prior reference rates of the substitute reference rates. In addition, developments related to reference rates could adversely affect our exposure to fluctuations in interest rates as well as the amounts we receive on, and the values of, the variable rate loans and LIBOR-based securities we hold. As such, any changes to calculation of the reference rates we currently use in our products, such as LIBOR or COFI, or the transition to one or more new reference rate(s) could have an adverse effect on our business, financial condition or results of operations.

Risks Related to the Regulatory Oversight of Our Institution

The banking industry is highly regulated, and legislative or regulatory actions taken now or in the future may have a significant adverse effect on our operations.

The banking industry is extensively regulated and supervised under both federal and state laws and regulations that are intended primarily to protect depositors, the public, the DIF, and the banking and financial systems as a whole, not our shareholders. We are subject to the regulation and supervision of the FDIC, the DBO and the CFPB. The banking laws, regulations and policies applicable to us govern matters ranging from the regulation of certain debt obligations, changes in the control of us and the maintenance of adequate capital to the general business operations conducted by us, including permissible types, amounts and terms of loans and investments, the amount of reserves held against deposits, restrictions on dividends, establishment of new offices and the maximum interest rate that may be charged by law. In addition, certain of our subsidiaries are subject to regulation, supervision and examination by other regulatory authorities, including the SEC and FINRA. See "Item 1. Business—Supervision and Regulation" above for more information on the laws and regulations applicable to us.

Since the financial crisis, financial institutions generally have been subjected to increased scrutiny from regulatory authorities. In addition, changes to the legal and regulatory framework governing our operations, including the passage and continued implementation of the Dodd-Frank Act, have significantly revised, and in many cases expanded, the laws and regulations under which we operate. These developments have and may continue to result in increased costs of doing business, decreased revenues and net income, and may reduce our ability to effectively compete to attract or retain clients. In particular, federal banking agencies have increased their focus on compliance with consumer protection laws and BSA and AML regulations, and we expect this

focus to continue. We continue to enhance our compliance programs. These enhancements, as well as any enhancements in other compliance areas that may be required in the future, will result in incremental professional fees and personnel costs, may limit our ability to offer competitive products to our clients and may divert resources from our ongoing business development activities. Notwithstanding our enhancements to these compliance programs, regulators may impose additional requirements on us or require us to take additional actions which could increase our costs, decrease our revenues or net income and reduce or restrict our ability to expand and effectively compete.

We are subject to changes in federal and state banking statutes, regulations and governmental policies, and the interpretation or implementation of them. Regulations affecting banks and other financial institutions in particular undergo continuous review and frequently change and the ultimate effect of such changes cannot be predicted. Regulations and laws may be modified at any time, and new legislation may be enacted that will affect us or our subsidiaries. Any changes in federal and state laws, as well as regulations and governmental policies, could affect us in substantial and unpredictable ways, including ways that may adversely affect our business, results of operations or financial condition.

Federal and state banking regulators have broad authority to supervise our banking business and that of our subsidiaries, including the authority to prohibit activities that represent unsafe or unsound banking practices or constitute violations of statute, rule, regulation, or administrative order. Failure to appropriately comply with any such laws, regulations or regulatory policies, including the consumer protection laws and BSA and AML regulations discussed above, could result in sanctions by regulatory agencies, civil money penalties or damage to our reputation, all of which could adversely affect our business, results of operations or financial condition.

In addition, the CFPB has broad rulemaking, supervisory and enforcement powers under various federal consumer financial protection laws. The CFPB also has examination and primary enforcement authority with respect to depository institutions with $10 billion or more in assets, their service providers and certain non-depository entities such as debt collectors and consumer reporting agencies. Since its formation, the CFPB has finalized a number of significant rules that could have a significant impact on our business and the financial services industry more generally. Depending on the CFPB's areas of supervisory and future rulemaking focus, it could have an adverse impact on our business, increase our compliance costs and potentially delay our response to marketplace changes.

In an Executive Order signed on February 3, 2017, the President of the United States directed the Secretary of the Treasury, in consultation with federal financial regulators, to assess the rules promulgated under the Dodd-Frank Act since 2010 with a view to producing a plan to revise them as necessary. In response to this Executive Order, the U.S. Department of Treasury has issued four reports recommending various changes to the regulation of the U.S. financial system, including regulation of U.S. depositary institutions, the U.S. capital markets, the asset management industry and non-bank financial and FinTech firms. The enactment of the EGRRCPA in May 2018 altered several provisions of the Dodd-Frank Act. Overall, the changes under the EGRRCPA mainly apply to smaller U.S. banks and to U.S. bank holding companies and, subject to rulemaking and implementation by our regulators, we expect them to have a limited effect on the Bank. Specifically, the EGRRCPA and corresponding FDIC rule expanded the definition of HQLA to include certain municipal obligations, and HQLA now include such qualifying securities. We continue to evaluate the impact of these changes, and the nature, extent, timing and impact of any future changes to the Dodd-Frank Act and related regulatory requirements or other laws and regulations impacting our business cannot be predicted. If further legislation or regulations are implemented or repealed, it may be time-consuming and expensive for us to alter our internal operations in order to comply with such changes.

Legislative and regulatory actions affecting us and the financial services industry may result in increased legal and compliance costs.

As a result of the current regulatory environment and our growth in recent years, we have made and expect to continue to make substantial investments in our legal, regulatory, audit and compliance infrastructure. As a

result of the foregoing, our expenses associated with our legal, regulatory, audit and compliance infrastructure have increased. Our expenses could also be higher than anticipated in the future, which may adversely impact our results of operations.

The proposed regulation of incentive compensation under the Dodd-Frank Act may adversely affect our ability to retain our key employees.

Federal regulators have published guidance and proposed regulations which would limit the manner and amount of compensation that banking organizations provide to employees. These regulations and guidance may adversely affect our ability to attract and retain our key employees. If we were to experience such effects with respect to our employees, our business, results of operations or financial condition could be adversely affected.

The ability-to-repay requirement for residential mortgage loans may limit our ability to sell or securitize certain of our mortgage loans and give borrowers potential claims against us.

The Dodd-Frank Act amended the TILA to require that mortgage lenders show that they have verified the borrower's ability to repay a residential mortgage loan (which does not include HELOCs). Borrowers could possibly claim statutory damages against us for violations of this requirement. Lenders of mortgages that meet a "qualified mortgage" standard have a safe harbor or a presumption of compliance with the requirement. Under final rules issued by the CFPB, qualified mortgages cannot have negative amortization, interest-only payments, or balloon payments, terms over 30 years, or points and fees over certain thresholds.

Currently, a majority of the non-conforming mortgage loans that we originate generally have an initial interest-only period of ten years, subsequent to which these loans fully and evenly amortize over a period of generally twenty years. Such loans are not "qualified mortgages" under the standard. If institutional mortgage investors limit their mortgage purchases to "qualified mortgages," demand for our non-qualifying mortgages in the secondary market may be significantly limited in the future. We do not currently intend to discontinue originating interest-only, non-qualifying mortgages, and we may be liable to borrowers under non-qualifying mortgages for violations of the ability-to-repay requirement. If demand for our non-qualifying mortgages in the secondary market declines significantly in the future, it would limit the amount of loans we can originate and in turn limit our ability to create new relationships, manage our growth and earn revenue from loan sales and servicing, all of which could materially and adversely affect our business, results of operations or financial condition.

Increases in FDIC insurance premiums may adversely affect our earnings.

Our deposits are insured by the FDIC up to legal limits and, accordingly, we are subject to FDIC deposit insurance assessments. We generally cannot control the amount of premiums we will be required to pay for FDIC insurance. See "Item 1. Business—Supervision and Regulation—Premiums for Deposit Insurance and Assessments" for additional information. Additional increases in our assessment rate may be required in the future to achieve the targeted reserve ratio or to address the impact of future financial institution failures. Future increases of FDIC insurance premiums or special assessments, including increases as a result of any future rulemaking, may adversely affect our business, results of operations or financial condition.

We are subject to stringent capital requirements.

We are subject to regulatory requirements specifying minimum amounts and types of capital that we must maintain. From time to time, the regulators change these regulatory capital adequacy guidelines. If we fail to meet these minimum capital guidelines and other regulatory requirements, we or our subsidiaries may be restricted in the types of activities we may conduct and we may be prohibited from taking certain capital actions, such as paying dividends and repurchasing or redeeming capital securities.

In particular, the capital requirements now applicable to us under the Basel III Capital Rules are more stringent than previous requirements and additional requirements will be phased in. As these rules take full effect, we will be required to satisfy additional, more stringent, capital adequacy standards than we have in the past. While we meet the requirements of the Basel III Capital Rules, inclusive of the capital conservation buffer, as phased in by the FDIC, we may fail to do so in the future. In addition, these requirements could have a negative impact on our ability to lend, grow deposit balances, make acquisitions or make capital distributions in the form of increased dividends or share repurchases. Higher capital levels could also lower our return on equity.

We may become subject to more stringent liquidity requirements.

On September 3, 2014, the federal banking agencies finalized the LCR Rule, which imposes standardized minimum liquidity requirements for large, internationally active banking organizations (those with at least $250 billion in total assets or at least $10 billion in on-balance sheet foreign exposure) as well as modified standardized minimum liquidity requirements for bank holding companies and savings and loan holding companies that have at least $50 billion in total assets but are not internationally active banking organizations. Under the EGRRCPA and subsequent guidance from the Federal Reserve, the asset threshold for application of the modified standardized minimum liquidity requirements for bank holding companies and savings and loan holding companies was effectively increased to at least $100 billion. In August 2018, the FDIC expanded the definition of HQLA to include certain municipal obligations, and HQLA now include such qualifying securities.

Because we are a California-chartered, non-member bank without a bank holding company, we currently are not subject to the LCR Rule. Nevertheless, we maintain on-balance sheet liquidity and a portfolio of HQLA.

It is possible that we may become subject to an LCR requirement or other heightened liquidity requirements in the future as a result of further growth, or if the FDIC or the federal banking agencies apply such a requirement to us as a supervisory matter. In addition, we may become subject to any rule implementing the NSFR that is promulgated in the future. As a result, we could be required to increase our holdings of HQLA or other liquidity resources, such as Federal Reserve balances and U.S. Treasury securities, and increase the use of long-term debt as a funding source. Increasing our holdings of lower-yielding assets and our use of higher-cost liabilities would reduce our net interest income and could limit our loan and deposit growth and our ability to attract and retain new clients, all of which could adversely affect our business, results of operations and financial conditions.

The investment management and brokerage businesses are highly regulated.

The investment management and brokerage business are highly regulated, primarily at the federal level. One of our subsidiaries, FRIM, is a registered investment adviser under the Investment Advisers Act of 1940, as amended (“Investment Advisers Act”), and FRSC is a registered broker-dealer regulated by the SEC, FINRA and state regulatory agencies. The Investment Advisers Act imposes numerous obligations on federally registered investment advisors, including fiduciary, record-keeping, operational and disclosure obligations.

FRIM is also subject to the provisions and regulations of the U.S. Employee Retirement Income Security Act of 1974, as amended (“ERISA”) to the extent it acts as a “fiduciary” under ERISA with respect to certain of its clients. ERISA and the applicable provisions of the federal tax laws impose a number of duties on persons who are fiduciaries under ERISA and prohibit transactions involving the assets of each ERISA plan that is a client, as well as certain transactions by the fiduciaries (and certain other related parties) to such plans. FRIM and FRSC are also both licensed and regulated under state law as insurance agencies, and FRIM is registered as a commodity pool operator and commodity trading advisor with the CFTC and a member of the NFA in connection with advising wealth management clients on investments in commodity pools and serving as advisor to private funds that invest in commodity pools. The relationships between the Bank and its subsidiaries and the private funds advised by FRIM are subject to restrictions and requirements under the Volcker Rule.

In April 2018, the SEC released for public comment a set of rule proposals to limit conflicts of interest for non-retirement and retirement accounts, and which include establishing a "best interest" standard of conduct for broker-dealers when making a recommendation on any securities transaction or investment strategy to a retail customer. Certain states are also advancing their own standard of conduct for investment advisors and broker-dealers. The impact of any new regulations is uncertain and difficult to predict, and, could have varying implications for our business, including, among other things, the products and services that we are able to provide to our clients, and the new regulations could result in increases in compliance and other costs.

Our failure or the failure of our subsidiaries that provide investment management services, brokerage services, or any related regulated services to comply with applicable laws or regulations could result in civil or criminal monetary penalties, fines or restitution, suspensions of individual employees, or other sanctions, including revocation of such subsidiary's registration as an investment advisor or otherwise. Any such failure could have an adverse effect on our reputation and could adversely affect our business, results of operations or financial condition.

Risks Related to Our Common Stock

Shares of our common stock are not an insured deposit.

Shares of our common stock are not bank deposits and are not insured or guaranteed by the FDIC or any other government agency. An investment in our common stock has risks, and you may lose your entire investment.

The market price and trading volume of our common stock may be volatile, which could result in rapid and substantial losses for our shareholders.

The market price of our common stock may be highly volatile and could be subject to wide fluctuations. In addition, the trading volume of our common stock may fluctuate and cause significant price variations to occur. If the market price of our common stock declines significantly, you may be unable to resell your shares of common stock at or above your purchase price, if at all. The market price of our common stock could fluctuate or decline significantly in the future. Some, but certainly not all, of the factors that could negatively affect the price of our common stock, or result in fluctuations in the price or trading volume of our common stock, include:

- Variations in our quarterly operating results or failure to meet the market's earnings expectations;
- Publication of research reports about us or the financial services industry in general;
- The failure of securities analysts to continue coverage of our common stock;
- Additions to or departures of our key personnel;
- Adverse market reactions to any indebtedness we may incur or securities we may issue in the future;
- Actions by our shareholders;
- The operating and securities price performance of companies that investors consider to be comparable to us;
- Changes or proposed changes in laws or regulations affecting our business; and
- Actual or potential litigation and governmental investigations.

In addition, if the market for stocks in our industry, or the stock market in general, experiences a loss of investor confidence, the trading price of the common stock could decline for reasons unrelated to our business, or results of operations or financial condition. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

Securities analysts may not continue coverage of our common stock.

The trading market for our common stock will depend in part on the research and reports that securities analysts publish about us and our business. We do not have any control over these securities analysts, and they may cease to cover our common stock. If securities analysts do not cover our common stock, the lack of research coverage may adversely affect its market price. If we are covered by securities analysts, and our common stock is the subject of an unfavorable report, the price of our common stock may decline. If one or more of these analysts cease to cover us or fail to publish regular reports on us, we could lose visibility in the financial markets, which could cause the price or trading volume of our common stock to decline.

We may not continue to pay dividends on our common stock.

Holders of our common stock are only entitled to receive such dividends as our Board of Directors may declare out of funds legally available for payment. We are not required to pay dividends on our common stock and may reduce or eliminate dividends on our common stock at any time in the future. This could adversely affect the market price of our common stock. Dividends on our common stock are also subject to bank regulatory limits and possible approval requirements. In addition, we cannot declare or pay dividends on our common stock or redeem or repurchase our common stock for any period for which we have not declared and paid in full dividends on our preferred stock. Our capital planning and risk management is subject to supervisory review, and, as a result of that review, our discretion to pay dividends or determine the amount of any dividend could be limited. Our Board of Directors will continue to evaluate the payment of dividends based on our results of operations, financial condition, capital requirements, regulatory and contractual restrictions, our business strategy and other factors our Board of Directors deems relevant.

Future sales of our common stock may adversely affect our stock price.

The market price of our common stock may be adversely affected by the sale of a significant quantity of our outstanding common stock (including any securities convertible into or exercisable or exchangeable for common stock), or the perception that such a sale could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to raise additional capital by selling equity securities in the future at a time and price that we deem appropriate.

Future issuances of equity securities could adversely affect our stock price.

We have historically approached the capital markets opportunistically, making public offerings of our common stock and preferred stock, from time to time. To the extent practicable, we expect to continue this approach. In addition, we may issue debt securities convertible into or exercisable or exchangeable for equity securities. In each case, we access the capital markets to raise additional capital, support growth or to make acquisitions. Further, we expect to issue stock options or other stock awards to retain and motivate our employees, executives and directors. These issuances of securities could dilute the voting and economic interests of our existing shareholders. These issuances or the perception that such issuances may occur could also adversely affect the market price of our common stock.

Our common stock is subordinate to our existing and future indebtedness and preferred stock.

Shares of our common stock are equity interests and do not constitute indebtedness. As such, our common stock ranks junior to all our deposits and indebtedness, and other non-equity claims on us, with respect to assets available to satisfy claims. Additionally, holders of common stock are subject to the prior dividend and liquidation rights of the holders of our Series D, Series F, Series G, Series H and Series I Preferred Stock (or holders of any interests therein) and any other series of preferred stock we may issue.

Various factors could make a takeover attempt of us more difficult to achieve.

Certain provisions of our organizational documents, in addition to certain federal and state banking laws and regulations, could make it more difficult for a third-party to acquire us without the consent of our Board of Directors, even if doing so were perceived to be beneficial to our shareholders. These provisions also make it more difficult to remove our current Board of Directors or management or to appoint new directors, and also regulate the timing and content of shareholder proposals and nominations, and qualification for service on our Board of Directors. These provisions could effectively inhibit a non-negotiated merger or other business combination, which could adversely impact the value of our common stock.

Item 1B. Unresolved Staff Comments.

Not applicable.

Item 2. Properties.

Our management believes that our current and planned facilities are adequate for our current level of operations. Our principal executive offices are at 111 Pine Street, 2nd Floor, San Francisco, California 94111. As of December 31, 2018, we provided our services through 75 Preferred Banking Offices primarily in the following areas: San Francisco, Palo Alto, Los Angeles, Santa Barbara, Newport Beach and San Diego, California; Portland, Oregon; Boston, Massachusetts; Palm Beach, Florida; Greenwich, Connecticut; New York, New York; and Jackson, Wyoming. We have 7 additional offices that offer exclusively lending, wealth management or trust services. All of our properties, except for two Preferred Banking Offices, are leased with terms expiring at dates ranging from 2019 to 2035, although most of the leases contain options to extend beyond these dates.

Item 3. Legal Proceedings.

There are no material pending legal proceedings to which we or any of our subsidiaries is a party or to which any of our property is subject. We are subject to ordinary routine litigation incidental to our business but we believe the results of such matters will not have a material effect on our business or financial condition.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

The Bank's common stock is listed on the New York Stock Exchange under the symbol "FRC."

As of February 14, 2019, there were less than 10 shareholders of record, although the Bank believes that its shares are held beneficially by approximately 165,000 shareholders.

Common Stock Dividends

The following table presents cash dividends per share of our common stock declared and paid by the Bank for the periods indicated:

	2018	2017
Quarter Ended:		
December 31	$ 0.18	$ 0.17
September 30	$ 0.18	$ 0.17
June 30	$ 0.18	$ 0.17
March 31	$ 0.17	$ 0.16

We paid a cash dividend for the fourth quarter of 2018 of $0.18 per share of common stock on February 14, 2019 to shareholders of record as of January 31, 2019.

For information on dividend restrictions, refer to "Item 1. Business—Supervision and Regulation—Restrictions on Dividends and Other Distributions" and "Item 1A. Risk Factors—Risks Related to Our Common Stock—We may not continue to pay dividends on our common stock."

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information as of December 31, 2018, regarding common stock of First Republic Bank to be issued upon exercise of outstanding stock options or pursuant to outstanding restricted stock units or performance share units, and common stock of First Republic Bank remaining available for issuance under the 2017 Omnibus Award Plan and the Employee Stock Purchase Plan:

Plan Category	Number of Shares to Be Issued upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Shares Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in First Column)
Equity compensation plans approved by security holders	5,274,077 [1]	$15.43 [2]	3,864,081 [3]
Equity compensation plans not approved by security holders	—	—	—
Total	5,274,077	$15.43	3,864,081

(1) Includes 1,764,407 outstanding stock options, 2,557,586 outstanding restricted stock units and 952,084 outstanding performance share units.

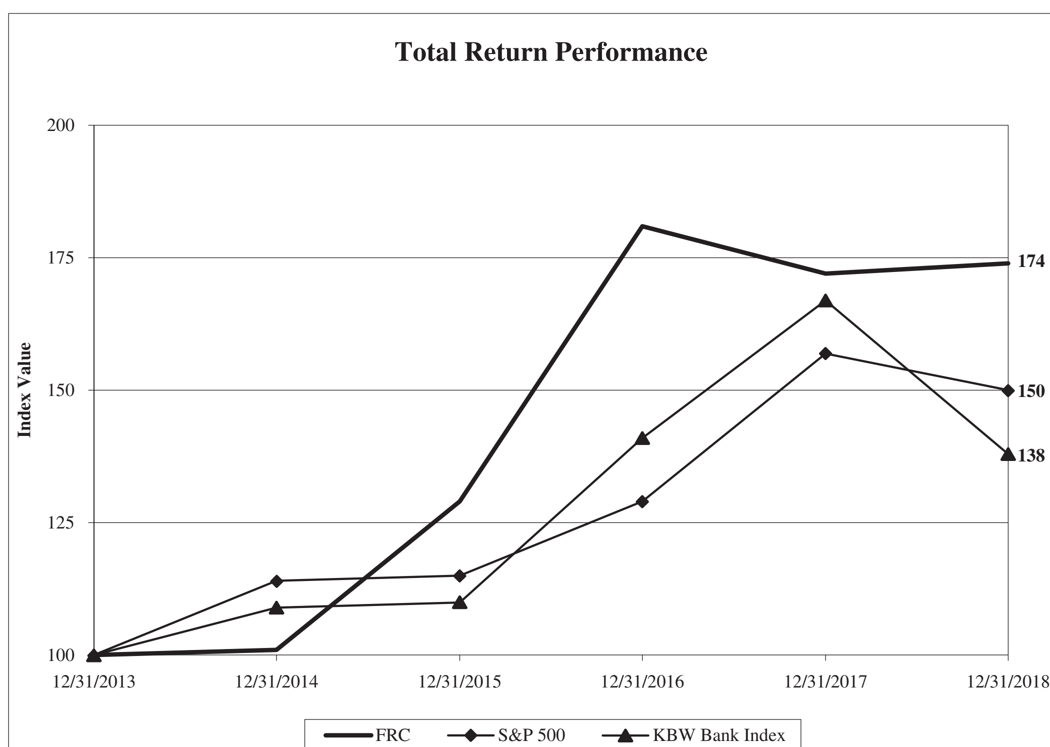
(2) Represents the weighted average exercise price of outstanding stock options. Does not include outstanding restricted stock units or performance share units which do not have an exercise price.

(3) The number of shares remaining available for future issuance consists of 1,234,604 shares reserved for future purchase under the Bank's Employee Stock Purchase Plan and 2,629,477 shares reserved for future awards under our stock award plan, the Bank's 2017 Omnibus Award Plan.

See Note 16 in "Item 8. Financial Statements and Supplementary Data" for information on our 2017 Omnibus Award Plan and Employee Stock Purchase Plan.

Performance Graph

The following graph compares, for the period from December 31, 2013 through December 31, 2018, the cumulative shareholder return (change in the stock price plus reinvested dividends) and the total compounded annual growth rate ("CAGR") for the common stock of First Republic Bank with the cumulative return and the CAGR for the (i) Standard and Poor's 500 ("S&P 500") Index and (ii) KBW Bank Index. The performance reflected below assumes that $100 was invested in our common stock and each of the indices listed below at their closing prices on December 31, 2013. The performance of our common stock reflected below is not indicative of our future performance.



	Cumulative Return as of December 31,						5-year CAGR
	2013	2014	2015	2016	2017	2018	
First Republic Bank ("FRC")	$100	$101	$129	$181	$172	$174	12%
S&P 500 Index	$100	$114	$115	$129	$157	$150	8%
KBW Bank Index	$100	$109	$110	$141	$167	$138	7%

Recent Sales of Unregistered Securities

During the quarter ended December 31, 2018, we sold 55,095 shares of common stock to eligible employees under the Employee Stock Purchase Plan for aggregate cash consideration of $4.5 million. These sales were exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), pursuant to Section (3)(a)(2) thereof because the sales involved securities issued by a bank.

Also, during the quarter ended December 31, 2018, we granted 9,995 restricted stock units, net of forfeitures, that are time vesting. In addition, we granted 45,639 restricted stock units, net of forfeitures, and 300

performance share units that vest over time, provided certain performance criteria are achieved. These awards (both time-vesting and performance-vesting) were granted to certain employees and officers, and had an aggregate grant date fair value of $5.2 million. We did not receive any cash consideration in connection with these grants. These grants were exempt from registration under the Securities Act, pursuant to Section (3)(a)(2) thereof because the grants involved securities issued by a bank.

On December 31, 2018, we offered 2,000,000 new shares of common stock as part of an "at-the-market" equity offering program, in conjunction with the addition of our common stock in the S&P 500 Index on January 2, 2019. This offering settled on January 3, 2019 and net proceeds, after commissions, were $170.9 million ($85.45 per share), which we used for general corporate purposes. This transaction was also exempt from registration under the Securities Act, pursuant to Section (3)(a)(2) thereof because the transaction involved securities issued by a bank.

Purchases of Equity Securities By the Issuer and Affiliated Purchasers

We did not repurchase any of our common stock during the fourth quarter of 2018 or at any time since our inception on July 1, 2010.

On December 28, 2018 (the "Redemption Date"), we redeemed all outstanding depositary shares, each representing a 1/40th interest in the Bank's 7.00% Noncumulative Perpetual Series E Preferred Stock ("Series E Preferred Stock"). In total, 8,000,000 depositary shares were redeemed at a redemption price of $25.00 per share, representing an aggregate amount of $200,000,000 plus all accrued and unpaid dividends as of the Redemption Date. As of the Redemption Date, the Series E Preferred Stock was deemed no longer outstanding, and no further dividends will be declared on the Series E Preferred Stock.

Item 6. Selected Financial Data.

The following table presents our selected financial and other data. The balance sheet and results of operations data have been derived from our audited financial statements. Certain of the information presented below under the captions "Selected Ratios," "Selected Asset Quality Ratios" and "Capital Ratios" is unaudited. The selected financial and other data is qualified in its entirety by, and should be read in conjunction with, "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Item 8. Financial Statements and Supplementary Data."

($ in millions, except per share amounts)	As of or for the Year Ended December 31, 2018	2017	2016	2015	2014
Selected Financial Data:					
Interest income	$ 3,032	$ 2,451	$ 1,981	$ 1,664	$ 1,483
Interest expense	531	300	164	148	153
Net interest income	2,501	2,151	1,817	1,516	1,330
Provision for loan losses	76	60	47	55	56
Net interest income after provision for loan losses	2,425	2,091	1,770	1,461	1,274
Noninterest income	543	460	395	325	318
Noninterest expense	1,917	1,640	1,337	1,096	923
Net income	854	758	673	522	487
Dividends on preferred stock	58	58	69	59	56
Net income available to common shareholders	$ 796	$ 700	$ 605	$ 463	$ 431
Selected Ratios:					
Basic earnings per common share (“EPS”)	$ 4.89	$ 4.44	$ 4.07	$ 3.27	$ 3.16
Diluted EPS	$ 4.81	$ 4.31	$ 3.93	$ 3.18	$ 3.07
Net income to average assets	0.93%	0.95%	1.02%	0.96%	1.06%
Net income available to common shareholders to average common equity	10.90%	10.99%	11.67%	10.72%	11.72%
Net income available to common shareholders to average tangible common equity	11.34%	11.54%	12.38%	11.34%	12.49%
Average total equity to average total assets	9.08%	9.25%	9.59%	9.67%	9.93%
Dividends per common share	$ 0.71	$ 0.67	$ 0.63	$ 0.59	$ 0.54
Dividend payout ratio	14.8%	15.5%	16.1%	18.5%	17.6%
Book value per common share	$ 46.92	$ 42.23	$ 37.39	$ 32.28	$ 28.13
Tangible book value per common share	$ 45.26	$ 40.43	$ 35.35	$ 30.16	$ 26.56
Net interest margin (1)	2.96%	3.13%	3.20%	3.21%	3.32%
Efficiency ratio (2)	63.0%	62.8%	60.5%	59.5%	56.0%
Selected Balance Sheet Data:					
Total assets	$ 99,205	$ 87,781	$73,278	$58,981	$48,350
Investment securities	16,235	18,576	15,158	10,452	6,638
Loans:	75,865	62,840	52,008	44,083	37,809
Less: Allowance for loan losses	(439)	(366)	(306)	(261)	(207)
Loans, net	75,426	62,474	51,702	43,822	37,602
Goodwill and other intangible assets	274	290	316	309	217
Deposits	79,063	68,919	58,602	47,893	37,131
Federal Home Loan Bank (“FHLB”) advances	8,800	8,400	5,900	4,000	5,275
Senior notes	896	895	398	397	396
Subordinated notes	777	777	387	—	—
Total equity	$ 8,678	$ 7,818	$ 6,909	$ 5,706	$ 4,778
Other Financial Information:					
Wealth management assets	$126,213	$106,961	$83,580	$72,293	$53,377
Loans serviced for others	$ 11,573	$ 12,495	$11,655	$10,531	$ 9,590
Selected Asset Quality Ratios:					
Nonperforming assets to total assets	0.05%	0.04%	0.07%	0.12%	0.10%
Nonperforming assets to loans and REO	0.06%	0.06%	0.09%	0.17%	0.12%
Allowance for loan losses to total loans	0.58%	0.58%	0.59%	0.59%	0.55%
Allowance for loan losses to nonperforming loans	945%	972%	625%	355%	451%
Net loan charge-offs to average total loans	0.00%	0.00%	0.00%	0.00%	0.01%
Capital Ratios:					
Tier 1 leverage ratio (3)	8.68%	8.85%	9.37%	9.21%	9.43%
Common Equity Tier 1 ratio (3), (4)	10.38%	10.63%	10.83%	10.76%	n/a
Tier 1 common equity ratio (4)	n/a	n/a	n/a	n/a	10.90%
Tier 1 risk-based capital ratio (3)	11.70%	12.22%	13.07%	13.13%	13.55%
Total risk-based capital ratio (3)	13.43%	14.11%	14.46%	13.78%	14.20%

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(1) Calculated on a fully taxable-equivalent basis. Beginning in 2018, reflects the new federal tax rate following the enactment of the Tax Reform Act.

(2) Efficiency ratio is the ratio of noninterest expense to the sum of net interest income and noninterest income.

(3) Beginning in 2015, ratios reflect the adoption of the Basel III Capital Rules. Ratios for prior periods represent the previous capital rules under Basel I.

(4) Beginning in 2015, the Common Equity Tier 1 ratio is a new ratio requirement under the Basel III Capital Rules and represents common equity, less goodwill and intangible assets net of any associated deferred tax liabilities, divided by risk-weighted assets. In prior periods, the Tier 1 common equity ratio represents common equity, less goodwill and intangible assets, divided by risk-weighted assets.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Introduction

The discussion of our results of operations for the past three fiscal years that follows should be read in conjunction with our financial statements and related notes thereto presented elsewhere in our Annual Report on Form 10-K. In addition to historical information, this discussion includes certain forward-looking statements regarding events and trends that may affect our future results. Refer to "Information Regarding Forward-Looking Statements" on page 3. For a more complete discussion of the factors that could affect our future results, see "Item 1A. Risk Factors."

We derive our income from three principal areas: (1) net interest income, which is our largest source of income, and constitutes the difference between the interest income that we receive from interest-earning assets such as loans and investment securities, and the interest expense that we pay on interest-bearing liabilities, such as deposits and borrowings; (2) fee income from wealth management activities, including investment management, trust, brokerage, foreign exchange and fee income from other banking services; and (3) earnings from the sale and servicing of real estate secured loans. We currently operate our business through two business segments: Commercial Banking and Wealth Management.

Critical Accounting Policies and the Impact of Accounting Estimates

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to allowance for loan losses and income taxes. We base these estimates on our historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We consider the accounting policies below to be critical accounting policies because of the significance to our financial condition and results of operations and the difficult and subjective judgments, assumptions and estimates involved. Actual results may differ from these estimates under different assumptions or conditions.

Allowance for Loan Losses

We maintain an allowance for loan losses that represents management's best estimate of probable credit losses inherent in the loan portfolio as of the balance sheet date. As part of our quarterly and ongoing review, management considers historical loss rates, changes in economic conditions, underlying collateral values and other trends and factors. Changes in estimates and assumptions could cause changes in the allowance for loan losses, and therefore, in the related provision for loan losses. For a description of our related accounting policies, see Note 1 in "Item 8. Financial Statements and Supplementary Data."

In determining the allowance for loan losses for loans that do not meet our definition of impaired, loss factors are applied to pools of homogeneous loans with similar risk characteristics. These factors represent credit losses inherent in the portfolio and are based on the Bank's historical loss experience. In determining the allowance for loan losses on the portfolio of impaired loans, measurement is made on an individual loan basis and is determined using the present value of expected future cash flows or the fair value of the underlying collateral, net of estimated selling costs.

We also maintain a qualitative reserve, which represents the qualitative portion of the allowance for loan losses. This qualitative reserve is determined based on management's assessments of the risks that may lead to a loan loss experience different than our historical loss experience and therefore not reflected in the quantitative model. We use qualitative factors that are intended to address developing external and internal environmental trends and include considerations, such as changes in current economic and business conditions, the nature and volume of Bank's loan portfolio, the existence and effects of credit concentrations, problem loan trends, along with other external factors, such as competition and the legal and regulatory environment.

If the financial condition of our borrowers were to deteriorate, resulting in an impairment of their ability to make payments, or the value of collateral securing mortgage loans were to decline, an increase in the allowance may be required. A significant decline in the credit quality of our loan portfolio requiring an increase in our allowance for loan losses would have a material adverse effect on our financial condition, results of operations and cash flows.

Income Taxes

The Bank estimates income tax expense based on amounts expected to be owed to various tax jurisdictions in which we operate and includes estimates for potential taxes, interest and penalties related to uncertain tax positions. On a quarterly basis, we evaluate tax accruals to determine if they are sufficient based on a probability of potential outcomes. Changes in the estimate of accrued taxes occur periodically due to changes in tax rates and interpretation of tax laws and regulations. Beginning in 2018, federal tax reform legislation reduced the federal tax rate for corporations from 35% to 21% and changed or limited certain tax deductions. See Note 19 in "Item 8. Financial Statements and Supplementary Data" for additional information.

Deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

The Bank records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized. Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, sources of taxable income in carryback periods and tax effects of the deferred tax liabilities, will be sufficient to fully recover the remaining deferred tax assets. The Bank will continue to evaluate the realizability of the deferred tax assets by assessing the need for a valuation allowance.

A tax position that meets the "more likely than not" recognition threshold is measured to determine the amount of benefits to recognize. The tax position is measured at the largest amount of benefit that is greater than 50% likely of being realized upon settlement. Interest and penalties are recognized as a component of income tax expense.

Current Accounting Developments

For discussion of accounting standards recently issued but not yet effective, refer to Note 1 in "Item 8. Financial Statements and Supplementary Data."

Key Factors Affecting Our Business and Financial Statements

Interest Rates

Net interest income is our largest source of income and is the difference between the interest income on interest-earning assets (usually loans and investment securities) and the interest expense incurred in connection with interest-bearing liabilities (usually deposits and borrowings). The level of net interest income is primarily a function of the average balance of interest-earning assets, the average balance of interest-bearing liabilities and the spread between the contractual yield on such assets and the contractual cost of such liabilities. These factors are influenced by both the pricing and mix of interest-earning assets and interest-bearing liabilities which, in turn, are impacted by external factors such as the local economy, competition for loans and deposits, the monetary policy of the FOMC and market interest rates.

The rate paid on our deposits and short-term borrowings is largely based on short-term interest rates, the level of which is driven primarily by the FOMC's actions. However, the yields generated by our loans and securities are typically driven by short-term and longer-term interest rates, which are set by the market, or, at times by the FOMC's actions, and generally vary from day to day. The level of net interest income is therefore influenced by movements in such interest rates and the pace at which such movements occur. Declines in the yield curve or a decline in longer-term yields relative to short-term yields (a flatter yield curve) would have an adverse impact on our net interest margin and net interest income.

See "Item 1A. Risk Factors—We are subject to interest rate risk" and "Item 7A. Quantitative and Qualitative Disclosures About Market Risk."

Regulatory and Supervisory Matters

Our results of operations are affected by the regulatory environment and requirements imposed on us by regulators. The extensive regulation and supervision that govern our business continues to evolve as the legal and regulatory framework changes and as our business grows. In particular, as described further under "Item 1. Business—Supervision and Regulation," the Dodd-Frank Act significantly restructured the financial regulatory regime in the United States. The enactment of the EGRRCPA in May 2018 altered several provisions of the Dodd-Frank Act. Overall, the changes under the EGRRCPA mainly apply to smaller U.S. banks and to U.S. bank holding companies and, subject to rulemaking and implementation by our regulators, we expect they may impact the Bank, including in the following areas, among others: a) company-run stress testing, b) treatment of municipal obligations as HQLA and c) resolution planning. Specifically, the EGRRCPA and corresponding FDIC rule expanded the definition of HQLA to include certain municipal obligations, and HQLA now include such qualifying securities. We continue to evaluate the impact of these changes, and the nature, extent, timing and impact of any future changes to the Dodd-Frank Act and related regulatory requirements cannot be predicted.

We are subject to the Basel III Capital Rules that took effect on January 1, 2015, as described further under "Item 1. Business—Supervision and Regulation—Capital Requirements."

As described further under "Item 1. Business—Supervision and Regulation—Liquidity Rules," because we are a California-chartered, non-member bank without a bank holding company, we are not subject to the LCR Rule. Nevertheless, we maintain on-balance sheet liquidity and a portfolio of HQLA.

As of December 31, 2018, we had $29.4 billion of noninterest-bearing business checking accounts and $2.4 billion of interest-bearing business checking accounts. The prohibition on depository institutions from paying interest on demand deposits, such as checking accounts, was repealed effective July 21, 2011. We began offering interest-bearing corporate checking after July 21, 2011. If we need to offer higher interest on checking

accounts to maintain current clients or attract new clients, our interest expense will increase, perhaps materially. Furthermore, if we fail to offer interest in a sufficient amount to keep these demand deposits, our core deposits may be reduced, which would require us to obtain funding in other ways or risk slowing our future asset growth.

The Dodd-Frank Act imposes additional underwriting standards on mortgages and restricts so-called "high-cost mortgages." Because of these restrictions, it may become impractical or impermissible for us to continue to originate certain mortgages with prepayment penalties. This may cause our fee income from prepayment penalties to decrease over time as mortgages with prepayment penalties in our loan portfolio repay and cannot be replaced. For 2018, 2017 and 2016, our revenue from prepayment penalties (including on loans serviced for others) was $8.5 million, $9.9 million and $19.5 million, respectively.

Financial Highlights

Our total assets were $99.2 billion at December 31, 2018 and $87.8 billion at December 31, 2017, a 13% increase.

At December 31, 2018, total investment securities were $16.2 billion, a 13% decrease compared to $18.6 billion at December 31, 2017. Total investment securities represented 16% of total assets at December 31, 2018, compared to 21% of total assets at December 31, 2017. The decrease in investment securities was primarily due to the sale of certain securities totaling $2.2 billion, as part of a repositioning of our investment portfolio. Our holdings of assets that are considered HQLA, including eligible cash, totaled $14.8 billion at December 31, 2018, compared to $10.5 billion at December 31, 2017. At December 31, 2018, HQLA include $5.2 billion of municipal securities that qualify under the amended definition of HQLA. At December 31, 2018, HQLA represented 15.4% of average total assets for the fourth quarter of 2018. For additional discussion regarding our investment portfolio, see "—Balance Sheet Analysis—Investments."

At December 31, 2018, loans, excluding loans held for sale, were $75.9 billion, a 21% increase, compared to $62.8 billion at December 31, 2017. Our single family mortgage loans, including loans held for sale and HELOCs, were $40.6 billion and represented 53% of total loans at December 31, 2018, compared to $34.3 billion, or 55% of total loans at December 31, 2017.

Loan origination volume was $32.1 billion in 2018, compared to $27.6 billion in 2017 and $25.7 billion in 2016, an increase of 16% in 2018 and an increase of 7% in 2017. Loan originations increased in 2018 primarily due to increases in multifamily and business lending, partially offset by a decline in single family refinance volume. Loan originations increased in 2017 primarily due to increases in single family, multifamily and business lending.

Total deposits were $79.1 billion at December 31, 2018, an increase of 15%, compared to $68.9 billion at December 31, 2017. Deposits increased as a result of expanding existing client relationships, referrals from existing clients, and new deposit clients. We continue to emphasize building banking relationships through checking and other transaction deposit accounts. At December 31, 2018, balances in business and personal checking accounts were $47.1 billion, or 60% of total deposits, compared to $43.7 billion, or 63% of total deposits at December 31, 2017. At December 31, 2018, business deposits were $44.3 billion and represented 56% of total deposits, compared to $37.4 billion, or 54% of total deposits, at December 31, 2017.

Our Common Equity Tier 1 and total risk-based capital ratios at December 31, 2018 were 10.38% and 13.43%, respectively. We continue to exceed regulatory guidelines for well-capitalized institutions. Refer to "—Capital Resources" for further discussion of capital ratios and our capital requirements.

Book value per common share was $46.92 at December 31, 2018, an 11% increase from December 31, 2017. Tangible book value per common share was $45.26 at December 31, 2018, a 12% increase from December 31, 2017.

Our capital markets activity for 2018 included the following:

- In December 2018, redemption of all outstanding shares of our 7.00% Noncumulative Perpetual Series E Preferred Stock, which totaled $200.0 million, plus all accrued and unpaid dividends through the date of redemption.
- In September 2018, a public offering and sale of 2,000,000 new shares of common stock. Net proceeds, after underwriting discounts and expenses, were $200.6 million.
- In June 2018, a public offering of 12,000,000 depositary shares, each representing a 1/40th interest in a share of the Bank's 5.50% Noncumulative Perpetual Series I Preferred Stock ("Series I Preferred Stock"), at a public offering price of $25.00 per depositary share. The Bank issued 300,000 shares of the Series I Preferred Stock in connection with the offering, each with a liquidation preference of $1,000. Net proceeds, after underwriting discounts and expenses, were $290.2 million.
- In January 2018, redemption of all outstanding shares of our 5.625% Noncumulative Perpetual Series C Preferred Stock, which totaled $150.0 million, plus all accrued and unpaid dividends through the date of redemption.

In addition, on December 31, 2018, we offered 2,000,000 new shares of common stock as part of an "at-the-market" equity offering program, in conjunction with the addition of our common stock in the S&P 500 Index on January 2, 2019. This offering settled on January 3, 2019, and net proceeds, after commissions and expenses, were $170.6 million, which will be included as an addition to common equity in the first quarter of 2019.

Cash dividends paid in 2018 were $0.71 per share of common stock, compared to $0.67 in 2017 and $0.63 in 2016. On January 15, 2019, the Bank declared a cash dividend for the fourth quarter of 2018 of $0.18 per share, which was paid on February 14, 2019 to shareholders of record as of January 31, 2019. Any future payment of dividends will be subject to ongoing regulatory oversight and board approval.

Wealth management AUM and AUA increased $19.3 billion, or 18%, to $126.2 billion at December 31, 2018, from $107.0 billion at December 31, 2017. The increase in AUM and AUA was due to net new assets from both existing and new clients, partially offset by market depreciation.

The Tax Reform Act reduced the federal tax rate for corporations from 35% to 21%, effective January 1, 2018, and changed or limited certain tax deductions. The Bank's effective tax rate for 2018 was 18.8%, which reflects the new federal tax rate, along with changes in tax deductions. See "—Provision for Income Taxes" for additional information.

Results of Operations—Years Ended December 31, 2018, 2017 and 2016

Overview

Net income was $853.8 million in 2018, compared to $757.7 million in 2017 and $673.4 million in 2016, an increase of $96.2 million, or 13%, in 2018 and an increase of $84.2 million, or 13%, in 2017. Diluted EPS were $4.81 in 2018, compared to $4.31 in 2017 and $3.93 in 2016, an increase of 12% in 2018 and an increase of 10% in 2017.

Net income for the Commercial Banking segment was $768.6 million in 2018, compared to $690.7 million in 2017 and $618.1 million in 2016, an increase of 11% in 2018 and an increase of 12% in 2017. The Wealth Management segment's net income was $85.3 million in 2018, compared to $67.0 million in 2017 and $55.3 million in 2016, an increase of 27% in 2018 and an increase of 21% in 2017. For a discussion of segment results, see "—Business Segments."

Net Interest Income

Net interest income was $2.5 billion in 2018, compared to $2.2 billion in 2017 and $1.8 billion in 2016, an increase of $349.6 million, or 16%, in 2018 and an increase of $334.3 million, or 18%, in 2017.

Fully taxable-equivalent net interest income was $2.6 billion in 2018, compared to $2.4 billion in 2017 and $2.0 billion in 2016, an increase of $241.7 million, or 10%, in 2018 and an increase of $374.2 million, or 19%, in 2017. Tax-equivalent adjustments to net interest income were lower for 2018, compared to 2017 and 2016, as a result of the reduced federal corporate tax rate under the Tax Reform Act. The growth in fully taxable-equivalent net interest income in 2018 compared to the growth in 2017 reflects the reduced tax-equivalent adjustments in 2018. The contractual interest income of the Bank's tax-advantaged investments and tax-exempt loans was not impacted by the lower tax rate.

On an average basis, interest-earning assets and interest-bearing liabilities both increased 16% in 2018 and both increased 22% in 2017.

Yields/Rates (Fully Taxable-Equivalent Basis)

The following table presents the distribution of average assets, liabilities and equity, interest income and resulting yields on average interest-earning assets, and interest expense and rates on average interest-bearing liabilities on a fully taxable-equivalent basis.

	Year Ended December 31,								
	2018			2017			2016		
($ in thousands)	Average Balance	Interest Income/ Expense [1]	Yields/ Rates	Average Balance	Interest Income/ Expense [1]	Yields/ Rates	Average Balance	Interest Income/ Expense [1]	Yields/ Rates
Assets:									
Cash and cash equivalents	$ 1,325,174	$ 23,197	1.75%	$ 1,217,293	$ 11,850	0.97%	$ 1,913,466	$ 9,485	0.50%
Investment securities:									
U.S. Treasury and other U.S. Government agency securities	4,694	87	1.85%	101,164	742	0.73%	33,929	257	0.76%
U.S. Government-sponsored agency securities	1,072,391	31,761	2.96%	1,181,353	32,527	2.75%	898,210	25,659	2.86%
MBS:									
Agency residential and commercial MBS	7,370,501	203,505	2.76%	7,431,780	186,725	2.51%	5,235,151	125,810	2.40%
Other residential and commercial MBS	5,027	265	5.28%	8,072	231	2.86%	11,181	288	2.58%
Municipal securities [2]	8,126,173	382,662	4.71%	8,097,134	466,302	5.76%	5,993,268	354,594	5.92%
Other investment securities [3]	19,617	480	2.44%	8,787	174	1.99%	887	—	0.00%
Total investment securities	16,598,403	618,760	3.73%	16,828,290	686,701	4.08%	12,172,626	506,608	4.16%
Loans:									
Residential real estate	37,184,625	1,185,240	3.19%	31,784,581	952,949	3.00%	27,250,593	806,429	2.96%
Multifamily	9,602,522	357,780	3.67%	7,498,125	268,141	3.58%	5,983,850	220,968	3.69%
Commercial real estate	6,352,419	265,664	4.12%	5,761,123	237,035	4.11%	4,943,640	214,414	4.34%
Construction	1,954,078	93,613	4.73%	1,529,192	71,645	4.69%	1,247,480	57,037	4.57%
Business [2]	9,579,793	417,636	4.30%	7,493,820	325,148	4.34%	6,339,146	263,388	4.15%
Other	4,520,492	148,873	3.25%	3,202,979	95,586	2.98%	2,147,611	55,702	2.59%
Total loans	69,193,929	2,468,806	3.54%	57,269,820	1,950,504	3.41%	47,912,320	1,617,938	3.38%
FHLB stock [4]	293,359	25,187	8.59%	235,259	14,861	6.32%	154,036	19,266	12.51%
Total interest-earning assets	87,410,865	3,135,950	3.57%	75,550,662	2,663,916	3.53%	62,152,448	2,153,297	3.46%
Noninterest-earning assets:									
Noninterest-earning cash	347,639			324,696			283,292		
Goodwill and other intangibles	281,633			303,498			298,014		
Other assets	3,501,575			3,272,772			3,001,916		
Total noninterest-earning assets	4,130,847			3,900,966			3,583,222		
Total Assets	$91,541,712			$79,451,628			$65,735,670		
Liabilities and Equity:									
Deposits:									
Checking	$43,793,120	21,892	0.05%	$38,792,204	10,818	0.03%	$33,150,987	3,703	0.01%
Money market checking and savings	17,774,302	108,290	0.61%	16,999,755	45,852	0.27%	14,979,993	15,305	0.10%
CDs	9,220,835	159,858	1.73%	6,133,143	78,116	1.27%	4,642,625	54,757	1.18%
Total deposits	70,788,257	290,040	0.41%	61,925,102	134,786	0.22%	52,773,605	73,765	0.14%
Borrowings:									
Short-term borrowings	793,606	15,277	1.93%	670,919	7,601	1.13%	499,253	3,311	0.66%
Long-term FHLB advances	9,039,658	165,081	1.83%	7,019,452	105,272	1.50%	4,459,836	68,487	1.54%
Senior notes [5]	895,584	23,709	2.65%	682,216	17,883	2.62%	397,559	10,295	2.59%
Subordinated notes [5]	777,280	36,391	4.68%	731,018	34,197	4.68%	161,920	7,377	4.56%
Other borrowings	—	—	—%	17,722	416	2.35%	28,076	476	1.69%
Total borrowings	11,506,128	240,458	2.09%	9,121,327	165,369	1.81%	5,546,644	89,946	1.62%
Total interest-bearing liabilities	82,294,385	530,498	0.64%	71,046,429	300,155	0.42%	58,320,249	163,711	0.28%
Noninterest-bearing liabilities	939,028			1,052,700			1,109,027		
Preferred equity	1,004,110			987,633			1,123,132		
Common equity	7,304,189			6,364,866			5,183,262		
Total Liabilities and Equity	$91,541,712			$79,451,628			$65,735,670		
Net interest spread [6]			2.92%			3.11%			3.18%
Net interest income (fully taxable-equivalent basis) and net interest margin [2],[7]		$2,605,452	2.96%		$2,363,761	3.13%		$1,989,586	3.20%
Reconciliation of tax-equivalent net interest income to reported net interest income:									
Municipal securities tax-equivalent adjustment [2]		(78,007)			(164,864)			(127,889)	
Business loans tax-equivalent adjustment [2]		(26,337)			(47,434)			(44,535)	
Net interest income, as reported		$2,501,108			$2,151,463			$1,817,162	

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(1) Interest income is presented on a fully taxable-equivalent basis.
(2) Beginning in 2018, tax equivalent adjustments to interest income and yields reflect the corporate federal tax rate of 21%.
(3) Includes mutual funds and marketable equity securities.
(4) Yields for 2018 and 2016 include FHLB special dividends received of $4.8 million and $5.9 million, respectively.
(5) Average balances include unamortized issuance discounts and costs. Interest expense includes amortization of issuance discounts and costs.
(6) Net interest spread represents the average yield on interest-earning assets less the average rate on interest-bearing liabilities.
(7) Net interest margin represents net interest income on a fully taxable-equivalent basis divided by total average interest-earning assets.

Interest Income

Total interest income consists of interest income on loans and investments, FHLB stock dividends, and interest income on cash and cash equivalents. Total interest income was $3.0 billion in 2018, compared to $2.5 billion in 2017 and $2.0 billion in 2016, an increase of $580.0 million, or 24% in 2018 and an increase of $470.7 million, or 24% in 2017. The increases were the result of increases in average interest-earning assets of 16% in 2018 and 22% in 2017, and increases in the average yield on interest-earning assets. Average interest-earning assets were $87.4 billion in 2018, compared to $75.6 billion in 2017 and $62.2 billion in 2016. The average yield on interest-earning assets was 3.57% in 2018, compared to 3.53% in 2017 and 3.46% in 2016. The average yield for 2018 also includes the negative impact of lower tax-equivalent adjustments for municipal securities and tax-exempt loans in 2018 as a result of the lower federal corporate tax rate, which reduced the year-over-year growth in yields on interest-earning assets.

Loans

Interest income on loans was $2.4 billion in 2018, compared to $1.9 billion in 2017 and $1.6 billion in 2016, an increase of $539.4 million, or 28%, in 2018 and an increase of $329.7 million, or 21%, in 2017. The increases were due to continued loan growth and increases in the average yield. Fully taxable-equivalent interest income on loans was $2.5 billion in 2018, compared to $2.0 billion in 2017 and $1.6 billion in 2016, an increase of $518.3 million, or 27%, in 2018 and an increase of $332.6 million, or 21%, in 2017.

Average loan balances were $69.2 billion in 2018, compared to $57.3 billion in 2017 and $47.9 billion in 2016, an increase of $11.9 billion, or 21%, during 2018 and an increase of $9.4 billion, or 20%, during 2017. The average yield on loans was 3.54% in 2018, compared to 3.41% in 2017 and 3.38% in 2016, an increase of 13 basis points during 2018 and an increase of 3 basis points during 2017.

Interest income on loans included prepayment penalty fees of $7.8 million, $7.5 million and $14.0 million in 2018, 2017 and 2016, respectively. The slight increase in 2018 was primarily due to higher prepayments on multifamily loans, partially offset by lower prepayments on single family and commercial real estate loans. The decrease in 2017 was primarily due to lower prepayments on multifamily and single family loans.

Our yield on loans is affected by a number of factors: market interest rates, the level of adjustable-rate loan indices, interest rate floors and caps, the repayment rate of loans, portfolio mix and the level of nonaccrual loans. Our weighted average contractual loan rate (on a fully taxable-equivalent basis) was 3.68% at December 31, 2018, compared to 3.32% at December 31, 2017. For ARM loans, the yield is also affected by the timing of changes in the loan rates, which generally lag market rate changes. At December 31, 2018, approximately 33% of our total loans were adjustable-rate or mature within one year, compared to 35% at December 31, 2017.

Investments

Interest income on investments was $540.8 million in 2018, compared to $521.8 million in 2017 and $378.7 million in 2016, an increase of $18.9 million, or 4%, in 2018 and an increase of $143.1 million, or 38%, in 2017. Fully taxable-equivalent interest income on investments was $618.8 million in 2018, compared to $686.7 million in 2017 and $506.6 million in 2016, a decrease of $67.9 million, or 10%, in 2018 and an increase of $180.1 million, or 36%, in 2017. The decrease in 2018 was primarily the result of the reduced federal corporate tax rate from the Tax Reform Act, which impacted the tax-equivalent income on municipal securities.

Average investment balances were $16.6 billion in 2018, compared to $16.8 billion in 2017 and $12.2 billion in 2016, a slight decrease in 2018 and an increase of $4.7 billion, or 38%, in 2017. The increase in 2017 was primarily due to purchases of HQLA and municipal securities. The average yield on investment securities was 3.73% in 2018, compared to 4.08% in 2017 and 4.16% in 2016, a decline of 35 basis points in 2018 and a decline of 8 basis points in 2017. The yield decline in 2018 was primarily the result of the reduced federal corporate tax rate from the Tax Reform Act, partially offset by an increase in HQLA yields. The yield decline in 2017 was the result of a change in the mix of the investment portfolio from increases in our holdings of agency MBS, which are considered HQLA, and also due to purchases of new municipal securities at slightly lower yields than the existing portfolio as a result of very strong market demand for municipal securities in 2017, which led to lower yields on new purchases.

FHLB Stock

Dividends on FHLB stock were $25.2 million in 2018, compared to $14.9 million in 2017 and $19.3 million in 2016, an increase of $10.3 million, or 69%, in 2018 and a decrease of $4.4 million, or 23%, in 2017. The average yield on FHLB stock was 8.59% in 2018, compared to 6.32% in 2017 and 12.51% in 2016. The increase in dividend income and yield in 2018 was primarily due to higher dividend rates and higher average FHLB stock balances. Also, dividend income in 2018 included an FHLB special dividend of $4.8 million. The decline in 2017 was primarily due to lower dividend rates, partially offset by higher average FHLB stock balances. Also, dividend income in 2016 included an FHLB special dividend of $5.9 million. Average FHLB stock balances were $293.4 million in 2018, compared to $235.3 million in 2017 and $154.0 million in 2016, an increase of $58.1 million, or 25%, in 2018 and an increase of $81.2 million, or 53%, in 2017.

Interest Expense

Total interest expense consists of interest expense on deposits, FHLB advances, senior notes, subordinated notes and other borrowings. Total interest expense was $530.5 million in 2018, compared to $300.2 million in 2017 and $163.7 million in 2016, an increase of $230.3 million, or 77%, during 2018 and an increase of $136.4 million, or 83% during 2017. The increase in 2018 was the result of an increase in the amount of average interest-bearing liabilities, which were $82.3 billion in 2018, compared to $71.0 billion in 2017, and an increase in the average cost of interest-bearing liabilities to 0.64% in 2018 from 0.42% in 2017. The increase in 2017 was the result of an increase in the amount of average interest-bearing liabilities, which were $71.0 billion in 2017, compared to $58.3 billion in 2016, and an increase in the average cost of interest-bearing liabilities to 0.42% in 2017 from 0.28% in 2016.

Deposits

Interest expense on deposits was $290.0 million in 2018, compared to $134.8 million in 2017 and $73.8 million in 2016, an increase of 115% in 2018 and an increase of 83% in 2017. The increases were primarily due to an increase in rates paid on deposits due to an increase in market rates of interest, as well as an increase in average deposit balances. The average interest rate paid on deposits was 0.41% in 2018, 0.22% in 2017 and 0.14% in 2016.

Average deposit balances were $70.8 billion in 2018, compared to $61.9 billion in 2017 and $52.8 billion in 2016, an increase of $8.9 billion, or 14%, in 2018 and an increase of $9.2 billion, or 17%, in 2017. The following table presents average deposit balances by deposit type as a percentage of average total deposits:

	Year Ended December 31,		
Average Deposits by Type as a % of Average Total Deposits	**2018**	**2017**	**2016**
Checking	62%	63%	63%
Money market checking and savings	25%	27%	28%
CDs	13%	10%	9%

At December 31, 2018, our total deposits were $79.1 billion, compared to $68.9 billion at December 31, 2017, an increase of 15%, and the weighted average contractual rate paid on total deposits was 0.56% and 0.28%, respectively. We will continue to focus on growth in our core deposit base to fund a significant percentage of our future asset growth, although there can be no assurance we will be successful. If we are not successful, we may need to use other sources of funding, such as FHLB advances, unsecured term senior notes or unsecured term subordinated notes, which are generally higher in cost.

Borrowings

Interest expense on borrowings was $240.5 million in 2018, compared to $165.4 million in 2017, and $89.9 million in 2016, an increase of $75.1 million, or 45%, in 2018 and an increase of $75.4 million, or 84%, in 2017. The increase in 2018 was primarily due to an increase in long-term FHLB advances and an issuance of 5-year, fixed-rate senior notes in June 2017. The increase in 2017 was primarily due to an increase in long-term FHLB advances, two new issuances of 30-year, fixed-rate subordinated notes in August 2016 and February 2017, and the issuance of 5-year, fixed-rate senior notes in June 2017.

Short-term borrowings, which include federal funds purchased and short-term FHLB advances, have an original maturity of one year or less. At both December 31, 2018 and 2017, short-term borrowings were $100.0 million. Interest expense on short-term borrowings was $15.3 million in 2018, compared to $7.6 million in 2017 and $3.3 million in 2016. The increases in 2018 and 2017 were primarily due to an increase in the average cost of short-term borrowings as short-term interest rates have risen over the past two years consistent with actions taken by the FOMC, and an increase in average short-term borrowings. Average short-term borrowings in 2018 were $793.6 million, compared to $670.9 million in 2017 and $499.3 million in 2016. The average cost of short-term borrowings was 1.93% in 2018, compared to 1.13% in 2017 and 0.66% in 2016.

At December 31, 2018, long-term FHLB advances outstanding were $8.7 billion, compared to $8.3 billion at December 31, 2017. Interest expense on long-term FHLB advances was $165.1 million in 2018, compared to $105.3 million in 2017 and $68.5 million in 2016, an increase of $59.8 million, or 57%, during 2018 and an increase of $36.8 million, or 54%, during 2017. The increase in 2018 was primarily due to higher average balances and an increase in the average cost of long-term FHLB advances. The increase in 2017 was primarily due to higher average balances, partially offset by a decrease in the average cost of long-term FHLB advances. Average long-term FHLB advances in 2018 were $9.0 billion, compared to $7.0 billion in 2017 and $4.5 billion in 2016, an increase of 29% in 2018 and an increase of 57% in 2017. Average long-term FHLB advances as a proportion of total average interest-bearing liabilities were 11% in 2018, 10% in 2017 and 8% in 2016. The average cost of long-term FHLB advances was 1.83%, 1.50% and 1.54% in 2018, 2017 and 2016, respectively.

At December 31, 2018, the carrying value of unsecured senior notes was $896.4 million, compared to $894.7 million at December 31, 2017. Interest expense on our fixed-rate senior notes was $23.7 million in 2018, $17.9 million in 2017 and $10.3 million in 2016, and includes contractual interest, increased by amortization of issuance discounts and offering costs. The increases in interest expense in both 2018 and 2017 were due to the issuance of new senior notes in the amount of $500 million in June 2017.

At December 31, 2018, the carrying value of unsecured subordinated notes totaled $777.5 million, compared to $777.1 million at December 31, 2017. The subordinated notes were issued in August 2016 and February 2017. Interest expense on our fixed-rate subordinated notes in 2018 was $36.4 million, compared to $34.2 million in 2017 and $7.4 million in 2016, and includes contractual interest, increased by amortization of issuance discounts and offering costs.

Rate and Volume Variances (Fully Taxable-Equivalent Basis)

Net interest income is affected by changes in both volume and interest rates. Volume changes are caused by increases or decreases during the year in the level of average interest-earning assets and average interest-bearing liabilities. Rate changes result from increases or decreases in the yields earned on assets or the rates paid on liabilities. The decrease in the yield on municipal securities in 2018 was primarily the result of the reduced federal corporate tax rate from the Tax Reform Act, which impacted the tax-equivalent income on municipal securities. The following table presents for each of the last two years a summary of the changes in interest income and interest expense resulting from changes in the volume of average asset and liability balances and changes in the average yields or rates compared to the preceding year, on a fully taxable-equivalent basis. Unallocated changes in interest income or interest expense due to both volume and rate changes (such as for changes in investment or borrowing types) have been allocated proportionally between the volume and the rate variances.

	2018 vs. 2017			2017 vs. 2016		
($ in thousands)	Volume	Rate	Total	Volume	Rate	Total
Increase (decrease) in interest income:						
Cash and cash equivalents	$ 1,180	$ 10,167	$ 11,347	$ (5,241)	$ 7,606	$ 2,365
Investment securities:						
U.S. Treasury and other U.S. Government agency securities	(1,758)	1,103	(655)	494	(9)	485
U.S. Government-sponsored agency securities	(3,134)	2,368	(766)	7,836	(968)	6,868
MBS:						
Agency residential and commercial MBS	(1,553)	18,333	16,780	54,883	6,032	60,915
Other residential and commercial MBS	(129)	163	34	(87)	30	(57)
Municipal securities	1,668	(85,308)	(83,640)	121,475	(9,767)	111,708
Other investment securities	253	53	306	74	100	174
Loans:						
Residential real estate	169,157	63,134	232,291	135,789	10,731	146,520
Multifamily	77,919	11,720	89,639	54,398	(7,225)	47,173
Commercial real estate	24,669	3,960	28,629	34,137	(11,516)	22,621
Construction	20,314	1,654	21,968	13,162	1,446	14,608
Business	90,998	1,490	92,488	49,642	12,118	61,760
Other	42,038	11,249	53,287	30,323	9,561	39,884
FHLB stock	4,234	6,092	10,326	8,849	(13,254)	(4,405)
Total increase	425,856	46,178	472,034	505,734	4,885	510,619
Increase (decrease) in interest expense:						
Deposits:						
Checking	1,621	9,453	11,074	814	6,301	7,115
Money market checking and savings	2,280	60,158	62,438	2,607	27,940	30,547
CDs	47,251	34,491	81,742	18,657	4,702	23,359
Short-term borrowings	1,655	6,021	7,676	1,446	2,844	4,290
Long-term FHLB advances	33,962	25,847	59,809	38,444	(1,659)	36,785
Senior notes	5,646	180	5,826	7,459	129	7,588
Subordinated notes	2,166	28	2,194	26,600	220	26,820
Other borrowings	(416)	—	(416)	(223)	163	(60)
Total increase	94,165	136,178	230,343	95,804	40,640	136,444
Increase (decrease) in net interest income	$331,691	$ (90,000)	$241,691	$409,930	$(35,755)	$374,175

Provision for Loan Losses

The provision for loan losses was $76.1 million in 2018, compared to $60.2 million in 2017 and $47.2 million in 2016. The provision for loan losses is related primarily to growth in loans outstanding and reflects management's continuing assessment of the credit quality of the Bank's loan portfolio and our overall allowance methodology, which considers, among other things, the Bank's loan growth, level and type of loans originated and trends in the Bank's markets.

Noninterest Income

The following table presents noninterest income:

	Year Ended December 31,		
($ in thousands)	**2018**	**2017**	**2016**
Noninterest income:			
Investment management fees	$341,539	$282,868	$224,626
Brokerage and investment fees	31,867	26,666	27,661
Insurance fees	10,090	5,555	4,207
Trust fees	14,633	13,658	12,365
Foreign exchange fee income	35,606	27,691	22,406
Deposit fees	24,974	22,633	20,699
Loan and related fees	15,713	13,012	14,097
Loan servicing fees, net	13,302	13,800	13,465
Gain on sale of loans	5,616	9,233	4,828
Gain (loss) on investment securities, net	5,202	(833)	1,055
Income from investments in life insurance	40,670	37,874	48,119
Other income	4,233	8,304	1,284
Total noninterest income	$543,445	$460,461	$394,812

Noninterest income in 2018 was $543.4 million, compared to $460.5 million in 2017 and $394.8 million in 2016, an increase of $83.0 million, or 18%, in 2018 and an increase of $65.6 million, or 17%, in 2017. The increase in 2018 was primarily due to increases in investment management fees, foreign exchange fee income and net gain on investment securities. The increase in 2017 was primarily due to increases in investment management fees, foreign exchange fee income and gain on sale of loans, partially offset by a decrease in income from investments in life insurance.

Wealth Management Fees

Wealth management fees consist of fees earned for the management or administration of clients' assets, as well as commissions and trading revenues generated from the execution of client-related brokerage and investment activities and fees earned for assisting clients with financial planning or foreign exchange transactions. For additional information on the AUM and AUA for the entities comprising the Wealth Management segment, see "—Business Segments."

Investment management fees. We provide traditional full-service portfolio management and customized client portfolios through FRIM. We earn fee income from the management of equity securities, fixed income securities, balanced portfolios and alternative investments for our clients. In addition, we employ experienced wealth managers to work with our relationship managers to generate new AUM using an open architecture

platform. Investment management fees were $341.5 million in 2018, $282.9 million in 2017 and $224.6 million in 2016, an increase of $58.7 million, or 21%, in 2018 and an increase of $58.2 million, or 26%, in 2017. The increases in investment management fees in 2018 and 2017 were due to an increase in AUM. FRIM's AUM were $60.6 billion at December 31, 2018, compared to $52.7 billion at December 31, 2017, an increase of 15% from the addition of assets from existing and new clients, partially offset by market depreciation. The addition of client assets was the result of growth in investment management services to Bank clients, acquiring new clients, the successful marketing efforts of existing wealth managers and the hiring of experienced wealth managers who brought their clients with them. Investment management fees vary by client with the amount of assets managed and the type of investment management chosen by the client. Generally, these wealth managers earn higher fees for managing equity securities than for managing a fixed income portfolio. The future level of these fees depends on the level and mix of AUM, type of investment management chosen by the client, market conditions and our ability to attract new clients.

Brokerage and investment fees. We perform brokerage and investment activities for clients through FRSC. We employ wealth managers to offer brokerage services for equity securities, mutual funds, exchange-traded funds, unit investment trusts, alternative investments, hedging strategies, treasury securities, municipal bonds, other fixed income securities, money market mutual funds and other shorter-term liquid investments at the request of clients or their financial advisors. Brokerage and investment fees were $31.9 million in 2018, $26.7 million in 2017 and $27.7 million in 2016, an increase of $5.2 million, or 20%, in 2018 and a decrease of $1.0 million, or 4%, in 2017. Such fees vary based on the level and mix of AUA, conditions in the securities markets, volume of transaction activity and our ability to attract new clients. At December 31, 2018, we held $55.4 billion of client assets in brokerage accounts through FRSC and in third-party money market mutual funds, compared to $44.7 billion at December 31, 2017, an increase of 24% primarily from the addition of assets from existing and new clients, partially offset by market depreciation.

Insurance fees. We earn revenue from selling life insurance and annuity policies to our clients through FRSC and FRIM. Insurance fees consist of initial commissions when a policy is sold and subsequent commissions each year that a policy is renewed. Insurance fees were $10.1 million in 2018, $5.6 million in 2017 and $4.2 million in 2016, an increase of $4.5 million, or 82%, in 2018 and an increase of $1.3 million, or 32%, in 2017. Such fees vary based on the level of sales of insurance and annuity products and our ability to attract new clients. The Bank does not retain any underwriting risk from the sale of insurance products.

Trust fees. The Trust Company specializes in personal trusts and custody services and operates in California, Oregon, Washington, New York, Massachusetts, Delaware, Florida and Connecticut. The Trust Company draws new trust clients from our Preferred Banking and wealth management client base, as well as from outside of our organization. Trust fees were $14.6 million in 2018, $13.7 million in 2017 and $12.4 million in 2016, an increase of $1.0 million, or 7%, in 2018 and an increase of $1.3 million, or 10%, in 2017. The increases in 2018 and 2017 were primarily due to increases in assets under custody or administration from existing and new clients. At December 31, 2018, assets under custody or administration were $10.2 billion, compared to $9.6 billion at December 31, 2017, an increase of 7%. Trust fees are primarily based on the level and mix of assets under custody or administration and will vary in the future based on these factors.

Foreign exchange fee income. Foreign exchange fee income represents fees we earn from transacting foreign exchange business on behalf of our clients. We earned foreign exchange income of $35.6 million in 2018, compared to $27.7 million in 2017 and $22.4 million in 2016, an increase of $7.9 million, or 29% in 2018 and an increase of $5.3 million, or 24%, in 2017. The amount of foreign exchange fees is primarily driven by volume of activity from both existing and new clients.

We execute foreign exchange trades with clients and then offset those trades with other financial institution counterparties, such as major investment banks or large commercial banks. We do not retain significant foreign exchange risk associated with these transactions, as the trades with the client and the financial institution counterparty are matched on our books. We do retain credit risk, both to the client and the counterparty institution, which is evaluated and managed by us in the normal course of our operations.

Other Noninterest Income

Deposit fees. We earn fees from our clients for deposit services. Deposit fees were $25.0 million in 2018, compared to $22.6 million in 2017 and $20.7 million in 2016, an increase of 10% in 2018 and an increase of 9% in 2017. The increases in deposit fees were primarily driven by volume of activity from both existing and new clients and growth in overall deposits.

Loan and related fees. Loan and related fee income was $15.7 million in 2018, compared to $13.0 million in 2017 and $14.1 million in 2016. Loan and related fee income includes: late charge income, which generally increases with growth in the average loan and servicing portfolios; loan-related processing fees that vary with market conditions and loan origination volumes; prepayment penalties on sold loans; and payoff fees that vary with loan repayment activity and market conditions such as the general level of longer-term interest rates. We collected prepayment penalty fees on loans serviced for others of $761,000 in 2018, $2.4 million in 2017 and $5.5 million in 2016.

Loan servicing fees, net. Net loan servicing fees are derived from the amount of loans serviced, the fees earned from servicing such loans (expressed as a percent of loans serviced that are retained), the amortization rate of MSRs and the amount of provisions for, or reversal of, the MSR valuation allowance. The following table presents net loan servicing fees:

	Year Ended December 31,		
($ in thousands)	**2018**	**2017**	**2016**
Contractually specified servicing fees	$ 30,087	$ 30,069	$ 27,450
MSR amortization expense	(16,785)	(16,269)	(13,985)
Loan servicing fees, net	$ 13,302	$ 13,800	$ 13,465

Contractual servicing fees were $30.1 million in both 2018 and 2017 and were $27.5 million in 2016, an increase of $2.6 million, or 10% in 2017, primarily due to the growth in the servicing portfolio. The average servicing portfolio in 2018 was $12.0 billion, compared to $11.9 billion in 2017 and $10.9 billion in 2016, a slight increase in 2018 and an increase of 9% in 2017. The amount of contractual servicing fees depends upon the size of the servicing portfolio, the terms of the loans at origination, the interest rate environment and conditions in the secondary market when the loans are sold, as well as the rate of loan payoffs. Weighted average servicing fees collected as a percentage of loans serviced were approximately 0.25% for 2018, 2017 and 2016.

The amount of net loan servicing fees that we record is affected by the repayment of loans in the servicing portfolio. In 2018, the overall repayment speed experienced on loans serviced was 14%, compared to 15% in 2017 and 17% in 2016. If actual repayments of loans serviced are lower than our estimate of future repayments, we could reduce the amortization of MSRs and release a valuation allowance, if any, which would increase our expected level of future earnings. If actual repayments on loans serviced are higher than our estimates of future repayments, we may be required to increase the amortization of MSRs and reduce the carrying value of MSRs through the establishment of a valuation allowance, thereby decreasing our expected level of current and future earnings.

Gain on sale of loans. The net gain on sales of loans fluctuates with the amount of loans sold, the type of loans sold and market conditions such as the current interest rate environment. The amount of loans that we sell depends upon conditions in the mortgage origination, loan securitization and secondary loan sales markets. The following table presents loan sales activity and gain on sale of loans:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Gain on sale of loans	$ 5,616	$ 9,233	$ 4,828
Loans sold	$1,239,130	$2,877,177	$3,147,427
Gain on sale of loans as a percentage of loans sold	0.45%	0.32%	0.15%

The lower level of gain on sales in 2018 was the result of a lower volume of loans sold, partially offset by higher margins. The higher level of gains in 2017 was the result of higher margins, partially offset by a lower volume of loans sold.

Gain (loss) on investment securities, net. The gain (loss) on investment securities consists of activity from sales of investment securities and, beginning in 2018, also includes changes in fair value of the Bank's marketable equity securities. The gain (loss) varies based on the amount and type of investments sold and market conditions. The following table presents net gain (loss) on investment securities:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Net gain (loss) on sales of investment securities	$ 6,800	$(833)	$1,055
Net change in fair value of equity securities	(1,598)	—	—
Gain (loss) on investment securities, net	$ 5,202	$(833)	$1,055

The gain on sales of investment securities for 2018 was primarily due to the repositioning of the Bank's investment portfolio.

Income from investments in life insurance. Income from investments in life insurance was $40.7 million in 2018, $37.9 million in 2017 and $48.1 million in 2016. The increase in 2018 was due to higher dividend rates and higher average balances of investments in life insurance from new purchases. Income from investments in life insurance for 2016 included a $9.7 million gain from life insurance proceeds. The book value of this portfolio of tax-exempt investments was $1.4 billion at December 31, 2018 and $1.3 billion at December 31, 2017.

Other income. Other income was $4.2 million in 2018, compared to $8.3 million in 2017 and $1.3 million in 2016. Other income for 2017 included a $5.3 million gain from the sale of a private investment.

Noninterest Expense

The following table presents noninterest expense:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Noninterest expense:			
Salaries and employee benefits	$1,109,228	$ 930,908	$ 763,625
Information systems	241,752	208,625	153,207
Occupancy	152,258	136,746	119,139
Professional fees	60,058	56,950	52,740
Advertising and marketing	60,463	48,398	32,783
FDIC assessments	58,122	55,792	44,200
Other expenses	234,838	202,122	171,492
Total noninterest expense	$1,916,719	$1,639,541	$1,337,186

Noninterest expense was $1.9 billion in 2018, compared to $1.6 billion in 2017 and $1.3 billion in 2016, an increase of $277.2 million, or 17%, in 2018 and an increase of $302.4 million, or 23%, in 2017. The increase in 2018 was primarily due to higher salaries and employee benefits, information systems and other expenses. The increase in 2017 was primarily due to higher salaries and employee benefits, information systems, advertising and marketing costs and other expenses. The overall increases in expenses were primarily attributable to continued investments in the expansion of the franchise.

Noninterest expense was reduced by certain general and administrative costs, primarily compensation costs directly related to loan originations, which have been capitalized in accordance with ASC 310-20, "Nonrefundable Fees and Other Costs." We capitalized loan origination costs of $128.5 million in 2018, compared to $124.2 million in 2017 and $108.0 million in 2016, an increase of $4.4 million, or 4%, in 2018 and an increase of $16.2 million, or 15%, in 2017. The amount of capitalized costs varies directly with the volume and type of loan originations and the costs incurred to make new loans. The capitalized costs are reported as net deferred loan fees and costs on our balance sheet and are amortized to interest income over the contractual life of the loans.

Our efficiency ratio, the ratio of noninterest expense to the sum of net interest income and noninterest income, was 63.0% in 2018, compared to 62.8% in 2017 and 60.5% in 2016. The increases in the efficiency ratio in 2018 and 2017 were primarily attributable to increased salaries and employee benefits and information systems costs from the continued investments in the expansion of the franchise.

Salaries and employee benefits. Salaries and employee benefits is the largest component of noninterest expense and includes the cost of salaries, incentive and stock based compensation, benefit plans, health insurance and payroll taxes, which have collectively increased in each of the past several years as we hired additional personnel to support our growth and our enhanced regulatory infrastructure. Salaries and employee benefit expenses were $1.1 billion in 2018, compared to $930.9 million in 2017 and $763.6 million in 2016, an increase of $178.3 million, or 19%, in 2018 and an increase of $167.3 million, or 22%, in 2017. The increases were primarily the result of the addition of new personnel to support higher levels of lending, deposit growth, expansion of wealth management and higher incentive compensation related to the continued expansion of our franchise. At December 31, 2018, we had 4,480 full-time equivalent employees, including temporary employees and independent contractors, compared to 4,025 full-time equivalent employees at December 31, 2017, an 11% increase, and 3,566 full-time equivalent employees at December 31, 2016, a 13% increase.

Information systems. These expenses include payments to vendors that provide software and services on an outsourced basis, costs related to supporting and developing digital platforms and the costs associated with telecommunications for ATMs, office activities and internal networks. Expenses for information systems were $241.8 million in 2018, $208.6 million in 2017 and $153.2 million in 2016, an increase of $33.1 million, or 16%, in 2018 and an increase of $55.4 million, or 36%, in 2017. The increases in information systems costs were primarily due to continued technology initiatives to upgrade our systems, including a new mobile and online banking platform, enhance the client experience and support our growth.

Occupancy. Occupancy costs were $152.3 million in 2018, $136.7 million in 2017 and $119.1 million in 2016, an increase of $15.5 million, or 11%, in 2018 and an increase of $17.6 million, or 15%, in 2017. The increases in occupancy costs in 2018 and 2017 were primarily due to expanding our office space in existing markets for new employees, increased rental costs in certain locations and rental costs for future banking office locations. We expect the level of occupancy costs to vary with the number of offices and our staffing levels.

Professional fees. Professional fees include legal services required to complete certain transactions, resolve legal matters or delinquent loans, and the cost of loan review professionals, co-sourced internal audit, external auditors and other consultants, including consulting services dedicated to enhancing regulatory compliance activities and technology initiatives. Such expenses were $60.1 million in 2018, compared to $57.0 million in 2017 and $52.7 million in 2016, an increase of $3.1 million, or 5%, in 2018 and an increase of $4.2 million, or 8%, in 2017. The increase in professional fees in 2018 was primarily due to higher consulting fees related to continued investments in the expansion of the franchise, partially offset by lower legal fees. The increase in professional fees in 2017 was primarily due to higher legal fees and consulting fees related to continued investments in the expansion of the franchise.

Advertising and marketing. We advertise in various forms of media, including digital media, newspapers, radio, and television, primarily to support growth in our Preferred Banking offices and for advertising and marketing initiatives related to Gradifi. Advertising and marketing expenses were $60.5 million in 2018, $48.4 million in 2017 and $32.8 million in 2016. These expenses vary based on the number of marketing initiatives, level of advertising costs and costs associated with holding client events to support our growth. The increase in 2018 was due to deposit-related promotions and marketing initiatives associated with the Bank's next generation of clients. The increase in 2017 included increased expenses related to marketing initiatives associated with the Bank's next generation of clients and Gradifi.

FDIC assessments. FDIC assessments were $58.1 million in 2018, $55.8 million in 2017 and $44.2 million in 2016, an increase of $2.3 million, or 4%, in 2018 and an increase of $11.6 million, or 26%, in 2017. The increase in 2018 was primarily due to growth in the assessment base as a result of the growth in assets, partially offset by the elimination of the FDIC assessment surcharge in the fourth quarter of 2018. The increase in 2017 was primarily due to the FDIC assessment surcharge, which became effective in the third quarter of 2016 and a higher assessment base as a result of the growth in assets, partially offset by a decrease in our assessment rate.

Other expenses. Other expenses were $234.8 million in 2018, compared to $202.1 million in 2017 and $171.5 million in 2016, an increase of 16% in 2018 and an increase of 18% in 2017. These expenses include costs related to lending activities, client service, amortization of intangibles, insurance, hiring and other costs related to expanding operations. Other operating expenses include postage, charitable contributions, cash management, custody and clearing, training, and other miscellaneous expenses. Expenses in this category have increased primarily due to higher transaction volumes of loans, deposits and AUM and AUA, as well as an increase in the number of office locations and employees. The following table presents the main components of other expenses:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Other expenses:			
Deposit client related costs	$ 55,581	$ 39,891	$ 27,772
Travel and entertainment	23,049	20,163	16,036
Loan related costs	21,507	18,886	15,643
Amortization of intangibles	16,247	20,625	25,002
Subscriptions	14,827	11,989	11,282
Insurance expense	11,400	11,218	10,433
Recruiting fees	10,086	8,566	6,622
Other operating expenses	82,141	70,784	58,702
Total other expenses	$234,838	$202,122	$171,492

Included in insurance expense are costs related to a parametric earthquake insurance policy (the "Policy") with American International Reinsurance Company, Ltd. (the "Insurer"), a subsidiary of American International Group, Inc. Pursuant to this Policy, the Insurer is required to pay us: (i) $75 million upon the occurrence of an earthquake during the Policy's term that measures at least 7.0 on the moment magnitude scale and has an epicenter within an 85-mile radius of 111 Pine Street in San Francisco, California (our headquarters); and/or (ii) $30 million upon the occurrence of an earthquake during the Policy's term that measures at least 7.5 on the moment magnitude scale and has an epicenter within an 85-mile radius of 1888 Century Park East, Los Angeles, California (our Los Angeles office). The Bank is not required to incur any loss in order to receive proceeds under the Policy and would receive payment within 10 business days following such occurrence. The Policy's term is scheduled to end on December 31, 2020.

Provision for Income Taxes

The provision for income taxes varies from statutory rates due to the amount of income for financial statement and tax purposes and the rates charged by federal and state authorities.

Beginning in 2018, federal tax reform legislation reduced the federal tax rate for corporations from 35% to 21% and changed or limited certain tax deductions.

The Bank's effective tax rate for 2018 was 18.8%, compared to 16.9% for 2017 and 18.6% for 2016. The increase in the effective tax rate in 2018 was primarily due to a reduction in excess tax benefits from a decrease in both stock option exercises and vesting of stock awards in 2018, partially offset by a one-time revaluation of deferred tax assets in 2017 and the decrease in the corporate federal tax rate in 2018. The decrease in the effective tax rate in 2017 resulted primarily from increased tax benefits from the continued growth in tax-advantaged investments and an increase in volume of stock option exercises by Bank employees and directors, partially offset by the one-time revaluation of deferred tax assets. During 2017, the volume of stock option exercises was elevated in response to tax reform legislation.

The following table presents additional information about the effective tax rate:

Effective Tax Rate	Year Ended December 31, 2018	2017	2016
Effective tax rate, prior to excess tax benefits and deferred tax assets valuation adjustment	21.0%	22.9%	23.9%
Excess tax benefits—stock options	(1.3)%	(8.3)%	(4.2)%
Excess tax benefits—other stock awards	(0.9)%	(2.1)%	(1.1)%
Total excess tax benefits	(2.2)%	(10.4)%	(5.3)%
Deferred tax assets valuation adjustment [1]	—%	4.4%	—%
Effective tax rate	18.8%	16.9%	18.6%

[1] During 2017, as a result of tax reform legislation, the Bank recorded a one-time revaluation adjustment of $39.7 million to reduce its deferred tax assets, which increased the provision for income taxes.

The number of options exercised or stock awards that vest impact the amount of excess tax benefits recorded as a reduction in provision for income taxes. The following table presents excess tax benefits recognized for stock options and other stock awards:

	Year Ended December 31,					
	2018		2017		2016	
($ in thousands)	Number of Awards Exercised or Vested	Related Excess Tax Benefit	Number of Awards Exercised or Vested	Related Excess Tax Benefit	Number of Awards Exercised or Vested	Related Excess Tax Benefit
Stock options	621,945	$13,986	2,428,027	$75,825	1,603,129	$34,708
Other stock awards	1,071,476	9,110	1,100,473	18,546	838,752	9,354
Total	1,693,421	$23,096	3,528,500	$94,371	2,441,881	$44,062

In addition to the impact from the change in the corporate federal tax rate in 2018, the effective tax rate varies based on the level of tax credit investments, tax-exempt securities, tax-advantaged loans, investments in life insurance and the amount of excess tax benefits from exercise or vesting of share-based awards.

Business Segments

We currently conduct our business through two reportable business segments: Commercial Banking and Wealth Management.

The principal business activities of the Commercial Banking segment are attracting funds from the general public, originating loans (primarily real estate secured mortgage loans) and investing in investment securities. The primary sources of revenue for this segment are: (1) interest earned on loans and investment securities, (2) gains on sales of loans, (3) fees earned in connection with loan and deposit services and (4) income earned on loans serviced for investors. Principal expenses for this segment are interest incurred on interest-bearing liabilities, including deposits and borrowings, general and administrative costs and provision for loan losses.

Our Wealth Management segment consists of (i) FRIM; (ii) our money market mutual fund activities through third-party providers and the brokerage activities of FRSC (these two activities collectively, "Brokerage and Investment"); (iii) the Trust Company; and (iv) our foreign exchange activities. The Wealth Management segment's primary sources of revenue are fees earned for the management or administration of clients' assets, as well as commissions and trading revenues generated from the execution of client-related brokerage and investment activities and fees earned for assisting clients with financial planning or foreign exchange transactions. Wealth Management also earns fee income for offering sales of life insurance and annuity products to clients. In addition,

Wealth Management earns fees for the Bank's investment portfolio and earns a deposit earnings credit for client deposit accounts that are maintained at the Bank, including sweep deposit accounts. The Wealth Management segment's principal expenses are personnel-related costs and other general and administrative expenses. For complete segment information, see Note 23 in "Item 8. Financial Statements and Supplementary Data."

Commercial Banking

Net interest income for Commercial Banking was $2.4 billion in 2018, compared to $2.1 billion in 2017 and $1.8 billion in 2016, an increase of 16% in 2018 and an increase of 19% in 2017. The increases in net interest income in 2018 and 2017 were primarily due to an increase in interest-earning assets.

The provision for loan losses for Commercial Banking was $76.1 million in 2018, compared to $60.2 million in 2017 and $47.2 million in 2016, an increase of 26% in 2018 and an increase of 28% in 2017. The provision for loan losses is related primarily to growth in loans outstanding and reflects management's continuing assessment of the credit quality of the Bank's loan portfolio and our overall allowance methodology, which considers, among other things, the Bank's loan growth, level and type of loans originated and trends in the Bank's markets.

Noninterest income for Commercial Banking was $108.0 million in 2018, compared to $100.1 million in 2017 and $102.9 million in 2016, an increase of 8% in 2018 and a decrease of 3% in 2017. The increase in 2018 included a gain from sales of investment securities from the repositioning of the Bank's investment portfolio, as well as higher income from investments in life insurance and loan and related fees, partially offset by a gain from the sale of a private investment in 2017 and lower gains on sale of loans. The decrease in 2017 was primarily due to lower income from investments in life insurance, which was partially offset by a gain from the sale of a private investment.

Noninterest expense for Commercial Banking was $1.5 billion in 2018, compared to $1.3 billion in 2017 and $1.1 billion in 2016, an increase of 15% in 2018 and an increase of 23% in 2017. The increase in 2018 was primarily due to higher salaries and employee benefits and investments in information systems. The increase in 2017 was primarily due to higher salaries and employee benefits, information systems and advertising and marketing costs. The overall increases in these expenses were primarily attributable to the addition of new personnel to support higher levels of lending, deposit growth and higher incentive compensation related to the continued expansion of our franchise.

Provision for income taxes for Commercial Banking in 2018 was $164.0 million, compared to $110.6 million in 2017 and $117.5 million in 2016, an increase of 48% in 2018 and a decrease of 6% in 2017. The increase in the provision for income taxes in 2018 was the result of higher pre-tax income and a reduction in excess tax benefits from a decrease in both stock options exercises and vesting of stock awards, partially offset by a one-time revaluation of deferred tax assets in 2017 and the decrease in the corporate federal tax rate in 2018. The decrease in the provision for income taxes in 2017 resulted primarily from the continued growth in tax-advantaged investments and the increase in the volume of stock option exercises by Bank employees and directors, partially offset by the one-time revaluation of deferred tax assets.

Wealth Management

Net interest income for Wealth Management was $80.9 million in 2018, compared to $67.3 million in 2017 and $59.8 million in 2016, an increase of 20% in 2018 and an increase of 13% in 2017. Net interest income is earned from Wealth Management client deposits with the Bank, for which Wealth Management earns a deposit earnings credit, and fees earned for Wealth Management sweep deposits. Net interest income increased in 2018 and 2017 primarily as a result of growth in Wealth Management client deposits, including sweep deposits.

Wealth Management client deposits totaled $9.1 billion and $7.3 billion at December 31, 2018 and 2017, respectively, including sweep deposits. Wealth Management client deposits, including sweep accounts, averaged $7.5 billion, $7.1 billion and $6.0 billion in 2018, 2017 and 2016, respectively. As noted above, Wealth Management is allocated a deposit earnings credit and fees as net interest income, which is included in the Wealth Management results. Net interest income as a percentage of the average deposits generated by Wealth Management represented 1.08% in 2018, compared to 0.95% in 2017 and 1.00% in 2016.

The allocated earnings credit represents only a portion of the total net interest income generated by these deposits for the Bank. The Bank's holistic approach to generating a full relationship with our clients is demonstrated by the total impact that these Wealth Management deposits have to the Bank's overall net interest income. The Bank's consolidated net interest margin was 2.96% in 2018, 3.13% in 2017 and 3.20% in 2016. Using this overall net interest margin and the average Wealth Management deposits for each year, the Wealth Management deposits, on a consolidated basis, contributed net interest income of approximately $221.9 million in 2018, $221.8 million in 2017 and $191.2 million in 2016.

Noninterest income for Wealth Management was $469.9 million in 2018, compared to $394.0 million in 2017 and $316.6 million in 2016, an increase of 19% in 2018 and an increase of 24% in 2017. The increases were primarily due to higher investment management fees. Fees and other revenues increased in 2018 and 2017 as a result of an increase in AUM and AUA due to the addition of assets from existing and new clients, partially offset by market depreciation in 2018, and the hiring of new wealth managers, who brought in additional clients.

Noninterest expense for Wealth Management was $431.6 million in 2018, compared to $350.3 million in 2017 and $284.5 million in 2016, an increase of 23% in both 2018 and 2017. The increases in 2018 and 2017 were primarily due to higher salaries and benefits, including incentive compensation, as a result of overall growth in our business and the addition of new wealth managers. We continue to expand our client base and capabilities in all markets to grow this segment.

Provision for income taxes for Wealth Management in 2018 was $33.9 million, compared to $43.9 million in 2017 and $36.7 million in 2016, a decrease of 23% in 2018 and an increase of 20% in 2017. The decrease in 2018 was primarily the result of the decrease in the corporate federal tax rate in 2018, partially offset by a reduction in excess tax benefits from a decrease in both stock option exercises and vesting of stock awards. The increase in 2017 was primarily due to higher pre-tax income.

AUM and AUA, in aggregate, were $126.2 billion at December 31, 2018, compared to $107.0 billion a year ago, an increase of 18%. Our Wealth Management strategy is focused on both managing investment portfolios for our clients and keeping custody of such assets in brokerage accounts at FRSC. By providing multiple services, we are able to better develop a full Wealth Management and banking relationship, including the ability to gather deposits, including sweep accounts. As described above, client deposits from Wealth Management generate net interest income for the Bank. Certain Wealth Management client assets that are held or managed by different areas within our Wealth Management business generate multiple revenue streams for the Bank. As a result of having these multiple revenue streams from certain client assets, such assets are included in more than one type of Wealth Management asset category in the table below. The following table presents the AUM and AUA by the entities comprising our Wealth Management segment:

($ in millions)	December 31, 2018	December 31, 2017
First Republic Investment Management	$ 60,591	$ 52,712
Brokerage and investment:		
Brokerage	53,046	43,015
Money market mutual funds	2,358	1,671
Total brokerage and investment	55,404	44,686
Trust Company:		
Trust	5,350	4,678
Custody	4,868	4,885
Total Trust Company	10,218	9,563
Total AUM and AUA	$ 126,213	$ 106,961

The following table presents changes in AUM and AUA. Net client flow includes adding to the balance in existing accounts by the depositing of additional funds and the opening of new accounts, offset by the closing of accounts or the withdrawing of funds. The portion of the net change that cannot be attributed to the deposit or withdrawal of funds is reported in market appreciation (depreciation).

($ in millions)	Year Ended December 31, 2018	2017	2016
AUM and AUA:			
Beginning balance	$ 106,961	$ 83,580	$ 72,293
Net client flow	24,366	11,000	7,617
Market appreciation (depreciation)	(5,114)	12,381	3,670
Ending balance	$ 126,213	$ 106,961	$ 83,580

The following table presents a distribution of FRIM's AUM by type of investment:

Investment Type	% of AUM December 31, 2018	2017
Equities	46%	49%
Fixed income	33%	33%
Alternative investments	12%	14%
Cash and cash equivalents	9%	4%
Total	100%	100%

The following table presents wealth management fee income (consisting of investment management, brokerage and investment, and trust fees) as a percentage of average AUM and AUA:

	Year Ended December 31, 2018	2017 (1)	2016 (1)
First Republic Investment Management	0.59%	0.60%	0.59%
Brokerage and investment:			
Brokerage	0.05%	0.05%	0.08%
Money market mutual funds	0.41%	0.42%	0.21%
Total brokerage and investment	0.06%	0.07%	0.09%
Trust Company:			
Trust	0.21%	0.23%	0.25%
Custody	0.08%	0.09%	0.10%
Total Trust Company	0.15%	0.15%	0.17%
Total	0.32%	0.34%	0.34%

(1) Periods prior to 2018 have been revised to exclude insurance fees, to conform to the current period presentation.

Balance Sheet Analysis

Investments

The following table presents the investment portfolio:

($ in thousands)	December 31, 2018	2017	2016
Available-for-sale:			
U.S. Treasury securities	$ —	$ 54,998	$ 111,029
Agency residential MBS	26,095	34,574	48,229
Other residential MBS	4,552	4,860	7,662
Agency commercial MBS	1,701,021	2,255,890	1,790,897
Securities of U.S. states and political subdivisions—taxable	47,448	47,449	47,493
Mutual funds and marketable equity securities [1]	—	20,317	1,948
Total	$ 1,779,116	$ 2,418,088	$ 2,007,258
Held-to-maturity:			
U.S. Government-sponsored agency securities	$ 1,044,912	$ 1,400,025	$ 993,179
Agency residential MBS	1,868,587	2,734,819	2,689,035
Other residential MBS	—	1,631	1,875
Agency commercial MBS	3,375,409	3,017,012	2,385,928
Securities of U.S. states and political subdivisions:			
Tax-exempt municipal securities	7,952,605	8,804,924	6,876,777
Tax-exempt nonprofit debentures	142,508	146,529	150,322
Taxable municipal securities	52,952	53,005	53,041
Total	$ 14,436,973	$ 16,157,945	$ 13,150,157
Equity (fair value):			
Mutual funds and marketable equity securities [1]	$ 18,719	$ —	$ —

[1] Beginning January 1, 2018, as a result of the adoption of ASU 2016-01, equity securities with readily determined fair values are no longer classified as securities available-for-sale. Refer to Note 1 in "Item 8. Financial Statements and Supplementary Data" for additional information.

The total combined investment securities portfolio represented 16% of total assets at December 31, 2018, compared to 21% at December 31, 2017.

In January 2018, the Bank early adopted ASU 2017-12 "Derivatives and Hedging." In connection with the adoption of this guidance, the Bank made a one-time transfer of eligible held-to-maturity securities with a carrying amount of $2.1 billion to available-for-sale and recorded $12.3 million of net unrealized gains ($54.1 million in gains, net of taxes, and $41.8 million in losses, net of taxes) in accumulated other comprehensive income.

During January 2018, the Bank performed a repositioning of its investment portfolio and sold certain available-for-sale U.S. Treasury securities, U.S. Government-sponsored agency securities, agency residential MBS, agency commercial MBS, and tax-exempt municipal securities with proceeds of $2.2 billion, and recognized a gain on sale of $10.7 million. The one-time transition election described in the paragraph above did not affect the Bank's intent to hold the securities in question as of December 31, 2017 and/or its other-than-temporary impairment ("OTTI") assertion as of December 31, 2017 for those securities that were sold at a loss.

The average duration of the available-for-sale portfolio was 1.5 and 1.3 years at December 31, 2018 and December 31, 2017, respectively. The average duration of the held-to-maturity portfolio was 7.7 years at December 31, 2018, compared to 7.5 years at December 31, 2017.

At December 31, 2018, the tax-exempt and taxable municipal securities had an average credit rating of AA and the portfolio was well-diversified with an average issuer position of approximately $16.0 million. The tax-exempt nonprofit debentures are securities issued through state and local agencies where we have a banking relationship with nonprofit entities. The debentures are reviewed, approved and monitored by our business banking group, similar to business loans.

The following table presents the remaining contractual principal maturities of debt securities and contractual yields calculated on a taxable-equivalent basis at December 31, 2018. The weighted average yield is calculated using the amortized cost of debt securities. Actual maturities for certain U.S. Government agency securities, U.S. Government-sponsored agency securities and municipal securities may occur earlier than their stated contractual maturities because the note issuers may have the right to call outstanding amounts ahead of their contractual maturities. In addition, the remaining contractual principal maturities for MBS do not consider prepayments. Expected remaining maturities for MBS can differ from contractual maturities because borrowers have the right to prepay obligations, with or without penalties, prior to contractual maturity.

			Contractual Principal—Remaining Maturity							
			Within 1 Year		After 1 Through 5 Years		After 5 Through 10 Years		After 10 Years	
($ in thousands)	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
Available-for-sale:										
Agency residential MBS	$ 26,095	2.54%	$ 12	3.08%	$ 2,198	2.55%	$ 3,150	1.63%	$ 20,735	2.68%
Other residential MBS	4,552	3.53%	—	—%	—	—%	—	—%	4,552	3.53%
Agency commercial MBS	1,701,021	2.74%	—	—%	350,647	2.89%	652,660	2.68%	697,714	2.71%
Securities of U.S. states and political subdivisions—taxable	47,448	3.83%	—	—%	—	—%	—	—%	47,448	3.83%
Total carrying value of debt securities	$ 1,779,116		$ 12		$352,845		$655,810		$ 770,449	
Held-to-maturity:										
U.S. Government-sponsored agency securities	$ 1,044,912	2.98%	$ —	—%	$ —	—%	$550,758	2.90%	$ 494,154	3.06%
Agency residential MBS	1,868,587	2.88%	—	—%	—	—%	3,830	2.72%	1,864,757	2.88%
Agency commercial MBS	3,375,409	2.85%	—	—%	—	—%	—	—%	3,375,409	2.85%
Securities of U.S. states and political subdivisions:										
Tax-exempt municipal securities	7,952,605	4.69%	381,750	5.42%	499,827	5.86%	181,981	4.69%	6,889,047	4.57%
Tax-exempt nonprofit debentures	142,508	4.83%	—	—%	—	—%	—	—%	142,508	4.83%
Taxable municipal securities	52,952	6.35%	5,012	6.20%	—	—%	—	—%	47,940	6.36%
Total carrying value of debt securities	$14,436,973		$386,762		$499,827		$736,569		$12,813,815	
Estimated fair value of debt securities	$14,287,524		$390,440		$536,214		$729,623		$12,631,247	

Loan Portfolio

The following table presents the recorded investment in the Bank's loan portfolio and allowance for loan losses:

($ in millions)	December 31, 2018	2017	2016	2015	2014
Single family (1-4 units)	$37,955	$31,508	$26,267	$23,088	$20,455
Home equity lines of credit	2,543	2,736	2,635	2,378	2,214
Multifamily (5+ units)	10,358	8,640	6,676	5,355	4,669
Commercial real estate	6,677	6,083	5,465	4,436	3,785
Single family construction	645	591	495	434	425
Multifamily/commercial construction	1,577	1,117	919	687	449
Total real estate mortgages	59,755	50,675	42,457	36,378	31,997
Business	10,999	8,295	6,872	6,217	4,858
Stock secured	1,433	1,084	823	522	286
Other secured	1,106	1,015	724	542	437
Unsecured	2,572	1,771	1,132	424	231
Total other loans	16,110	12,165	9,551	7,705	5,812
Total loans	75,865	62,840	52,008	44,083	37,809
Less:					
Allowance for loan losses	(439)	(366)	(306)	(261)	(207)
Loans, net	75,426	62,474	51,702	43,822	37,602
Loans held for sale	99	88	407	49	271
Total	$75,525	$62,562	$52,109	$43,871	$37,873

The following table presents an analysis of the recorded investment in our loan portfolio at December 31, 2018, by category and major geographic location:

($ in millions)	San Francisco Bay Area	New York Metro Area	Los Angeles Area	Boston Area	San Diego Area	Other California Areas	Other	Total	%
Single family (1-4 units) [(1)]	$15,070	$ 8,398	$ 6,478	$3,920	$1,138	$ 359	$2,678	$38,041	50%
Home equity lines of credit	1,100	477	454	268	68	13	163	2,543	3%
Multifamily (5+ units) [(1)]	4,333	2,156	1,666	304	964	342	606	10,371	14%
Commercial real estate	3,017	1,255	1,133	270	165	161	676	6,677	9%
Business	4,289	2,268	1,790	710	334	15	1,593	10,999	15%
Construction	540	392	743	85	96	32	334	2,222	3%
Stock and other secured	486	622	318	284	45	70	714	2,539	3%
Unsecured	649	712	567	267	108	35	234	2,572	3%
Total	$29,484	$16,280	$13,149	$6,108	$2,918	$1,027	$6,998	$75,964	100%
% by location at December 31, 2018	39%	21%	17%	8%	4%	2%	9%	100%	
% by location at December 31, 2017	40%	22%	17%	8%	4%	1%	8%	100%	

(1) Includes loans held for sale.

At December 31, 2018 and 2017, approximately 50% and 51%, respectively, of total loans (based on recorded investment) were secured by real estate properties located in California. Future economic or political conditions, natural disasters or other developments in California could adversely affect the value of real estate secured mortgage loans.

The following table presents the maturity distribution (based on unpaid principal balance) of our real estate construction loans and other non-mortgage loans as of December 31, 2018. The maturity dates were determined based on the remaining scheduled principal repayment dates, without consideration of prepayments.

($ in thousands)	1 Year or Less	>1 Through 5 Years	>5 Years	Total
Maturity distribution:				
Business	$ 4,921,167	$ 1,950,221	$ 4,139,078	$ 11,010,466
Real estate construction	1,450,143	779,732	5,671	2,235,546
Stock secured	1,228,406	182,826	19,605	1,430,837
Other secured	42,889	626,372	435,943	1,105,204
Unsecured	309,306	401,972	1,856,479	2,567,757
Total	$ 7,951,911	$ 3,941,123	$ 6,456,776	$ 18,349,810

The following table presents the distribution (based on unpaid principal balance) of our real estate construction loans and other non-mortgage loans outstanding as of December 31, 2018 that are due after one year between fixed and adjustable interest rates:

($ in thousands)	Fixed	Adjustable	Total
Business	$ 4,603,333	$ 1,485,966	$ 6,089,299
Real estate construction	451,650	333,753	785,403
Stock secured	46,164	156,267	202,431
Other secured	111,262	951,053	1,062,315
Unsecured	2,175,975	82,476	2,258,451
Total	$ 7,388,384	$ 3,009,515	$ 10,397,899

The Bank's loan portfolio includes: (1) adjustable-rate loans tied to Prime, LIBOR, COFI, and other rates such as 1-year Constant Maturity Treasury ("CMT"), which are currently adjustable; (2) hybrid-rate loans, for which the initial rate is fixed for a period from one year to as much as ten years; and (3) fixed-rate loans, for which the interest rate does not change through the life of the loan. The following table presents the recorded investment in our loan portfolio at December 31, 2018, by rate type:

	Adjustable Rate							
($ in millions)	Prime	LIBOR	COFI	Other	Total	Hybrid Rate	Fixed Rate	Total
Single family (1-4 units) [1]	$ 185	$2,296	$3,022	$219	$ 5,722	$28,127	$ 4,192	$38,041
Home equity lines of credit	2,527	5	—	—	2,532	—	11	2,543
Multifamily (5+ units) [1]	330	243	2,232	135	2,940	4,863	2,568	10,371
Commercial real estate	202	303	468	15	988	2,467	3,222	6,677
Business	4,698	1,520	18	9	6,245	339	4,415	10,999
Construction	592	200	—	—	792	22	1,408	2,222
Stock and other secured	456	1,907	—	—	2,363	2	174	2,539
Unsecured	279	78	—	—	357	—	2,215	2,572
Total	$9,269	$6,552	$5,740	$378	$21,939	$35,820	$18,205	$75,964
% by rate type at December 31, 2018	12%	9%	8%	0%	29%	47%	24%	100%
% by rate type at December 31, 2017	12%	11%	9%	0%	32%	46%	22%	100%

(1) Includes loans held for sale.

At December 31, 2018, included in the hybrid-rate and fixed-rate loan portfolios are $2.9 billion, or 4% of the total loan portfolio, that either (1) mature within one year; (2) are within one year of adjusting from the initial fixed-rate period; or (3) are committed for sale. In December 2018, the Federal Home Loan Bank of San Francisco announced it will no longer calculate and publish COFI after January 31, 2020, at which time any remaining loans with the Bank will transition to another rate index. The Bank has a transition plan in place with respect to these loans.

Single Family

Our single family loans include loans that have an initial interest-only period. Subsequent to the initial interest-only period, these loans fully and evenly amortize until maturity. Underwriting standards for all such loans require substantial borrower net worth, substantial post-loan liquidity, excellent credit scores and significant down payments. As part of our underwriting standards, we verify the ability of the borrowers to repay our loans. At December 31, 2018, approximately $25.6 billion, or 68%, of the unpaid principal balance of our single family loan portfolio, including loans held for sale, fully and evenly amortize until maturity following an initial interest-only period of generally ten years. Such loans were $21.8 billion, or 69%, of our single family loan portfolio, at December 31, 2017. At December 31, 2018, loans of this type had a weighted average LTV of approximately 56%, based on appraised value at the time of origination, and had credit scores averaging 762 at origination. At December 31, 2018, interest-only home loans with an LTV at origination of more than 80% comprised less than 1% of the unpaid principal balance of our single family loan portfolio, including loans held for sale.

The following table presents the years in which amortization begins for single family loans, including loans held for sale:

($ in thousands)	December 31, 2018 Unpaid Principal Balance
Currently amortizing	$ 12,316,627
Amortization period starts in:	
2019	333,140
2020	439,646
2021	555,781
2022	963,172
2023	1,017,805
2024 and thereafter	22,302,372
Total	$ 37,928,543

The following table presents additional LTV information at origination for all single family loans, including loans held for sale:

($ in thousands)	December 31, 2018	
	Unpaid Principal Balance	% of Total
LTV at Origination		
Less than or equal to 60%	$ 19,243,794	50.7%
Greater than 60% to 70%	11,894,240	31.4%
Greater than 70% to 80%	5,582,731	14.7%
Greater than 80%	1,207,778	3.2%
Total	$ 37,928,543	100.0%

We do not originate single family loans with the characteristics generally described as "subprime" or "high cost." Subprime loans are typically made to borrowers with little or no cash reserves and poor or limited credit. Often, subprime loans are underwritten using limited documentation. Over the past two years, the single family loans originated by us had a weighted average credit score of 759, and all of our home loans were underwritten using full documentation.

HELOCs

Our single family HELOC product requires the payment of interest each month on the outstanding balance. During the first ten years of the loan term, principal amounts may be repaid or drawn at the borrower's option; thereafter, the unpaid principal balance fully and evenly amortizes over a period of fifteen years. We underwrite HELOCs based on the same standards as single family home loans. As a result, our delinquency and loss experience on HELOCs has been similar to the experience for single family loans.

For HELOCs that are in second lien position, the LTVs in the table below are presented on a combined LTV ("CLTV") basis, including the total HELOC commitment and any balance on a first residential mortgage. As of December 31, 2018, approximately 35% of HELOCs are in first lien position, and approximately 51% of HELOCs are in second lien position behind a first residential mortgage originated by us, including loans

subsequently sold to investors. The following table presents CLTV information at origination for HELOCs, including both the unpaid principal balance and total commitment:

($ in thousands)	December 31, 2018		
	Unpaid Principal Balance	Total Commitment	% of Unpaid Principal Balance
CLTV at Origination			
Less than or equal to 60%	$ 1,574,719	$ 5,202,186	62.3%
Greater than 60% to 70%	687,767	1,903,705	27.2%
Greater than 70% to 80%	240,629	613,556	9.5%
Greater than 80%	25,475	125,419	1.0%
Total	$ 2,528,590	$ 7,844,866	100.0%

The following table presents the years in which amortization begins on our HELOC portfolio:

($ in thousands)	December 31, 2018	
	Unpaid Principal Balance	Total Commitment
Currently amortizing	$ 108,883	$ 116,620
Amortization period starts in:		
2019	120,896	238,704
2020	82,991	240,798
2021	75,392	270,393
2022	125,233	458,434
2023	178,994	665,008
2024 and thereafter	1,836,201	5,854,909
Total	$ 2,528,590	$ 7,844,866

Multifamily

At December 31, 2018 and 2017, the unpaid principal balance of multifamily loans, including loans held for sale, was $10.4 billion and $8.7 billion, respectively. At December 31, 2018 and 2017, included in this portfolio were $4.7 billion and $3.7 billion, respectively, of loans, including loans held for sale, for which interest-only payments may be made for a period of up to ten years, depending upon the borrower, specific underwriting criteria and terms of the loans. At December 31, 2018, for multifamily loans that allow for interest-only payments, the weighted average LTV was 51% based on the appraised value at the time of origination. Additionally, at December 31, 2018 and 2017, we had committed to lend $351.3 million and $274.4 million, respectively, under lines of credit secured by the equity in multifamily real estate. The unpaid principal balance related to these commitments at December 31, 2018 and 2017 was $134.4 million and $146.2 million, respectively, representing 1.3% and 1.7% of the portfolio at December 31, 2018 and 2017, respectively; these lines of credit also allow for interest-only payments for an initial period.

Commercial Real Estate

At December 31, 2018 and 2017, the unpaid principal balance of commercial real estate loans was $6.7 billion and $6.1 billion, respectively. At both December 31, 2018 and 2017, included in this portfolio were $1.9 billion and $1.7 billion, respectively, of loans for which interest-only payments may be made for a period of up to ten years, depending upon the borrower, specific underwriting criteria and terms of the loans. At December 31, 2018, for commercial real estate loans that allow for interest-only payments, the weighted average LTV was 44% based on the appraised value at the time of origination. Additionally, at December 31, 2018 and 2017, we had committed to lend $336.2 million and $230.5 million, respectively, under lines of credit secured by the equity in commercial real estate. The unpaid principal balance related to these commitments at December 31, 2018 and 2017 was $120.2 million and $124.3 million, respectively, representing 1.8% and 2.0% of the portfolio at December 31, 2018 and 2017, respectively; these lines of credit also allow for interest-only payments for an initial period.

Business

Business loans provide funding for investment opportunities, bridge capital calls from investors, and meet the working capital cash flow requirements and various other financing needs of our business and non-profit clients. The business loan portfolio is comprised primarily of capital call lines to private equity and venture capital funds, and loans to independent schools and other non-profit organizations, which include social service organizations, the performing arts, museums, historical societies and community foundations. In addition, we provide operating lines of credit and term loans to other business clients to meet their working capital needs. The following table presents the recorded investment and total commitment for business loans by type:

	December 31,			
	2018		2017	
($ in thousands)	Recorded Investment	Total Commitment	Recorded Investment	Total Commitment
Private Equity/Venture Capital Funds	$ 5,116,390	$ 13,425,814	$ 2,836,888	$ 8,519,497
Schools/Non-profit Organizations	3,356,479	4,107,191	3,060,495	3,819,705
Investment Firms	400,609	894,772	421,116	852,009
Entertainment Industry	333,334	534,223	422,129	774,278
Real Estate Related Entities	339,278	737,221	362,882	725,758
Professional Service Firms	204,718	417,625	208,302	418,690
Aviation/Marine	360,926	367,591	283,545	290,123
Vineyards/Wine	192,402	254,085	175,387	225,522
Clubs and Membership Organizations	155,921	207,960	161,479	230,533
Other	538,446	840,704	363,001	608,204
Total	$ 10,998,503	$ 21,787,186	$ 8,295,224	$ 16,464,319

The following table presents the unpaid principal balance, total commitment and utilization percentages for business lines of credit by type:

	Lines of Credit					
	December 31,					
	2018			2017		
($ in thousands)	Unpaid Principal Balance	Total Commitment	Utilization Percentage	Unpaid Principal Balance	Total Commitment	Utilization Percentage
Private Equity/Venture Capital Funds	$ 5,050,905	$ 13,357,100	37.8%	$ 2,693,645	$ 8,372,799	32.2%
Schools/Non-profit Organizations	359,624	1,107,614	32.5%	403,937	1,160,455	34.8%
Entertainment Industry	326,338	524,610	62.2%	423,731	774,118	54.7%
Investment Firms	221,658	715,583	31.0%	209,186	639,669	32.7%
Real Estate Related Entities	146,650	543,066	27.0%	219,434	580,668	37.8%
Professional Service Firms	86,088	298,832	28.8%	79,008	288,040	27.4%
Vineyards/Wine	63,088	124,467	50.7%	41,923	91,637	45.7%
Clubs and Membership Organizations	25,244	77,025	32.8%	17,935	86,673	20.7%
Aviation/Marine	5,767	11,760	49.0%	60	6,170	1.0%
Other	208,768	508,084	41.1%	164,865	407,149	40.5%
Total	$ 6,494,130	$ 17,268,141	37.6%	$ 4,253,724	$ 12,407,378	34.3%

Included within business lines of credit are capital call lines of credit, which are credit facilities that enable private equity and venture capital funds to bridge the timing between funding investments and receiving funds from limited partner capital calls. As of December 31, 2018, the unpaid principal balance and total commitment for capital call lines of credit was $4.8 billion and $13.0 billion, respectively. In addition, the utilization rate for these lines of credit was 37.0% at December 31, 2018.

The following table presents the unpaid principal balance of business term loans by type:

	Term Loans Unpaid Principal Balance	
	December 31,	
($ in thousands)	2018	2017
Schools/Non-profit Organizations	$ 2,999,577	$ 2,659,250
Aviation/Marine	355,831	283,953
Investment Firms	179,189	212,340
Clubs and Membership Organizations	130,935	143,860
Private Equity/Venture Capital Funds	68,714	146,698
Professional Service Firms	118,793	130,650
Vineyards/Wine	129,618	133,885
Real Estate Related Entities	194,155	145,090
Entertainment Industry	9,613	160
Other	332,620	201,055
Total	$ 4,519,045	$ 4,056,941

Loan Originations

Our strategy is to originate relationship-based loans. While we emphasize loans secured by single family residences, we also selectively originate multifamily mortgages, commercial real estate mortgages and other loans, including business loans. At December 31, 2018, approximately 33% of our total loans, including loans held for sale, were currently adjustable-rate and reprice with indices or mature within one year. Some single family loans are originated for sale in the secondary market. From the inception of our predecessor institution in mid-1985 through December 31, 2018, we have originated approximately $230 billion of loans, of which approximately $35 billion have been sold to investors.

Total loan originations were $32.1 billion in 2018, compared to $27.6 billion in 2017 and $25.7 billion in 2016, an increase of 16% in 2018 and an increase of 7% in 2017. Loans originated increased during 2018 primarily due to increases in multifamily and business lending, partially offset by a decline in single family refinance volume. Loans originated increased during 2017 primarily due to increases in single family, multifamily and business lending. The volume and type of loan originations depend on the level of interest rates, the demand for loans in our markets and other economic conditions.

We focus on originating specific loan types in our primary markets. The majority of our mortgage loans are secured by properties located in close proximity to one of our offices. The following table presents loan originations, by product type:

	Year Ended December 31,		
($ in thousands)	**2018**	**2017**	**2016**
Single family (1-4 units)	$ 10,784,654	$ 11,568,111	$ 10,615,621
Home equity lines of credit	1,542,747	1,731,988	1,815,252
Multifamily (5+ units)	3,321,334	2,703,242	2,542,551
Commercial real estate	1,235,819	1,263,776	1,354,527
Construction	1,694,788	1,480,957	1,342,404
Business	10,004,639	6,252,983	5,572,410
Stock and other secured	2,101,390	1,587,393	1,401,559
Unsecured	1,382,552	1,044,769	1,076,550
Total loans originated	$ 32,067,923	$ 27,633,219	$ 25,720,874

The following table presents the weighted average LTVs for new loans secured by real estate originated during each of the periods indicated based on the appraised value at the time of origination. The single family loan category also includes loans originated and subsequently sold to investors.

	Year Ended December 31,		
LTVs for New Originations	**2018**	**2017**	**2016**
Single family (1-4 units)	59%	58%	55%
Home equity lines of credit [1]	52%	50%	52%
Multifamily (5+ units)	51%	50%	49%
Commercial real estate	50%	47%	48%
Construction	55%	56%	53%

[1] Presented on a CLTV basis, including the first residential mortgage and a second lien, where applicable.

The weighted average LTVs in all categories have remained consistent and conservative over the periods and are indicative of the high quality of the Bank's underwriting standards.

The following table presents the weighted average credit scores for home loans originated during each of the periods indicated. The single family loan category also includes loans originated and subsequently sold to investors.

Weighted Average Credit Scores	Year Ended December 31, 2018	2017	2016
Single family (1-4 units)	765	764	764
Home equity lines of credit	768	766	766

The following table presents purchase loans and refinance loans as a percentage of total single family mortgage originations (excluding HELOCs) for each of the periods indicated:

Purchase and Refinance Composition	Year Ended December 31, 2018	2017	2016
Purchase loans	53%	46%	42%
Refinance loans	47%	54%	58%
Total	100%	100%	100%

We have approved a limited group of third-party appraisers to appraise all of the properties on which we make loans. Certain larger single family loans require two appraisals (with the lower value used for underwriting purposes). Our practice is to seldom exceed an 80% LTV on single family loans and an 80% CLTV on HELOCs. LTV ratios generally decline as the size of the loan increases. At origination, we generally do not exceed a 75% LTV on multifamily loans and a 70% LTV on commercial real estate loans.

The following table presents the weighted average LTVs based on the appraised value at the time of origination for our entire portfolio of loans secured by real estate at the dates indicated:

Portfolio LTVs	December 31, 2018	2017
Single family (1-4 units) (1)	58%	58%
Home equity lines of credit (2)	52%	52%
Multifamily (5+ units) (1)	51%	52%
Commercial real estate	48%	48%
Construction	55%	55%

(1) Including loans held for sale.
(2) Presented on a CLTV basis, including the first residential mortgage and a second lien, where applicable.

We either retain originated home loans in our loan portfolio or sell the loans in whole loan or loan participation arrangements, either in the secondary market or in loan securitizations. Loan sales are highly dependent upon market conditions. We have retained in our loan portfolio both ARMs and intermediate-fixed rate loans. As interest rates rise, payments on ARMs increase, which may be financially burdensome to some borrowers and could increase the risk of default. Subject to market conditions, our ARMs generally provide for a life cap that is 5% to 9% above the initial interest rate, thereby protecting borrowers from unlimited interest rate increases. As part of our standard underwriting guidelines, borrowers undergo a qualification process for an ARM loan assuming an interest rate that is higher than the initial rate.

Asset Quality

We place an asset on nonaccrual status when any installment of principal or interest is 90 days or more past due (except for single family loans that are well secured and in the process of collection) or when management determines the ultimate collection of all contractually due principal or interest to be unlikely. Restructured loans for which we grant payment or significant interest rate concessions ("troubled debt restructurings") are placed on nonaccrual status until collectibility improves and a satisfactory payment history is established, generally by the receipt of at least six consecutive timely payments.

Our collection policies are highly focused with respect to both our portfolio loans and loans serviced for others. We have policies requiring rapid notification of delinquency and the prompt initiation of collection actions. Our practice is to attempt to resolve problem assets quickly, including the aggressive pursuit of foreclosure, other workout procedures or the sale of such problem assets as rapidly as possible at prices available in the prevailing market. For certain properties, we may make repairs and engage management companies in order to reach stabilized levels of occupancy prior to asset disposition. We believe our collection and foreclosure procedures comply with all applicable laws and regulations. We currently have a low level of loans in foreclosure and have not needed to suspend any of our foreclosure activities.

The following table presents nonaccrual loans, other real estate owned, restructured accruing loans and accruing loans 90 days or more past due, as well as the ratio of nonperforming assets to total assets:

	December 31,				
($ in thousands)	2018	2017	2016	2015	2014
Nonaccrual loans:					
Single family (1-4 units)	$23,830	$16,897	$24,560	$21,330	$19,478
Home equity lines of credit	9,526	8,585	10,464	11,211	15,126
Multifamily (5+ units)	2,056	4,651	4,516	8,690	851
Commercial real estate	266	286	306	5,519	5,791
Single family construction	—	—	—	—	—
Multifamily/commercial construction	—	—	—	11,600	—
Business	6,540	5,765	8,728	14,726	4,301
Unsecured	4,247	1,472	446	469	415
Total nonaccrual loans	46,465	37,656	49,020	73,545	45,962
Other real estate owned	—	—	—	—	—
Total nonperforming assets	$46,465	$37,656	$49,020	$73,545	$45,962
Nonperforming assets to total assets	0.05%	0.04%	0.07%	0.12%	0.10%
Restructured accruing loans	$11,514	$12,605	$14,278	$14,043	$16,252
Accruing loans 90 days or more past due	$ —	$ —	$ —	$ 4,199	$ 4,380

See Note 3 in "Item 8. Financial Statements and Supplementary Data" for information related to interest income on nonaccrual loans for the years ended December 31, 2018 and 2017.

Of the loans on nonaccrual status, $21.1 million were current at December 31, 2018, compared to $21.5 million at December 31, 2017.

The future level of nonperforming assets depends upon a number of factors, including the performance of borrowers under loan terms, the timing of the sale of future other real estate owned properties and economic conditions nationally and in our primary markets.

Allowance for Loan Losses

We establish an allowance for loan losses for the inherent risk of probable losses, based upon established criteria, including the type of loan, loan characteristics, our and the industry's historical loss experience, and economic trends. Our allowance for loan losses is adjusted quarterly to maintain a level estimated by management to be appropriate to provide for losses that can be reasonably anticipated based upon specific conditions at the time. Our allowance for loan losses methodology, including allocation to specific loans and between the loan portfolio categories, requires management's consideration of a number of factors.

We evaluate any allowance for loan losses that would be required on acquired loans, which were recorded at fair value on the acquisition date, by evaluating whether the loans had experienced a deterioration in credit such as a decline in the fair value of the underlying collateral, the worsening of a borrower's financial condition, or a delinquency in payment. If the loan has experienced a credit deterioration, we provide an allowance by comparing any reserve required to the basis in the loans. In addition, we provide for any loan losses associated with new loan originations based upon our assessment of credit losses inherent in the portfolio.

We also maintain a qualitative reserve, which represents the qualitative portion of the allowance for loan losses. This qualitative reserve is determined based on management's assessments of the risks that may lead to a loan loss experience different than our historical loss experience and therefore not reflected in the quantitative model. We use qualitative factors that are intended to address developing external and internal environmental trends and include considerations such as changes in current economic and business conditions, the nature and volume of the Bank's loan portfolio, the existence and effects of credit concentrations, and problem loan trends, along with other external factors, such as competition and the legal and regulatory environment.

The provision for loan losses is related primarily to growth in loans outstanding and reflects management's continuing assessment of the credit quality of the Bank's loan portfolio and our overall allowance methodology, which considers, among other things, the Bank's loan growth, level and type of loans originated and trends in the Bank's markets.

The following table presents an analysis of our allowance for loan losses, including provisions for loan losses, charge-offs and recoveries:

($ in thousands)	At or for the Year Ended December 31, 2018	2017	2016	2015	2014
Allowance for loan losses:					
Balance at beginning of period	$ 365,932	$ 306,398	$ 261,058	$ 207,342	$ 153,005
Provision	76,092	60,181	47,192	55,439	56,486
Charge-offs:					
Single family (1-4 units)	(239)	(1,176)	(1,694)	(146)	(259)
Home equity lines of credit	(497)	(848)	(272)	(1,632)	(1,715)
Multifamily (5+ units)	—	—	—	—	—
Commercial real estate	—	—	—	—	—
Single family construction	—	—	—	—	—
Multifamily/commercial construction	—	—	—	—	—
Business	(1,748)	(616)	(93)	(95)	(797)
Stock secured	—	—	—	—	—
Other secured	—	—	—	—	—
Unsecured	(1,074)	(346)	(57)	(169)	(233)
Total charge-offs	(3,558)	(2,986)	(2,116)	(2,042)	(3,004)
Recoveries:					
Single family (1-4 units)	77	30	15	89	180
Home equity lines of credit	110	2,167	103	49	189
Multifamily (5+ units)	—	—	—	—	1
Commercial real estate	—	—	—	—	—
Single family construction	—	—	—	—	—
Multifamily/commercial construction	—	—	—	—	—
Business	265	47	117	50	342
Stock secured	—	—	—	—	—
Other secured	—	—	—	—	—
Unsecured	130	95	29	131	143
Total recoveries	582	2,339	264	319	855
Net loan charge-offs	(2,976)	(647)	(1,852)	(1,723)	(2,149)
Balance at end of period	$ 439,048	$ 365,932	$ 306,398	$ 261,058	$ 207,342
Average total loans for the period	$68,934,629	$56,864,796	$47,508,150	$40,640,098	$35,579,839
Total loans at period end	$75,865,282	$62,840,215	$52,008,317	$44,083,569	$37,808,369
Total nonaccrual loans	$ 46,465	$ 37,656	$ 49,020	$ 73,545	$ 45,962
Ratios:					
Net charge-offs to:					
Average total loans	0.00%	0.00%	0.00%	0.00%	0.01%
Allowance for loan losses to:					
Total loans	0.58%	0.58%	0.59%	0.59%	0.55%
Nonaccrual loans	944.9%	971.8%	625.0%	355.0%	451.1%

The following tables present management's historical allocation of the allowance for loan losses by loan category to specific loans in those categories as a result of our loan review process at the dates indicated:

	December 31,					
	2018		2017		2016	
($ in thousands)	Amount	% of Loan Portfolio	Amount	% of Loan Portfolio	Amount	% of Loan Portfolio
Allocation of allowance for loan losses:						
Single family (1-4 units) and home equity lines of credit	$ 78,289	53%	$ 65,057	54%	$ 52,870	55%
Multifamily (5+ units)	80,134	14%	67,605	14%	53,373	13%
Commercial real estate	54,907	9%	52,268	10%	48,880	11%
Construction	17,760	3%	13,271	3%	10,935	3%
Business	167,591	15%	137,956	13%	118,874	13%
Stock secured	8,724	2%	6,596	2%	5,102	2%
Other secured	8,301	1%	7,850	1%	5,822	1%
Unsecured	23,342	3%	15,329	3%	10,542	2%
Total	$439,048	100%	$365,932	100%	$306,398	100%

	December 31,			
	2015		2014	
($ in thousands)	Amount	% of Loan Portfolio	Amount	% of Loan Portfolio
Allocation of allowance for loan losses:				
Single family (1-4 units) and home equity lines of credit	$ 33,144	58%	$ 30,199	60%
Multifamily (5+ units)	25,416	12%	21,800	12%
Commercial real estate	24,690	10%	19,891	10%
Construction	4,862	3%	3,559	2%
Business	92,568	14%	71,805	13%
Stock secured	1,809	1%	984	1%
Other secured	6,610	1%	5,081	1%
Unsecured	6,918	1%	4,145	1%
Unallocated [(1)]	65,041	—%	49,878	—%
Total	$261,058	100%	$207,342	100%

(1) For periods after December 31, 2015, the unallocated qualitative reserve was allocated to the individual loan portfolios.

Mortgage Banking Activities

In addition to originating loans for our own portfolio, we conduct mortgage banking activities. We have sold whole loans and participations in loans in the secondary market and in loan securitizations. We originate, on a direct flow basis, single family mortgages that are priced and underwritten to conform to previously agreed-upon criteria prior to loan funding and are delivered to the investor shortly after funding. We have also identified secondary market sources that seek to acquire loans of the type we originate for our loan portfolio.

The amount of loans sold depends upon conditions in both the mortgage origination and secondary loan sales markets as well as our asset/liability management strategy. The following table presents information on single family loans originated, loans sold and gain on sale of loans:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Single family loans originated	$10,784,654	$11,568,111	$10,615,621
Loans sold:			
Flow sales:			
Agency	$ 42,081	$ 131,111	$ 434,094
Non-agency	172,077	309,482	323,454
Total flow sales	214,158	440,593	757,548
Bulk sales:			
Non-agency	773,041	2,436,584	2,389,879
Securitization	251,931	—	—
Total loans sold	$ 1,239,130	$ 2,877,177	$ 3,147,427
Gain on sale of loans:			
Amount	$ 5,616	$ 9,233	$ 4,828
Gain as a percentage of loans sold	0.45%	0.32%	0.15%

The lower level of gain on sale of loans in 2018 was the result of a lower volume of loans sold, partially offset by higher margins. The higher level of gain on sale of loans in 2017 was the result of higher margins, partially offset by a lower volume of loans sold. The level of future loan originations, loan sales and loan repayments depends on overall credit availability, the interest rate environment, the strength of the general economy, local real estate markets and the housing industry, and conditions in the secondary loan sale market. The amount of gain or loss on the sale of loans is primarily driven by market conditions and changes in interest rates, as well as our pricing and asset/liability management strategies.

In connection with loan sales, we retain all the loan servicing in order to maintain the primary contact with our clients and to generate recurring fee income. We retain MSRs on loans that we sell to institutional investors and governmental agencies. We generally do not provide any financial or performance guarantees to the investors who purchase our loans and the purchasers do not have any recourse to the Bank on the loans that we have sold. In accordance with secondary market standards, we make customary representations and warranties related to the origination and documentation of sold loans. We have not been required to make any significant loan repurchases or incur any other significant costs subsequent to the sale of loans for any breach of these customary representations and warranties.

During 2018, the Bank sold $251.9 million of originated multifamily loans through a securitization with Freddie Mac. As of December 31, 2018, the weighted average LTV of those loans was 56% based on the appraised value at the time of origination. These loans are included in the Bank's servicing portfolio, since the Bank performs servicing of the loans. The Bank has an obligation to reimburse Freddie Mac for losses up to $30.2 million, or 12% of the multifamily loans securitized. Based upon the conservative underwriting characteristics of the underlying multifamily loans, the liability for estimated losses related to this reimbursement obligation based upon our credit loss analysis was only $488,000 at December 31, 2018.

The following table presents information on loans serviced for others and net loan servicing fees:

($ in thousands)	At or for the Year Ended December 31, 2018	2017	2016
Loans serviced for others	$11,573,326	$12,495,321	$11,655,453
Loan servicing fees, net	$ 13,302	$ 13,800	$ 13,465

Mortgage loans serviced for investors decreased to $11.6 billion at December 31, 2018, from $12.5 billion at December 31, 2017, due to repayments in the servicing portfolio exceeding loan sales over the past twelve months. MSRs are recognized as separate assets on our balance sheet and are reported at the lower of amortized cost or fair value. At December 31, 2018, MSRs were $54.5 million (47 basis points of loans serviced), compared to $66.1 million (53 basis points of loans serviced) at December 31, 2017.

Our loan origination policies and consistent underwriting standards have resulted in a low historical loan loss experience on single family loans sold in the secondary market. Since our inception in 1985, we have experienced cumulative net loan losses of only $9.1 million on single family loans sold. At December 31, 2018, single family loans serviced for investors that are 90 days or more past due were $5.6 million, or 5 basis points of such loans serviced.

Deposit Gathering

We obtain funds from depositors by offering consumer and business checking, money market and passbook accounts, and term CDs. Our accounts are federally insured by the FDIC up to the maximum limit. At December 31, 2018, our total deposits were $79.1 billion, a 15% increase from $68.9 billion at December 31, 2017, as we continued to expand relationships with existing clients and acquire new deposit clients, both business and consumer. The following table presents the balances and average contractual cost of deposits:

	December 31, 2018		2017		2016	
($ in thousands)	Amount	Weighted Ave. Cost	Amount	Weighted Ave. Cost	Amount	Weighted Ave. Cost
Checking	$47,123,178	0.04%	$43,680,014	0.04%	$37,316,193	0.01%
Money market checking	10,317,436	1.13%	9,251,504	0.52%	7,969,787	0.13%
Money market savings and passbooks	10,245,107	0.73%	8,752,396	0.30%	8,203,340	0.09%
CDs	11,377,515	2.05%	7,234,794	1.37%	5,113,061	1.20%
Total	$79,063,236	0.56%	$68,918,708	0.28%	$58,602,381	0.14%

Core deposits, which include checking accounts, money market accounts, savings accounts and CDs (excluding CDs greater than $250,000 and all brokered deposits), provide a stable source of low cost funding. Core deposits totaled $72.6 billion and $65.4 billion at December 31, 2018 and 2017, respectively, and represented 92% of total deposits at December 31, 2018, compared to 95% at December 31, 2017. At December 31, 2018, total deposits included $1.7 billion of brokered CDs.

Our deposit base consists of: (1) deposits from Preferred Banking Offices, which are retail locations that gather deposits and service all of our clients; (2) Preferred Banking deposits, which are placed by clients who enter into deposit relationships directly with a relationship manager, business banker, preferred banker or wealth management professional; (3) wealth management sweep deposits, which primarily consist of deposits swept from clients' brokerage or other investment accounts; and (4) other deposits, which primarily consist of brokered CDs, municipal deposits, and other deposits that are not attributable to any specific deposit location.

The following table presents deposits by channel, and by region in which the accounts are domiciled:

($ in thousands)	December 31, 2018	December 31, 2017
Preferred Banking Offices		
Northern California	$15,485,330	$13,249,754
Metropolitan New York	5,088,101	5,555,605
Southern California	3,666,699	3,071,237
Boston	1,575,127	1,384,166
Subtotal	25,815,257	23,260,762
Preferred Banking		
Northern California	18,761,256	17,001,723
Metropolitan New York	12,144,755	10,334,686
Southern California	6,171,983	5,810,717
Boston	8,300,381	6,754,505
Subtotal	45,378,375	39,901,631
Wealth management sweep	4,503,092	4,446,808
Other	3,366,512	1,309,507
Total deposits	$79,063,236	$68,918,708

The following table presents consumer and business deposits:

($ in thousands)	December 31, 2018	December 31, 2017
Consumer deposits:		
Checking	$15,342,539	$15,558,482
Money market checking	3,776,018	3,493,205
Money market savings and passbooks	6,048,923	5,714,458
CDs	9,636,575	6,768,422
	34,804,055	31,534,567
Business deposits:		
Checking	31,780,639	28,121,532
Money market checking	6,541,418	5,758,299
Money market savings	4,196,184	3,037,938
CDs	1,740,940	466,372
	44,259,181	37,384,141
Total	$79,063,236	$68,918,708

We fund a portion of our assets with CDs that have balances greater than $250,000. At December 31, 2018 and 2017, our CDs having balances greater than $250,000 totaled $4.8 billion and $3.5 billion, respectively. The following table presents the maturities of our CDs greater than $250,000:

($ in thousands)	December 31, 2018
Remaining maturity:	
Three months or less	$1,170,524
Over three through six months	1,107,652
Over six through twelve months	1,551,321
Over twelve months	981,553
Total	$4,811,050
Percent of total deposits	6%

At December 31, 2018 and 2017, the weighted average contractual rate paid on CDs was 2.05% and 1.37%, respectively, and the weighted average remaining maturity of CDs was 9.1 months and 11.0 months at the same respective period ends. The contractual maturities and weighted average contractual rate of our CDs were as follows:

	December 31, 2018	
($ in thousands)	Amount	Rate
Certificates of deposit maturing in:		
2019	$ 8,245,951	1.92%
2020	2,707,089	2.41%
2021	172,217	2.03%
2022	111,187	2.17%
2023	82,882	2.41%
2024 and thereafter	58,189	2.89%
Total	$11,377,515	2.05%

Other Funding

Other sources of funding include federal funds purchased, short-term and long-term FHLB advances and unsecured, term, fixed-rate senior notes and subordinated notes. Short-term borrowings, which include federal funds purchased and short-term FHLB advances, have an original maturity of one year or less. Long-term FHLB advances, senior notes and subordinated notes have an original maturity in excess of one year.

FHLB Advances

As of December 31, 2018, we had short-term FHLB advances of $100.0 million.

Our long-term, laddered maturity, fixed-rate FHLB advances as of December 31, 2018 were $8.7 billion. The weighted average remaining maturity of long-term FHLB advances was 1.2 years at December 31, 2018.

The following table presents the contractual maturities and weighted average contractual rate of our long-term FHLB advances:

($ in thousands)	December 31, 2018 Amount	Rate
FHLB advances maturing in:		
2019	$3,550,000	1.62%
2020	3,950,000	2.25%
2021	1,200,000	2.50%
Total	$8,700,000	2.03%

Senior Notes and Subordinated Notes

The following table presents the carrying values, coupon rates and maturity dates of the Bank's unsecured, term, fixed-rate senior notes and subordinated notes as of December 31, 2018:

($ in thousands)	December 31, 2018		
	Carrying Value [1]	Rate	Maturity Date
Senior notes:			
Fixed rate, issued June 2014	$399,607	2.375%	June 2019
Fixed rate, issued June 2017	$496,825	2.500%	June 2022
Subordinated notes:			
Fixed rate, issued August 2016	$387,810	4.375%	August 2046
Fixed rate, issued February 2017	$389,665	4.625%	February 2047

[1] Principal balance, net of unamortized issuance discounts and deferred issuance costs.

Available Borrowing Capacity

Our unused, available borrowing capacity at the FHLB and the Federal Reserve Bank discount window at December 31, 2018 was $22.7 billion and $2.3 billion, respectively. This available borrowing capacity is supported by pledged loans at the FHLB and investment securities at the Federal Reserve Bank. See "Item 7A. Quantitative and Qualitative Disclosures About Market Risk—Interest Rate Risk Management" for additional information regarding our funding practices.

Commitments and Contractual Obligations

In the ordinary course of business, we enter into transactions that involve financial instruments with off-balance sheet risks, to meet the financing needs of our clients. These financial instruments include conditional commitments to originate loans, commitments to disburse additional funds on existing loans and lines of credit, and commitments issued under standby letters of credit. Such instruments involve elements of credit risk and interest rate risk. Since commitments may expire without being drawn, the total commitment amounts do not necessarily represent future cash requirements. See Note 14 in "Item 8. Financial Statements and Supplementary Data" for additional information regarding the Bank's lending commitments.

In addition to the commitments described above, the Bank enters into other contractual obligations in the ordinary course of business. Certain of these obligations, such as deposits, FHLB advances, senior notes, subordinated notes and unfunded commitments on tax credit investments and other investments, are recorded as

liabilities in the consolidated financial statements. The Bank also has obligations under operating leases for premises and equipment and agreements to purchase goods or services, which are off-balance sheet obligations. As discussed in Note 1 in "Item 8. Financial Statements and Supplementary Data," the Bank adopted ASC 842, "Leases," effective January 1, 2019, which resulted in the Bank recording its off-balance sheet obligations for leases on its consolidated balance sheet beginning in 2019.

In connection with the securitization of loans with Freddie Mac, the Bank has an obligation to reimburse Freddie Mac for losses up to $30.2 million, or 12% of the multifamily loans securitized. At December 31, 2018, the liability for estimated losses related to the reimbursement obligation was $488,000.

The following table presents information regarding our significant contractual obligations at December 31, 2018, and expected settlement or maturity dates for these obligations. Deposit obligations categorized as "indeterminate maturity" include noninterest-bearing checking accounts, interest-bearing checking accounts, money market checking accounts, money market savings accounts and passbook accounts.

	Contractual Payments by Period					
($ in thousands)	Less Than 1 Year	1 to 3 Years	>3 to 5 Years	> 5 Years	Indeterminate Maturity	Total
Deposits	$8,245,951	$2,879,306	$194,069	$ 58,189	$67,685,721	$79,063,236
FHLB advances	3,650,000	5,150,000	—	—	—	8,800,000
Senior notes	399,607	—	496,825	—	—	896,432
Subordinated notes	—	—	—	777,475	—	777,475
Unfunded commitments—tax credit investments	199,206	97,455	11,033	44,744	—	352,438
Unfunded commitments—other investments	2,834	1,283	327	812	—	5,256
Operating leases, net of sublease income	99,576	194,178	172,955	537,810	—	1,004,519
Purchase obligations	$ 26,969	$ 43,956	$ 16,201	$ —	$ —	$ 87,126

See Notes 6, 8, 10 and 11 in "Item 8. Financial Statements and Supplementary Data" for additional information regarding the contractual obligations presented in the table above.

Liquidity

Liquidity refers to our capacity to meet our cash and collateral obligations and to manage both expected and unexpected cash flows without adversely impacting the operations or financial health of the Bank. Sources of liquidity include both unencumbered assets, such as marketable loans and securities, and traditional forms of funding, such as deposits, borrowings and equity. At December 31, 2018, our investment securities portfolio of $16.2 billion and cash and cash equivalents of $2.8 billion collectively comprised 19% of total assets. At December 31, 2018, assets that are considered HQLA, including eligible cash, increased to $14.8 billion. HQLA include $5.2 billion of municipal securities that qualify under the amended definition of HQLA.

At December 31, 2018, we had $22.7 billion of unused, available borrowing capacity at the FHLB supported by pledged loans. In addition, we had $2.3 billion of unused, available borrowing capacity at the Federal Reserve Bank discount window collateralized by pledged investment securities. This unused, available borrowing capacity at the FHLB and the Federal Reserve Bank discount window equaled 25% of total assets.

We may also, from time to time, issue additional common stock, preferred stock, senior or subordinated notes or other forms of capital or debt instruments, depending on our capital, funding, asset-liability management or other needs as market conditions warrant and subject to any required regulatory approvals. Management believes that the sources of available liquidity are adequate to meet all reasonably foreseeable short-term and intermediate-term demands.

During 2018, our loan originations, net of repayments, were $13.8 billion. We also redeemed all of the outstanding shares of our 5.625% Noncumulative Perpetual Series C Preferred Stock, which totaled $150.0 million and all of the outstanding shares of our 7.00% Noncumulative Perpetual Series E Preferred Stock, which totaled $200.0 million. These activities were primarily funded by a net increase in deposits of $10.1 billion; investment sales, calls and paydowns, net of purchases, of $2.7 billion; a net increase in FHLB borrowings of $400.0 million; and the sale of $1.2 billion of loans. In addition, we sold common stock in an underwritten public offering, which added $200.6 million to equity, and we completed an underwritten public offering of 5.50% Noncumulative Perpetual Series I Preferred Stock, which added $290.2 million to equity.

At December 31, 2018, we had $100.0 million in outstanding short-term FHLB advances. We primarily use these short-term borrowings to fund short-term assets, such as loans that have been committed for sale and floating rate investments, or to bridge temporary funding needs, such as those resulting from client investment activity or seasonal deposit fluctuations. At December 31, 2018, the Bank had loans held for sale of $99.0 million, which were committed to be delivered to investors in the first quarter of 2019.

We sell single family mortgage loans in the secondary market directly to a variety of investors. We originate single family mortgages in part to attract new clients for other banking and wealth management services. Selling mortgages allows us to originate more loans without growing our balance sheet loan portfolio and creating the need for additional funding and capital. All loans sold are performing loans and meet all underwriting standards required by us and the secondary market.

Capital Resources

The Bank maintains capital levels to satisfy regulatory capital requirements and support asset growth. As described in "Item 1. Business—Supervision and Regulation—Capital Requirements," the Basel III Capital Rules determine the components of regulatory capital and the approach for risk weighting assets.

The following table represents the components of our regulatory capital:

($ in thousands)	December 31, 2018	December 31, 2017
Shareholders' equity	$8,677,777	$7,818,301
CET1 capital adjustments and deductions:		
Preferred stock	(940,000)	(990,000)
Goodwill and other intangible assets, net of deferred taxes	(260,077)	(260,827)
Deferred tax assets that arise from net operating loss and tax credit carryforwards, net of deferred tax liabilities	(117,086)	(82,696)
Accumulated other comprehensive loss	19,383	3,840
CET1 capital	7,379,997	6,488,618
Preferred stock	940,000	990,000
Additional Tier 1 capital deductions	—	(20,674)
Additional Tier 1 capital	940,000	969,326
Tier 1 capital	8,319,997	7,457,944
Tier 2 capital instruments—subordinated notes [(1)]	777,475	777,084
Qualifying allowance for loan losses [(2)]	452,266	380,132
Other Tier 2 qualifying instruments	—	229
Tier 2 capital	1,229,741	1,157,445
Total risk-based capital	$9,549,738	$8,615,389

(1) Subordinated notes mature in 2046 and 2047.
(2) Includes the reserve for unfunded commitments.

At December 31, 2018 and 2017, the Bank's noncumulative perpetual preferred stock was 11% and 13% of Tier 1 capital, respectively.

During 2018, we completed an underwritten public offering of 5.50% Noncumulative Perpetual Series I Preferred Stock, which added $290.2 million to equity and an underwritten public offering of common stock, which added $200.6 million to common equity.

During 2018, we redeemed all of the outstanding shares of our 5.625% Noncumulative Perpetual Series C Preferred Stock and all of the outstanding shares of our 7.00% Noncumulative Perpetual Series E Preferred Stock, which totaled $350.0 million, plus, for each redemption, accrued and unpaid dividends to the date of redemption.

In addition, at December 31, 2018, we offered 2,000,000 new shares of common stock as part of an "at-the-market" equity offering program, in conjunction with the addition of our common stock in the S&P 500 Index on January 2, 2019. This offering settled on January 3, 2019 and added $170.6 million to common equity in the first quarter of 2019.

A "capital conservation buffer" is also required under the Basel III Capital Rules. The capital conservation buffer is designed to absorb losses during periods of economic stress. Banking institutions with a ratio of CET1 to risk-weighted assets above the minimum requirement but below the capital conservation buffer will face constraints on dividends, equity repurchases and compensation based on the amount of the shortfall. The implementation of the capital conservation buffer began on January 1, 2016 at 0.625% and was phased in over a

four-year period (increasing by that amount on each subsequent January 1, until it reached 2.5% on January 1, 2019). Thus, effective January 1, 2019, the Bank is required to maintain this additional capital conservation buffer of 2.5% of risk-weighted assets.

Our capital ratios exceeded all applicable regulatory requirements at December 31, 2018 for well-capitalized institutions, and our capital conservation buffer of 5.43% exceeded both the 2018 transitional buffer of 1.875% and the fully phased-in minimum requirement of 2.5%. The following table presents our capital ratios and regulatory requirements:

	Actual		Regulatory Requirements		
	December 31,				
($ in thousands)	2018	2017	Well-Capitalized Ratio	Minimum Capital Ratio	Minimum Capital Conservation Buffer [(1)]
Capital Ratios					
Tier 1 leverage ratio (Tier 1 capital to average assets)	8.68%	8.85%	5.00%	4.00%	—%
CET1 capital to risk-weighted assets	10.38%	10.63%	6.50%	4.50%	1.875%
Tier 1 capital to risk-weighted assets	11.70%	12.22%	8.00%	6.00%	1.875%
Total capital to risk-weighted assets	13.43%	14.11%	10.00%	8.00%	1.875%
Regulatory Capital [(2)]					
CET1 capital	$ 7,379,997	$ 6,488,618			
Tier 1 capital	$ 8,319,997	$ 7,457,944			
Total capital	$ 9,549,738	$ 8,615,389			
Assets [(2)]					
Average assets	$95,905,266	$84,238,404			
Risk-weighted assets	$71,116,459	$61,054,077			

(1) Beginning on January 1, 2016, a capital conservation buffer is required to be held by banking institutions. The minimum required capital conservation buffer was 1.875% in 2018 and was phased in through January 1, 2019 when it reached 2.5%. As of December 31, 2018, our capital conservation buffer was 5.43%, which exceeded both the 2018 transitional buffer of 1.875% and the fully phased-in minimum requirement of 2.5%.

(2) As defined by regulatory capital rules.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk Management

We seek to measure and manage the potential impact of changes in interest rates on our net interest income and net interest margin, known as interest rate risk. Interest rate risk primarily occurs when interest-earning assets and interest-bearing liabilities mature or reprice at different times, on a different basis or in unequal amounts. The Bank's Board of Directors approves policies and limits governing the management of interest rate risk at least annually. Our Asset Liability Management ("ALM") and Investment Committees further establish risk management guidelines and procedures within the broader policies and limits established by the Bank's Board of Directors. Compliance with these policies and limits is reported to the Bank's Board of Directors on an ongoing basis and decisions on the management of interest rate risk are made as needed. We utilize a variety of interest rate risk management tools to evaluate our interest rate risk.

We manage interest rate risk primarily by originating and retaining adjustable-rate loans and hybrid ARM loans with initial short- or intermediate-term fixed rates and funding these assets with checking and savings accounts, short- and intermediate-term CDs, long-term laddered maturity fixed-rate FHLB advances and unsecured, term, fixed-rate senior notes and subordinated notes. We may also utilize overnight and short-term borrowings to fund certain short-term assets, such as loans that have been committed for sale and floating rate investments, or to bridge temporary funding needs, such as those resulting from client investment activity or seasonal deposit fluctuations. As an active and ongoing part of our ALM strategy, we sell long-term fixed-rate single family mortgage loans into the secondary market through ongoing, or "flow," transactions. We also sell portions of our single family hybrid ARM and fixed-rate loans in bulk loan transactions or securitizations. We sold $1.2 billion of loans in 2018.

In addition to the mix and pricing of interest-earning assets and interest-bearing liabilities, our net interest income and net interest margin may also be affected by factors such as competition, conditions in loan markets, levels of loan sales and repayment rates, levels of cash held on the balance sheet, overall growth of assets and liabilities, general interest rate trends, including movements in interest rates and the shape of the yield curve, level and cost of FHLB advances, market rates of new capital or debt offerings and any nonaccrual loans. Our net interest margin may also be affected by our overall business model or strategy.

There is also interest rate risk inherent in the estimated fair value of our MSRs. Movements in interest rates affect the servicing fees from MSRs, which are recorded in noninterest income as opposed to net interest income. In a decreasing interest rate environment, loans in the servicing portfolio may repay more rapidly, which reduces current and future servicing income. Inversely, in an increasing interest rate environment, repayments may decrease, which increases expected future servicing income.

Balance Sheet Overview

Our net interest income and net interest margin may be affected by the mix of interest-earning assets and interest-bearing liabilities. The Bank has earning assets with reset periods or maturity of less than one year totaling $29.1 billion, or 31% of total earning assets at December 31, 2018. Of these earning assets, the Bank has loans, including loans held for sale, which are currently adjustable and reprice with indices or mature within one year totaling $24.9 billion, or 33% of the total loan portfolio at December 31, 2018. The loan portfolio that reprices at least quarterly to market rate indices, such as Prime or LIBOR, totaled $15.8 billion, or 21% of the total loan portfolio at December 31, 2018. The loan portfolio with lagging indices, such as COFI and the CMT, totaled $6.2 billion, or 8% of the total loan portfolio at December 31, 2018. Additionally, the loan portfolio that either (1) matures within one year; (2) is within one year of adjusting from the initial fixed-rate period; or (3) is

committed for sale totaled $2.9 billion, or 4% of the total loan portfolio at December 31, 2018. In addition, at December 31, 2018, the Bank held $2.5 billion in cash and $1.7 billion in investment securities (collectively, 22% of total cash and investment securities), that reprice to market rate indices at least quarterly.

Total checking deposits were $47.1 billion, or 60% of total deposits at December 31, 2018. Total checking deposits include both noninterest-bearing checking accounts and interest-bearing checking accounts, which currently pay a nominal rate of 4 basis points, but exclude money market checking accounts. We do not expect the rate paid on interest-bearing checking deposits to fluctuate much with changes in overall interest rates, consistent with our history. The rates paid on money market savings, money market checking and passbook deposit accounts generally move directionally with changes in short-term prevailing interest rates and may be subject to competitive pricing pressure. Money market savings, money market checking and passbook deposit accounts together totaled $20.6 billion, or 26% of total deposits at December 31, 2018. CDs were $11.4 billion, or 14% of total deposits and had a weighted average remaining maturity of 9.1 months at December 31, 2018.

We utilize long-term FHLB advances as a source of fixed-rate, term funding to help manage our overall interest rate risk. Such advances totaled $8.7 billion at December 31, 2018 and had a weighted average remaining maturity of 1.2 years. In addition, the Bank has also issued unsecured, term, fixed-rate senior notes and unsecured, term, fixed-rate subordinated notes. At December 31, 2018, the senior notes had a carrying value of $896.4 million and mature in June 2019 and June 2022. Also, at December 31, 2018, the subordinated notes had a carrying value of $777.5 million and mature in August 2046 and February 2047.

Net Interest Income Simulation

In addition to evaluating our current balance sheet, we also perform net interest income simulations to measure and evaluate our potential exposure to changes in interest rates. Based on the results of such analysis, we may decide to make changes in our asset/liability mix, to draw down longer-term advances with the FHLB, to issue long-term senior notes or long-term subordinated notes, to sell loans, to enter into interest rate exchange agreements or to otherwise seek to better protect ourselves against potential adverse effects from changes in interest rates.

We use a simulation model to measure and evaluate potential changes in our net interest income. We run various hypothetical interest rate scenarios at least quarterly and compare these results against a scenario with no changes in interest rates. Our net interest income simulation model incorporates various assumptions, which management believes to be reasonable but which may have a significant impact on results, such as: (1) the timing and magnitude of changes in interest rates, (2) the yield curve evolution and shape, (3) repricing characteristics, other than contractual, for market rate sensitive instruments, (4) non-interest bearing checking deposit balance behavior and the possibility of shifts in preference towards interest-bearing products, (5) varying sensitivities of financial instruments due to differing underlying rate indices, (6) loan prepayment speeds for different interest rate scenarios, (7) the effect of interest rate floors, periodic loan caps and lifetime loan caps, (8) the levels of cash held on our balance sheet and (9) overall growth, product mix and repayment rates of assets and liabilities. Because of limitations inherent in any approach used to measure interest rate risk, simulation results are not intended as a precise forecast of the actual effect of a change in market interest rates on our results, but rather as a means to better understand interest rate risk exposure and plan and execute the appropriate ALM strategies.

Potential changes to our contractual net interest income in hypothetical rising and declining rate scenarios, measured over a two-year period beginning December 31, 2018, are presented in the following table. The projections assume both (a) instantaneous parallel shifts upward of 100 and 200 basis points and instantaneous parallel shifts downward of the yield curve of 100 and 200 basis points occurring immediately (“Shock”) and (b) gradual parallel shifts upward and downward of the yield curve in even increments over the first twelve

months, followed by rates held constant thereafter ("Ramp"). In downward shifts of the yield curve, interest rates are not modeled to decline lower than 0%.

Change in Market Interest Rates	Estimated Increase (Decrease) in Net Interest Income	
	Twelve Months Ending December 31, 2019	Twelve Months Ending December 31, 2020
Shock:		
+200 basis points immediately	2.2%	4.1%
+100 basis points immediately	1.5%	2.6%
-100 basis points immediately	(2.3)%	(3.6)%
-200 basis points immediately	(9.1)%	(14.8)%
Ramp:		
+200 basis points over next 12 months	1.2%	2.6%
+100 basis points over next 12 months	1.0%	1.9%
-100 basis points over next 12 months	(0.6)%	(2.6)%
-200 basis points over next 12 months	(2.8)%	(11.1)%

As of December 31, 2018, the Bank is slightly asset sensitive, indicating that it would generally benefit from parallel increases in interest rates, given the positive variances in net interest income observed when we compare the two-year earnings simulation results in a rising rate scenarios to a scenario in which rates remain unchanged. In a hypothetical rising rate environment, we benefit from adjustable-rate loans, which would begin to reprice upward with prevailing rates, adjustable-rate securities, certain fixed funding sources and modeled deposit balances and mix. In addition, in the second year, the greater asset sensitivity is driven by loan originations and investment purchases at new market interest rates.

With respect to deposit balances, we expect non-interest bearing and interest-bearing checking balances, which exclude money market checking, to migrate from the current level of 60% of total deposits to approximately 53% of total deposits over the two-year horizon, depicting a shift in preference by some account holders towards higher yielding deposit products in a rising rate environment. We expect the rate paid on these checking balances to remain nominal in a rising rate environment and consistent with our historical experience.

Excluding certificates of deposit, the remaining deposits include money market checking, money market savings and passbook accounts and are assumed to reprice by approximately 72% of the change in short-term interest rates over the two-year period, which is also consistent with our historical experience.

Inversely, in a hypothetical declining rate environment, in which interest rates decline lower than current levels, we experience an asymmetrical reduction in net interest income as variable funding sources, such as money market savings and checking deposits, reach natural floors while average yields on interest-earning assets continue to decline.

The results of this earnings simulation analysis are hypothetical, and a variety of factors might cause actual results to differ substantially from what is depicted. For example, if the timing and magnitude of interest rate changes differ from our projections, our net interest income might vary significantly. Non-parallel yield curve shifts, such as a flattening or steepening of the yield curve or changes in interest rate spreads, would also cause our net interest income to be different from that depicted. In a rising rate environment, our net interest income could be lower than projected if deposits and other short-term liabilities reprice faster than expected, or if a greater than expected portion of non-interest bearing deposits migrate to interest-bearing deposits. Actual results could also differ from those projected if we grow assets and liabilities faster or slower than estimated, if we experience a net outflow of deposit liabilities, or if our mix of assets and liabilities otherwise changes materially. Actual results could also differ from those projected if we experience repayment speeds in our loan portfolio substantially different than those assumed in the simulation model.

Finally, these simulation results do not contemplate all the actions that we may undertake in response to potential or actual changes in interest rates, such as changes to our loan, investment, deposit, funding or hedging strategies.

Although we believe we are effectively managing our current exposure to changes in interest rates, we may decide to take further action depending on subsequent interest rate and economic developments, the growth rates and mix of loans and deposits, the future level of loan repayments, purchases of investment securities, and changes in other assets.

FIRST REPUBLIC BANK
CONSOLIDATED BALANCE SHEETS

Item 8. Financial Statements and Supplementary Data

(in thousands, except share amounts)	December 31, 2018	December 31, 2017
ASSETS		
Cash and cash equivalents	$ 2,811,159	$ 2,297,021
Investment securities available-for-sale	1,779,116	2,418,088
Investment securities held-to-maturity (fair value of $14,287,524 and $16,502,745 at December 31, 2018 and 2017, respectively)	14,436,973	16,157,945
Equity securities (fair value)	18,719	—
Loans	75,865,282	62,840,215
Less: Allowance for loan losses	(439,048)	(365,932)
Loans, net	75,426,234	62,474,283
Loans held for sale	98,985	87,695
Investments in life insurance	1,376,579	1,330,652
Tax credit investments	1,057,541	1,107,546
Prepaid expenses and other assets	1,538,971	1,254,720
Premises, equipment and leasehold improvements, net	332,483	296,197
Goodwill and other intangible assets	273,974	290,221
Mortgage servicing rights	54,470	66,139
Total Assets	$99,205,204	$87,780,507
LIABILITIES AND EQUITY		
Liabilities:		
Deposits:		
Noninterest-bearing checking	$30,033,658	$26,355,331
Interest-bearing checking	17,089,520	17,324,683
Money market checking	10,317,436	9,251,504
Money market savings and passbooks	10,245,107	8,752,396
Certificates of deposit	11,377,515	7,234,794
Total Deposits	79,063,236	68,918,708
Short-term borrowings	100,000	100,000
Long-term FHLB advances	8,700,000	8,300,000
Senior notes	896,432	894,723
Subordinated notes	777,475	777,084
Other liabilities	990,284	971,691
Total Liabilities	90,527,427	79,962,206
Shareholders' Equity:		
Preferred stock, $0.01 par value per share; 25,000,000 shares authorized; 940,000 and 990,000 shares issued and outstanding at December 31, 2018 and 2017, respectively	940,000	990,000
Common stock, $0.01 par value per share; 400,000,000 shares authorized; 164,901,950 and 161,695,803 shares issued and outstanding at December 31, 2018 and 2017, respectively	1,649	1,617
Additional paid-in capital	4,024,306	3,778,913
Retained earnings	3,731,205	3,051,611
Accumulated other comprehensive loss	(19,383)	(3,840)
Total Shareholders' Equity	8,677,777	7,818,301
Total Liabilities and Shareholders' Equity	$99,205,204	$87,780,507

See accompanying notes to financial statements.

FIRST REPUBLIC BANK
CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME

($ in thousands, except per share amounts)	Year Ended December 31, 2018	2017	2016
Interest income:			
Loans	$2,442,469	$1,903,070	$1,573,403
Investments	540,753	521,837	378,719
Other	25,187	14,861	19,266
Cash and cash equivalents	23,197	11,850	9,485
Total interest income	3,031,606	2,451,618	1,980,873
Interest expense:			
Deposits	290,040	134,786	73,765
Borrowings	240,458	165,369	89,946
Total interest expense	530,498	300,155	163,711
Net interest income	2,501,108	2,151,463	1,817,162
Provision for loan losses	76,092	60,181	47,192
Net interest income after provision for loan losses	2,425,016	2,091,282	1,769,970
Noninterest income:			
Investment management fees	341,539	282,868	224,626
Brokerage and investment fees	31,867	26,666	27,661
Insurance fees	10,090	5,555	4,207
Trust fees	14,633	13,658	12,365
Foreign exchange fee income	35,606	27,691	22,406
Deposit fees	24,974	22,633	20,699
Loan and related fees	15,713	13,012	14,097
Loan servicing fees, net	13,302	13,800	13,465
Gain on sale of loans	5,616	9,233	4,828
Gain (loss) on investment securities, net	5,202	(833)	1,055
Income from investments in life insurance	40,670	37,874	48,119
Other income	4,233	8,304	1,284
Total noninterest income	543,445	460,461	394,812
Noninterest expense:			
Salaries and employee benefits	1,109,228	930,908	763,625
Information systems	241,752	208,625	153,207
Occupancy	152,258	136,746	119,139
Professional fees	60,058	56,950	52,740
Advertising and marketing	60,463	48,398	32,783
FDIC assessments	58,122	55,792	44,200
Other expenses	234,838	202,122	171,492
Total noninterest expense	1,916,719	1,639,541	1,337,186
Income before provision for income taxes	1,051,742	912,202	827,596
Provision for income taxes	197,914	154,542	154,168
Net income	853,828	757,660	673,428
Dividends on preferred stock	57,725	58,040	68,589
Net income available to common shareholders	$ 796,103	$ 699,620	$ 604,839
Net income	$ 853,828	$ 757,660	$ 673,428
Other comprehensive income (loss), net of tax:			
Net unrealized gain on securities transferred from held-to-maturity to available-for-sale	12,305	—	—
Net unrealized gain (loss) on securities available-for-sale	(8,518)	(10,564)	13,488
Reclassification of (gain) loss on securities available-for-sale to net income	(17,078)	1,359	(605)
Amortization of unrealized gain on securities transferred from available-for-sale to held-to-maturity	(1,070)	(974)	(1,324)
Other comprehensive income (loss)	(14,361)	(10,179)	11,559
Comprehensive income	$ 839,467	$ 747,481	$ 684,987
Basic earnings per common share	$ 4.89	$ 4.44	$ 4.07
Diluted earnings per common share	$ 4.81	$ 4.31	$ 3.93

See accompanying notes to financial statements.

FIRST REPUBLIC BANK
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(in thousands, except share amounts)	Common Stock Shares	Preferred Stock	Common Stock	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2015	**146,109,790**	**$ 989,525**	**$1,461**	**$2,770,265**	**$1,949,652**	**$ (5,220)**	**$5,705,683**
Net income	—	—	—	—	673,428	—	673,428
Other comprehensive income	—	—	—	—	—	11,559	11,559
Issuance of preferred stock, net	—	150,000	—	(4,816)	—	—	145,184
Issuance of common stock, net	6,900,000	—	69	527,431	—	—	527,500
Stock compensation expense	—	—	—	56,503	—	—	56,503
Net issuance of common stock under stock plans	1,282,697	—	13	(47,678)	—	—	(47,665)
Dividends on preferred stock (see Note 15)	—	—	—	—	(68,589)	—	(68,589)
Dividends on common stock ($0.63/share)	—	—	—	—	(94,951)	—	(94,951)
Balance at December 31, 2016	**154,292,487**	**1,139,525**	**1,543**	**3,301,705**	**2,459,540**	**6,339**	**6,908,652**
Net income	—	—	—	—	757,660	—	757,660
Other comprehensive loss	—	—	—	—	—	(10,179)	(10,179)
Issuance of preferred stock, net	—	200,000	—	(6,325)	—	—	193,675
Redemption of preferred stock	—	(349,525)	—	—	—	—	(349,525)
Issuance of common stock, net	5,375,000	—	54	508,853	—	—	508,907
Stock compensation expense	—	—	—	75,245	—	—	75,245
Net issuance of common stock under stock plans	2,028,316	—	20	(100,565)	—	—	(100,545)
Dividends on preferred stock (see Note 15)	—	—	—	—	(58,040)	—	(58,040)
Dividends on common stock ($0.67/share)	—	—	—	—	(107,549)	—	(107,549)
Balance at December 31, 2017	**161,695,803**	**990,000**	**1,617**	**3,778,913**	**3,051,611**	**(3,840)**	**7,818,301**
Cumulative adjustments from adoption of new accounting guidance	—	—	—	—	1,334	(1,182)	152
Balance at January 1, 2018	**161,695,803**	**990,000**	**1,617**	**3,778,913**	**3,052,945**	**(5,022)**	**7,818,453**
Net income	—	—	—	—	853,828	—	853,828
Other comprehensive loss	—	—	—	—	—	(14,361)	(14,361)
Issuance of preferred stock, net	—	300,000	—	(9,840)	—	—	290,160
Redemption of preferred stock	—	(350,000)	—	—	—	—	(350,000)
Issuance of common stock, net	2,000,000	—	20	200,553	—	—	200,573
Stock compensation expense	—	—	—	93,134	—	—	93,134
Net issuance of common stock under stock plans	1,206,147	—	12	(38,454)	—	—	(38,442)
Dividends on preferred stock (see Note 15)	—	—	—	—	(57,725)	—	(57,725)
Dividends on common stock ($0.71/share)	—	—	—	—	(117,843)	—	(117,843)
Balance at December 31, 2018	**164,901,950**	**$ 940,000**	**$1,649**	**$4,024,306**	**$3,731,205**	**$(19,383)**	**$8,677,777**

See accompanying notes to financial statements.

FIRST REPUBLIC BANK
CONSOLIDATED STATEMENTS OF CASH FLOWS

($ in thousands)	Year Ended December 31, 2018	2017	2016
Operating Activities:			
Net income	$ 853,828	$ 757,660	$ 673,428
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for loan losses	76,092	60,181	47,192
Depreciation, amortization and accretion, net	97,578	75,685	42,137
Amortization of mortgage servicing rights	16,785	16,269	13,985
Loans originated for sale	(215,354)	(501,420)	(850,064)
Proceeds from sales and principal repayments of loans held for sale	274,870	525,247	836,516
Deferred income taxes	(92,598)	8,516	(43,532)
Gain on sale of loans	(5,616)	(9,233)	(4,828)
(Gain) loss on investment securities, net	(5,202)	833	(1,055)
Other net gains	—	(3,798)	853
Noncash cost of stock plans	93,134	75,245	56,503
(Increase) decrease in other assets	(79,958)	(113,170)	26,170
Increase in other liabilities	97,645	120,123	55,180
Net Cash Provided by Operating Activities	1,111,204	1,012,138	852,485
Investing Activities:			
Loan originations, net of principal collections	(13,804,816)	(12,854,842)	(10,588,032)
Loans purchased	(635,438)	(289,301)	(310,558)
Loans sold	1,000,050	2,382,883	2,335,125
Purchases of securities available-for-sale	—	(749,353)	(1,409,144)
Proceeds from sales of securities available-for-sale	2,533,694	255,118	1,706,640
Proceeds from paydowns of securities available-for-sale	533,183	299,219	151,489
Purchases of securities held-to-maturity	(906,358)	(3,748,173)	(6,433,866)
Proceeds from sales, calls and paydowns of securities held-to-maturity	530,518	738,620	1,604,932
Purchases of FHLB stock and other investments	(151,499)	(121,500)	(97,875)
Proceeds from redemptions of FHLB stock	138,409	—	72,293
Purchases of investments in life insurance	(5,000)	(19,630)	(71,151)
Net change in tax credit investments	(160,887)	(210,429)	(173,176)
Additions to premises, equipment and leasehold improvements, net	(133,875)	(166,706)	(86,748)
Proceeds from sales of other assets	—	—	1,254
Cash paid for acquisition	—	—	(31,804)
Net Cash Used for Investing Activities	(11,062,019)	(14,484,094)	(13,330,621)
Financing Activities:			
Net increase in deposits	10,138,457	10,316,133	10,709,702
Proceeds from long-term debt	3,300,000	4,743,328	3,241,748
Repayment of long-term debt	(2,900,000)	(1,450,000)	(950,000)
Payment of long-term debt issuance costs	—	(8,510)	(4,453)
Decrease in debt related to variable interest entities	—	(25,973)	(3,670)
Net proceeds from issuance of preferred stock	290,160	193,675	145,184
Net proceeds from issuance of common stock	200,573	508,907	527,500
Redemption of preferred stock	(350,000)	(349,525)	—
Proceeds from issuance of common stock under employee stock purchase plan	12,891	10,631	8,278
Proceeds from stock options exercised	43	34	150
Payments of employee taxes withheld from share-based awards	(51,603)	(111,856)	(56,151)
Dividends on preferred stock	(57,725)	(58,040)	(68,589)
Dividends on common stock	(117,843)	(107,549)	(94,951)
Net Cash Provided by Financing Activities	10,464,953	13,661,255	13,454,748
Increase in Cash and Cash Equivalents	514,138	189,299	976,612
Cash and Cash Equivalents at the Beginning of Period	2,297,021	2,107,722	1,131,110
Cash and Cash Equivalents at the End of Period	$ 2,811,159	$ 2,297,021	$ 2,107,722
Supplemental Disclosure of Cash Flow Items			
Cash paid during period:			
Interest	$ 516,784	$ 282,819	$ 148,393
Income taxes	$ 97,852	$ 95,163	$ 89,280
Transfer of loans to held for sale	$ 1,071,499	$ 2,098,167	$ 2,701,461
Transfer of loans to securities available-for-sale	$ 363,640	$ 234,699	$ 303,384
Transfer of securities from held-to-maturity to available-for-sale	$ 2,096,497	$ —	$ 781,165
Transfer of repossessed assets from loans to other assets	$ —	$ 1,930	$ 1,307

See accompanying notes to financial statements.

FIRST REPUBLIC BANK
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Summary of Significant Accounting Policies

Basis of Presentation and Organization

First Republic Bank ("First Republic" or the "Bank") is a California-chartered commercial bank and trust company headquartered in San Francisco with deposits insured by the Federal Deposit Insurance Corporation ("FDIC"). First Republic has operated for 33 years and the current legal entity has been operating since July 1, 2010. Our consolidated financial statements include the accounts of First Republic and its wholly-owned subsidiaries: First Republic Investment Management, Inc. ("FRIM"), First Republic Securities Company, LLC ("FRSC"), First Republic Trust Company of Delaware LLC ("FRTC Delaware"), First Republic Lending Corporation ("FRLC") and Gradifi, Inc. ("Gradifi"). All significant intercompany balances and transactions have been eliminated.

Nature of Operations

First Republic and its subsidiaries offer private banking, private business banking and private wealth management, including investment, trust and brokerage services. First Republic specializes in delivering exceptional, relationship-based service and offers a complete line of products, including residential, commercial and personal loans, deposit services, and wealth management. Services are offered through preferred banking or wealth management offices primarily in San Francisco, Palo Alto, Los Angeles, Santa Barbara, Newport Beach and San Diego, California; Portland, Oregon; Boston, Massachusetts; Palm Beach, Florida; Greenwich, Connecticut; New York, New York; and Jackson, Wyoming.

First Republic originates real estate secured loans and other loans. Real estate secured loans are secured by single family residences, multifamily buildings and commercial real estate properties and loans to construct such properties. Most of the real estate loans that First Republic originates are secured by properties located close to one of its offices in the San Francisco Bay Area, the Los Angeles area, San Diego, Boston or the New York City area. First Republic originates business loans, loans secured by securities and other types of collateral and personal unsecured loans primarily to meet the non-mortgage needs of First Republic's clients. Most of these loans are also made to borrowers in the geographic areas served by the Bank's offices.

First Republic offers its clients various wealth management services. First Republic provides investment management services through FRIM, which earns fee income from the management of equity securities, fixed income securities, balanced portfolios and alternative investments for its clients. First Republic Trust Company, a division of First Republic, and FRTC Delaware, provide trust and custody services. FRSC is a registered broker-dealer that performs brokerage and investment activities for clients. The Bank offers insurance solutions through FRSC and FRIM. The Bank also offers money market mutual funds to clients through third-party providers and conducts foreign exchange activities on behalf of clients.

Gradifi is a corporate provider of education-related benefit plans. Through Gradifi, employers can make direct contributions to education debt repayment or savings plans for their employees and provide employees with the ability to refinance their existing student loans with options from multiple lenders.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. Actual results could differ from these estimates. Material estimates subject to change include those related to allowance for loan losses, mortgage servicing rights, goodwill, identifiable intangible assets, fair value measurements, and income taxes.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation.

Investment Securities

Beginning in 2018, the Bank adopted Accounting Standards Update ("ASU") 2016-01, "Financial Instruments—Overall (ASC 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities." Upon adoption, the Bank follows Accounting Standards Codification ("ASC") 321, "Investments-Equity Securities," which requires marketable equity securities to be measured at fair value with changes in fair value recognized in earnings that were previously recorded in other comprehensive income. Non-marketable equity securities are measured at cost less impairment, adjusted for observable price changes of the same or similar investment. Refer to "—Accounting Standards Adopted in 2018" below for further discussion.

The accounting for debt securities was not impacted by ASU 2016-01. The discussion that follows applies to debt securities for all periods presented and for equity securities prior to 2018. The Bank follows ASC 320, "Investments-Debt and Equity Securities," which addresses the accounting and reporting for investments in equity securities that have readily determinable fair values and for all investments in debt securities. Debt securities that the Bank has the positive intent and ability to hold to maturity are classified as held-to-maturity and reported at amortized cost. Debt securities that the Bank might not hold until maturity and marketable equity securities are classified as securities available-for-sale and reported at fair value, with unrealized gains and losses excluded from earnings and reported as accumulated other comprehensive income, which is included in equity.

Premiums and discounts are amortized or accreted over the contractual life of the security as an adjustment to the yield using the interest method. For certain types of securities, prepayments are considered in determining the effective yield of the individual security. Unrealized and realized gains and losses on investment securities are computed based on the cost basis of securities specifically identified.

The Bank conducts other-than-temporary impairment ("OTTI") analysis on a quarterly basis. The initial indicator of OTTI for both debt and equity securities is a decline in market value below the amount recorded for an investment and the severity and duration of the decline.

For a debt security for which there has been a decline in the fair value below its amortized cost basis, the Bank recognizes OTTI if the Bank (1) has the intent to sell the security, (2) it is more likely than not that the Bank will be required to sell the security before recovery of its amortized cost basis, or (3) the Bank does not expect to recover the entire amortized cost basis of the security.

Estimating recovery of the amortized cost basis of a debt security is based upon an assessment of the cash flows expected to be collected. If the present value of the cash flows expected to be collected is less than the amortized cost, OTTI is considered to have occurred.

If the Bank intends to sell the debt security, or if it is more likely than not that the Bank will be required to sell the debt security before recovery, an OTTI write-down is recognized in earnings equal to the entire difference between the amortized cost basis and the fair value of the security. For debt securities that are considered other-than-temporarily impaired that the Bank does not intend to sell or it is more likely than not that the Bank will not be required to sell before recovery, the OTTI write-down is separated into an amount representing the credit loss, which is recognized in earnings, and the amount related to all other factors, which is recognized in other comprehensive income. The measurement of the credit loss component is equal to the difference between the debt security's cost basis and the present value of its expected future cash flows discounted at the security's effective yield.

Prior to 2018, a decline in the fair value of a marketable equity security below cost was evaluated for the Bank's intent to sell, the severity and duration of the impairment, and the financial condition of the investee. If the Bank intended to sell the security, or if evidence existed that impairment was other-than-temporary, an OTTI write-down was recognized in earnings equal to the entire difference between the cost and the fair value of the security.

Loans

Loans are reported at their outstanding principal balances net of any charge-offs, unamortized deferred fees and costs on originated loans and premiums or discounts on purchased loans. On July 1, 2010, in connection with the re-establishment of First Republic as an independent institution, loan discounts from purchase accounting were recorded and are included in the basis of the loans.

Interest income from loans is recognized in the month earned. In accordance with ASC 310-20, "Nonrefundable Fees and Other Costs," loan origination fees and direct loan origination costs are deferred and amortized as a yield adjustment over the contractual life of each loan using a level yield or straight-line methodology, depending upon the type of loan.

Loans are placed on nonaccrual status when principal or interest payments are 90 days or more past due, except for single family loans that are well secured and in the process of collection, or earlier when management determines that collection of principal or interest is unlikely. When a loan is placed on nonaccrual status, the Bank reverses accrued unpaid interest receivable against interest income and accounts for the loan on the cash or cost recovery method, until it qualifies for return to accrual status. The Bank may return a loan to accrual status when principal and interest payments are current, a satisfactory payment history is established and collectibility improves or the loan otherwise becomes well secured and is in the process of collection.

Allowance for Loan Losses and Loan Charge-Offs

The Bank reviews and adjusts the allowance for loan losses on a quarterly basis. It is the Bank's policy to promptly charge off balances that are deemed uncollectible. The Bank evaluates any allowance for loan losses that would be required on the loans recorded at fair value in purchase accounting by evaluating whether the loans had experienced a deterioration in credit since the acquisition date. If the loan had experienced a credit deterioration, the Bank provides an allowance by comparing any reserve required to the basis in the loans, including the remaining loan discounts. In addition, the Bank provides for any loan losses associated with new loan originations based upon our assessment of credit losses inherent in the portfolio.

The principal sources of guidance on accounting for impairment in a loan portfolio are ASC 450, "Contingencies," and ASC 310-10-35, "Receivables-Subsequent Measurement." Under the provisions of ASC 310-10-35, a loan is considered impaired when, based on current information and events, it is probable that a creditor will be unable to collect all amounts due according to the contractual terms of the loan agreement. Nonaccrual loans with a balance greater than or equal to $1 million or loans modified in a troubled debt restructuring are generally considered impaired. The Bank measures impairment of a loan that is collateral dependent based on the fair value of the underlying collateral, net of selling costs. For a loan that is not collateral dependent, the Bank measures impairment using the present value of expected future cash flows, discounted at the instrument's effective interest rate. If the fair value of the collateral or the present value of expected future cash flows is less than the recorded investment in the loan, the Bank recognizes impairment by recording a charge-off or creating a valuation allowance.

All other loans, including individually evaluated loans determined not to be impaired under ASC 310-10-35, are included in a group of loans that are evaluated for estimated losses under ASC 450. For these non-impaired loans, the Bank segments its portfolio into groups that have similar risk characteristics. For each group, credit losses inherent in the portfolio are estimated based on the Bank's historical loss experience.

The Bank also maintains a qualitative reserve, which represents the qualitative portion of the allowance for loan losses. This qualitative reserve is determined based on management's assessments of the risks that may lead to a loan loss experience different than our historical loss experience and therefore not reflected in the quantitative model. The Bank uses qualitative factors that are intended to address developing external and internal environmental trends and include considerations, such as changes in current economic and business conditions, the nature and volume of the Bank's loan portfolio, the existence and effects of credit concentrations, problem loan trends, and other external factors, such as competition and the legal and regulatory environment.

In addition, federal banking agencies will periodically review our allowance for loan losses and the value attributed to nonaccrual loans or to real estate acquired through foreclosure. Such regulatory agencies may require us to adjust our determination of the amount of allowance for loan losses, nonaccrual loans or other real estate owned.

Other Real Estate Owned

Real estate acquired through foreclosure is recorded at the lower of cost or fair value less costs to sell upon transfer of the loans to foreclosed assets. Subsequent declines in value are recorded through an expense to the income statement and a charge to the valuation allowance. The Bank records costs related to holding real estate as expenses when incurred.

Investments in Life Insurance

The Bank initially records investments in life insurance at cost and subsequently adjusts the carrying value of the investment quarterly to its cash surrender value. The Bank recognizes the resulting income or loss in noninterest income.

Tax Credit Investments

In accordance with ASC 323-740, "Investments-Equity Method and Joint Ventures-Income Taxes," the initial cost of the Bank's low income housing tax credit ("tax credit") investments is amortized over the life of the investment using a proportional amortization method. Under the proportional amortization method, amortization expense recognized each period is based on the amount of tax credits and other tax benefits for the period as a percentage of expected total tax credits and other tax benefits of the investment. Beginning in 2018, tax credit investment amortization levels were increased to reflect the lower federal tax rate from tax reform legislation (the "Tax Reform Act"). Amortization expense is presented as a component of provision for income taxes on the consolidated statements of income. Tax credit investments are evaluated on a quarterly basis to determine if it is more likely than not that the carrying amount of the tax credit investments will not be realized through the future recognition of tax credits and other tax benefits. If it is more likely than not that future tax credits and other tax benefits will not be realized, an impairment loss is recorded.

Selling and Servicing Loans

The Bank sells loans on a non-recourse basis to generate servicing income, to provide funds for additional lending and for asset/liability management purposes. Loans that are sold include loans originated for sale to investors under commitments executed prior to origination, existing loans that are sold through bulk sales and loans sold through securitizations. The Bank classifies loans as held for sale when the Bank has the intent to sell, is waiting on a pre-approved investor purchase or is negotiating with a specific investor for the sale of specific loans that meet selected criteria. Loans held for sale include net deferred loan fees or costs and are carried at the lower of aggregate cost or fair value.

The Bank recognizes a sale only when consideration is received and control is transferred to the buyer. The Bank retains the mortgage servicing rights ("MSRs") on substantially all loans sold. The Bank's class of servicing rights consists of loans sold that are secured by real estate. MSRs retained for loans sold are initially measured at fair value at the date of transfer and recorded as a component of the gain or loss on sale of loans in the consolidated statements of income.

To determine the fair value of MSRs, the Bank uses a valuation model that calculates the present value of estimated future net servicing income. The Bank uses assumptions in the valuation model that market participants use in estimating future net servicing income, including estimates of prepayment speeds, discount rate, cost to service, escrow account earnings, contractual servicing fees and ancillary income.

MSRs are reported at the lower of amortized cost or fair value. MSRs are amortized in proportion to and over the period of estimated net servicing income. To calculate the initial fair value of MSRs and, subsequently, to measure impairment, the Bank values MSRs by stratifying loans by the year they are sold, by product type (fixed, hybrid or adjustable) and interest rate coupon range. Hybrid loans are further stratified by their initial fixed-rate period. The Bank evaluates impairment of MSRs for a stratum periodically based on their current fair value, actual prepayment experience and other market factors. If the fair value of MSRs for a stratum is less than the amortized cost, the Bank records a provision for a valuation allowance. Subsequently, the Bank adjusts the valuation allowance for changes in fair value to the extent that fair value does not exceed the amortized cost. The Bank evaluates at least quarterly the recoverability of the valuation allowance on MSRs. If the Bank determines that a portion of the valuation allowance is unrecoverable, primarily due to loan prepayments, the Bank records a direct write-down by reducing both the amortized cost of MSRs for a stratum and the related valuation allowance.

Goodwill and Other Identifiable Intangible Assets

In accordance with ASC 805, "Business Combinations," the Bank records the cost of acquisitions based on the estimated fair values of the assets acquired and liabilities and noncontrolling interests assumed at the acquisition date. Goodwill represents the excess of the purchase price over the fair value of the net assets acquired.

In accordance with ASC 350-20, "Goodwill," the Bank evaluates goodwill for impairment annually and on an interim basis if events or changes in circumstances indicate that its implied fair value is less than the carrying amount. Such an event or circumstance may include an adverse change in the business climate or market, a legal factor, an action by the regulators, introduction of or an increase in competition, or a loss of key personnel. In accordance with ASC 350-20, the Bank has the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount before applying the two-step goodwill impairment test. The qualitative factors considered include, but are not limited to, industry and market conditions and trends, the Bank's financial performance and any Bank-specific events relevant to the assessment. If the assessment of qualitative factors indicates that it is not more likely than not that impairment exists, no further testing is performed. If there is an indication that impairment exists, a quantitative test is performed to determine whether the fair value of each reporting unit, including goodwill, is less than the

carrying amount of the reporting unit. If the implied fair value of goodwill is less than its carrying amount, goodwill is considered impaired and an impairment loss is recognized as the amount by which the carrying amount of goodwill exceeds its implied fair value.

Identifiable intangible assets related to core deposits, wealth management customer relationships and trade name/trademark are reported as other intangible assets. Core deposits and wealth management customer relationships are amortized on an accelerated basis over their useful lives, not to exceed ten years. The Bank evaluates intangible assets associated with core deposits and wealth management customer relationships for impairment whenever circumstances indicate that the carrying amount may not be recoverable, in accordance with ASC 360-10, "Impairment or Disposal of Long-Lived Assets." If the carrying amount is not recoverable and exceeds fair value, an impairment loss is recognized. The trade name/trademark is considered to have an indefinite useful life. In accordance with ASC 350-30, "General Intangibles Other Than Goodwill," the trade name/trademark is evaluated for impairment annually and on an interim basis if events or changes in circumstances indicate that its fair value is less than the carrying amount. ASC 350-30 allows the Bank the option to first perform a qualitative assessment to determine whether the indefinite-lived intangible asset is impaired before determining its fair value. The qualitative factors considered include, but are not limited to, industry and market conditions and trends, the Bank's financial performance and any Bank-specific events relevant to the assessment. If the factors considered indicate that impairment exists, a quantitative test is performed and an impairment loss is recognized if the determined fair value is less than the carrying amount.

Premises, Equipment and Leasehold Improvements

Premises, equipment and leasehold improvements are recorded at cost, less accumulated depreciation and amortization. Depreciation and amortization are calculated on a straight-line basis over the estimated useful lives of the assets, which generally range from three to ten years, or the lease term, if the term is less than ten years.

Software

Software is recorded at cost, less accumulated amortization. Software includes both purchased software and capitalized costs associated with internally developed software. Amortization is calculated on a straight-line basis over the estimated useful life of the software, which ranges from three to ten years. Software is included in "Premises, equipment and leasehold improvements, net" in the consolidated balance sheets.

Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences of differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The Tax Reform Act reduced the federal tax rate for corporations from 35% to 21%, effective January 1, 2018, and changed or limited certain tax deductions. See Note 19, "Income Taxes" for additional information on the impact of the Tax Reform Act to the Bank.

The Bank records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized. Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, sources of taxable income in carryback periods and tax effects of the deferred tax liabilities, will be sufficient to fully recover the remaining deferred tax assets. The Bank will continue to evaluate the realizability of the deferred tax assets by assessing the need for a valuation allowance.

A tax position that meets the "more likely than not" recognition threshold is measured to determine the amount of benefits to recognize. The tax position is measured at the largest amount of benefit that is greater than 50% likely of being realized upon settlement. Interest and penalties are recognized as a component of income tax expense.

The Bank files a consolidated U.S. tax return and separate state and local tax returns.

Statement of Cash Flows

For the purposes of reporting cash flows, cash and cash equivalents include cash on hand, amounts due from the Federal Reserve Bank and commercial banks, and short-term investments such as federal funds sold or U.S. Treasury Bills with original maturity dates of ninety days or less. Amounts due from the Federal Reserve Bank include the minimum reserve balance the Bank is required to maintain. The Bank considers this reserve balance to be restricted.

Derivative Instruments and Hedging Activities

The Bank follows ASC 815, "Derivatives and Hedging," for the accounting and reporting of derivative instruments, including derivative instruments embedded in other contracts, and for hedging activities. On the date that the Bank enters into a derivative contract, the Bank designates the derivative contract as either a hedge of the fair value of a recognized asset or liability ("fair value" hedge), a hedge of the variability of cash flows related to a recognized asset or liability ("cash flow" hedge) or a contract that does not qualify for hedge accounting ("freestanding derivative"). The Bank records all derivatives at fair value as either other assets or other liabilities. The Bank accounts for changes in fair value of a derivative based on the designation, which is determined by its intended use. There were no fair value or cash flow hedges outstanding as of and for the years ended December 31, 2018, 2017 or 2016.

The Bank has freestanding derivative assets and liabilities, which consist of foreign exchange contracts executed with clients in which the Bank offsets the client exposure with another financial institution counterparty. The Bank does not retain significant foreign exchange risk or credit risk. The Bank uses current market prices to determine the fair value of these contracts.

The Bank originates certain mortgage loans with the intention of selling these loans to investors. The Bank enters into commitments to originate the loans whereby the interest rate on the loan paid by the borrower is set prior to funding ("interest rate lock commitments"). Such interest rate lock commitments are accounted for as freestanding derivative instruments that do not qualify as hedges. However, the interest rate exposure is economically hedged by the forward loan sale commitment to the investor. The change in fair value of these freestanding derivatives is recognized in earnings.

The Bank does not conduct proprietary trading activities in derivative instruments for its own accounts.

Share-Based Compensation

The Bank follows ASC 718, "Compensation-Stock Compensation," in accounting for its stock compensation plan. The Bank has awarded stock options, restricted stock units, performance share units and restricted stock awards to its employees, officers and directors.

The Bank measures the compensation cost of stock options based on the fair value of the options at the grant date. Restricted stock units, performance share units and restricted stock awards are valued at the closing market price of the Bank's common stock at the date of grant. Compensation expense is recognized over the requisite service period, which is generally the vesting period of the awards.

Investment Management, Brokerage and Investment, Insurance, Trust, and Deposit Fees

Investment management fees, brokerage and investment fees, and trust fees are generally based upon the market value of assets under management or administration or the volume of transactions and are recorded on the accrual basis over the period in which the service is provided or the underlying transactions occur. Insurance fees are based on the value and type of the policies sold and are recognized once the policy is in effect and upon annual renewal. Deposit fees are based on average account balances, type of account and transactions and are recognized over the period that services are provided. See Note 22, "Revenue from Contracts with Customers" for further discussion.

Accounting Standards Adopted in 2018

During the year ended December 31, 2018, the Bank adopted the following ASUs issued by the Financial Accounting Standards Board ("FASB"):

ASU 2014-09—Revenue from Contracts with Customers (ASC 606) and subsequent related ASUs

The Bank adopted this guidance effective January 1, 2018. ASC 606 establishes a principles-based approach to recognizing revenue from contracts with customers and applies to the Bank's following revenue streams: investment management, brokerage, insurance, trust and deposit fees. This guidance does not apply to interest income, which represents the majority of the Bank's revenues. The Bank adopted this guidance using a modified retrospective approach. There were no changes to the timing or amount of revenue recognized or to the accounting for contract costs, and no cumulative effect adjustment to retained earnings as a result of the adoption of this guidance.

ASC 606 also requires quantitative and qualitative disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows. See Note 22, "Revenue from Contracts with Customers," for these disclosures.

ASU 2016-01—Financial Instruments—Overall (ASC 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities and subsequent related ASU

The Bank adopted this guidance effective January 1, 2018. There are no changes to the accounting for debt securities or equity securities accounted for under the equity method as a result of this guidance. Upon adoption, marketable equity securities continue to be measured at fair value, but are no longer classified as securities available-for-sale. The changes in fair value are recognized in earnings, rather than other comprehensive income. In addition, other-than-temporary impairment analysis is no longer required for these securities, since changes in fair value are recognized through earnings. This guidance was applied on a modified retrospective basis. The Bank recorded a cumulative effect adjustment on January 1, 2018 of $510,000 to retained earnings, which represented net unrealized gains for these securities that were previously recognized in accumulated other comprehensive income, including any related tax effects. The cumulative adjustment is included within the Bank's Consolidated Statements of Changes in Shareholders' Equity and Note 17, "Accumulated Other Comprehensive Income (Loss)" for the year ended December 31, 2018.

Non-marketable equity securities are measured at cost less impairment, adjusted for observable price changes of the same or similar investment. This guidance was applied prospectively.

This guidance requires separate presentation of financial assets and financial liabilities by measurement category and type. Refer to the Bank's Consolidated Balance Sheets and Note 2, "Investment Securities" for these disclosures. The guidance also clarifies that fair value disclosures of financial instruments measured at amortized cost should be based on an exit price. Refer to Note 13, "Fair Value Measurements."

ASU 2017-12—Derivatives and Hedging (ASC 815): Targeted Improvements to Accounting and Hedging Activities

This guidance simplifies and improves hedge accounting, including expanding hedging strategies to include the "last-of-layer" method. The last-of-layer method can be used to hedge either prepayable assets in a closed portfolio or beneficial interests secured by prepayable financial instruments. For prepayable financial assets in a closed portfolio that are eligible to be hedged using the last-of-layer method, entities may reclassify eligible securities classified as held-to-maturity to available-for-sale upon adoption. In addition, there were changes to disclosure requirements for derivatives designated as hedging instruments.

The Bank early adopted this guidance effective in January 2018, using a modified retrospective approach. In connection with the adoption of this guidance, the Bank made a one-time transfer of eligible held-to-maturity securities with a carrying amount of $2.1 billion to available-for-sale securities and recorded $12.3 million of unrealized gain, net of taxes, in accumulated other comprehensive income.

There were no changes to the Bank's disclosures as a result of the adoption of this guidance, since the Bank's derivatives are not hedging instruments.

ASU 2018-02—Income Statement—Reporting Comprehensive Income (ASC 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income

The change in the federal corporate income tax rate from 35% to 21% beginning in 2018 resulted in the adjustment of the Bank's deferred tax assets to reflect the new corporate tax rate at the time of enactment of tax reform legislation in 2017. However, balances within accumulated other comprehensive income related to unrealized gains and losses from available-for-sale securities did not reflect the change in the tax rate. This guidance allows entities to record a cumulative effect adjustment from accumulated other comprehensive income to retained earnings so that unrealized gains and losses in accumulated other comprehensive income reflect the change in the tax rate. In addition, this guidance also requires disclosure of the Bank's policy for accounting for tax effects related to available-for-sale investments. The Bank accounts for tax effects at the individual security level.

The Bank early adopted this guidance effective January 1, 2018 and elected to record a cumulative effect adjustment to increase beginning retained earnings by $824,000. The reclassified amount is included within the Bank's Consolidated Statements of Changes in Shareholders' Equity and Note 17, "Accumulated Other Comprehensive Income (Loss)," for the year ended December 31, 2018.

ASU 2016-15—Statement of Cash Flows (ASC 230): Classification of Certain Cash Receipts and Cash Payments

The amendments clarify or add guidance on how entities should classify certain cash receipts and payments on the statement of cash flows to reduce diversity in practice on how certain transactions are classified. The amendments provide guidance regarding the presentation of items such as payments for debt prepayment or debt extinguishment costs, proceeds from the settlement of insurance claims, proceeds from investments in life insurance, and distributions received from equity method investees. In addition, the amendments provide a three step approach for classifying cash receipts and payments that may fall within more than one cash flow category. The Bank adopted this guidance effective January 1, 2018, on a retrospective basis. The adoption of this guidance did not have an impact on its consolidated statements of cash flows.

ASU 2017-09—Compensation—Stock Compensation (ASC 718): Scope of Modification Accounting

The amendments clarify when changes to share-based payment awards must be accounted for as modifications. Under the amended guidance, modification accounting is not required if the fair value, vesting conditions, or classification of the award (as equity or liability) are the same before and after the modification. The Bank adopted this guidance effective January 1, 2018 on a prospective basis. The adoption of this guidance did not have an impact on its consolidated financial statements.

Recent Accounting Standards

The following ASUs have been issued by the FASB, but were not yet effective as of December 31, 2018:

ASU 2016-02—Leases (ASC 842) and subsequent related ASUs	
ASC 842, which was issued in February 2016, replaces existing lease guidance for lessees, and requires operating leases to be recognized on the balance sheet. Upon adoption of the guidance, lessees will recognize a lease liability for the present value of future lease payments, and a corresponding right-of-use asset. For operating leases, ASC 842 does not significantly change the recognition or measurement of lease expense on the income statement, or the presentation on the statement of cash flows, compared to existing GAAP. Quantitative and qualitative disclosures regarding the amount, timing and uncertainty of cash flows from leases are also required. These amendments should be applied to each comparative reporting period using a modified retrospective approach. If elected, they may also be applied through a cumulative effect adjustment to the beginning of the period of adoption, instead of the beginning of the earliest comparative period.	The Bank adopted this guidance effective January 1, 2019, using a modified retrospective approach and elected to record a cumulative effect adjustment to the beginning of the period of adoption without adjusting prior comparative financial statements. As a result, the Bank recorded lease assets and liabilities of $578 million and $619 million, respectively, on its consolidated balance sheet effective January 1, 2019. There was no cumulative effect adjustment recorded to retained earnings upon adoption. Additional quantitative and qualitative disclosures required under this guidance will be included in the consolidated financial statements beginning in the first quarter of 2019.

ASU 2016-13—Financial Instruments—Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments	
ASC 326, which was issued in June 2016, revises the methodology for estimating credit losses on loans receivable, held-to-maturity debt securities, and unfunded loan commitments. Under ASC 326, the current expected credit losses (“CECL”) model is based on lifetime expected losses, rather than incurred losses, and requires the recognition of credit loss expense in the statement of income and a related allowance for credit losses on the balance sheet at the time of origination or purchase of a loan receivable or held-to-maturity debt security. Subsequent changes in this estimate are recorded through credit loss expense and related allowance. The CECL model requires the use of not only relevant historical experience and current conditions, but also reasonable and supportable forecasts of future events and circumstances, thus incorporating a broad range of information in developing credit loss estimates, which could result in significant changes to both the timing and amount of credit loss expense and allowance. Under ASC 326, available-for-sale debt securities are evaluated for impairment if fair value is less than amortized cost. Estimated credit losses are recorded if the present value of expected future cash flows is less than amortized cost, and are recorded through a credit loss expense and an allowance, rather than a write-down of the investment. Changes in fair value that are not credit-related will continue to be recorded in other comprehensive income. Certain additional disclosures are required.	The Bank will adopt this guidance effective January 1, 2020 using a modified retrospective approach. The Bank is currently assessing the impact of this guidance on its consolidated financial statements, which will depend on factors such as loan and investment portfolio characteristics, historical losses, a reasonable and supportable forecast period, and various qualitative factors. The Bank continues to develop the credit loss models under the new guidance and is addressing key implementation matters such as disclosure requirements.

ASU 2017-04—Intangibles—Goodwill and Other (ASC 350): Simplifying the Test for Goodwill Impairment

The amendments, which were issued in January 2017, simplify the accounting for goodwill impairment by removing Step 2 of the impairment test, which compared the implied fair value of goodwill to its carrying amount. Measuring the implied fair value of goodwill followed the same process as determining the fair value of individual assets and liabilities assumed in a business combination, which was complex. The amended guidance simplifies the impairment test to only require a comparison of the fair value of a reporting unit with its carrying amount, including the effect of tax deductible goodwill on the carrying amount of the reporting unit. Entities still have the option to perform a qualitative assessment to determine if the quantitative impairment test is needed.

The amendments are effective for interim and annual periods beginning after December 15, 2019 and are applied on a prospective basis. Early adoption is permitted. The Bank does not expect this guidance to have a material impact on its consolidated financial statements.

ASU 2018-13—Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements For Fair Value Measurement

The amendments, which were issued in August 2018, revise certain disclosure requirements for fair value measurements. The amendments remove the requirement to disclose the amounts and reasons for transfers between Levels 1 and 2 of the fair value hierarchy, the Bank's policy for the timing of transfers between levels, and the valuation processes for Level 3 fair value measurements. In addition, the amendments require disclosures of the changes in unrealized gains and losses included in other comprehensive income for recurring Level 3 fair value measurements and the range and weighted average of significant unobservable inputs to develop Level 3 fair value measurements.

The amendments are effective for interim and annual periods beginning after December 15, 2019. Additional disclosure requirements are applied prospectively, while the amendments to remove disclosures are applied retrospectively to all periods presented. Early adoption is permitted. The Bank does not expect the revised disclosure requirements to have a material impact on its consolidated financial statements.

ASU 2018-15—Intangibles—Goodwill and Other—Internal-Use Software (ASC 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract

The amendments, which were issued in August 2018, require certain implementation costs for cloud computing arrangements that are service contracts to be capitalized under the internal-use software guidance. Capitalized costs should generally be amortized over the term of the arrangement on a straight-line basis. The amortization term includes fixed non-cancellable periods plus renewal periods the customer is reasonably certain to exercise, termination periods the customer is reasonably certain not to exercise, and periods covered by an option to extend that is controlled by the vendor.

When an arrangement includes multiple elements (e.g., hosting service, software license, professional service), the amendments require the purchase price be allocated based on the relative standalone price of each element. This requirement will also be applicable to internal-use software.

The amendments are effective for interim and annual periods beginning after December 15, 2019 and are applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. Early adoption is permitted. The Bank is currently assessing the impact to its financial statements.

Note 2. Investment Securities

The following tables present information related to available-for-sale securities, held-to-maturity securities, and equity securities measured at fair value:

($ in thousands)	December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Available-for-sale:				
Agency residential mortgage-backed securities (“MBS”)	$ 26,608	$ 65	$ (578)	$ 26,095
Other residential MBS	4,581	—	(29)	4,552
Agency commercial MBS	1,731,293	847	(31,119)	1,701,021
Securities of U.S. states and political subdivisions—taxable	47,275	173	—	47,448
Total	$ 1,809,757	$ 1,085	$ (31,726)	$ 1,779,116
Held-to-maturity:				
U.S. Government-sponsored agency securities	$ 1,044,912	$ —	$ (33,588)	$ 1,011,324
Agency residential MBS	1,868,587	—	(69,487)	1,799,100
Agency commercial MBS	3,375,409	2,040	(136,597)	3,240,852
Securities of U.S. states and political subdivisions:				
Tax-exempt municipal securities	7,952,605	208,263	(125,725)	8,035,143
Tax-exempt nonprofit debentures	142,508	228	(2,910)	139,826
Taxable municipal securities	52,952	8,327	—	61,279
Total	$14,436,973	$218,858	$(368,307)	$14,287,524

($ in thousands)	December 31, 2018
Equity (fair value):	
Mutual funds and marketable equity securities	$18,719

($ in thousands)	December 31, 2017			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Available-for-sale:				
U.S. Treasury securities	$ 55,439	$ —	$ (441)	$ 54,998
Agency residential MBS	34,791	202	(419)	34,574
Other residential MBS	4,888	—	(28)	4,860
Agency commercial MBS	2,267,102	3,314	(14,526)	2,255,890
Securities of U.S. states and political subdivisions—taxable	47,258	191	—	47,449
Mutual funds and marketable equity securities	19,807	689	(179)	20,317
Total	$ 2,429,285	$ 4,396	$ (15,593)	$ 2,418,088
Held-to-maturity:				
U.S. Government-sponsored agency securities	$ 1,400,025	$ 1	$ (45,090)	$ 1,354,936
Agency residential MBS	2,734,819	2,971	(39,745)	2,698,045
Other residential MBS	1,631	34	(11)	1,654
Agency commercial MBS	3,017,012	—	(72,730)	2,944,282
Securities of U.S. states and political subdivisions:				
Tax-exempt municipal securities	8,804,924	505,182	(20,404)	9,289,702
Tax-exempt nonprofit debentures	146,529	4,466	(468)	150,527
Taxable municipal securities	53,005	10,594	—	63,599
Total	$16,157,945	$523,248	$(178,448)	$16,502,745

In January 2018, the Bank early adopted ASU 2017-12. In connection with the adoption of this guidance, the Bank made a one-time transfer of eligible held-to-maturity securities with a carrying amount of $2.1 billion to available-for-sale and recorded $12.3 million of net unrealized gains ($54.1 million in gains, net of taxes, and $41.8 million in losses, net of taxes) in accumulated other comprehensive income.

During January 2018, the Bank performed a repositioning of its investment portfolio and sold certain available-for-sale U.S. Treasury securities, U.S. Government-sponsored agency securities, agency residential MBS, agency commercial MBS, and tax-exempt municipal securities with proceeds of $2.2 billion, and recognized a gain on sale of $10.7 million. The one-time transition election described in the paragraph above did not affect the Bank's intent to hold the securities in question as of December 31, 2017 and/or its OTTI assertion as of December 31, 2017 for those securities that were sold at a loss.

The Bank pledges investment securities at the Federal Reserve Bank to maintain the ability to borrow at the discount window, or at a correspondent bank as collateral to secure trust funds and public deposits. At December 31, 2018, the carrying value of investment securities pledged was $2.5 billion, of which $2.4 billion was unencumbered and available to support additional borrowings.

The following tables present gross unrealized losses and fair value of available-for-sale and held-to-maturity securities by length of time that individual securities in each category had been in a continuous loss position:

	December 31, 2018						
	Less than 12 months		12 months or more		Total		
($ in thousands)	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Total Number of Securities
Available-for-sale:							
Agency residential MBS	$ (8)	$ 1,266	$ (570)	$ 16,941	$ (578)	$ 18,207	23
Other residential MBS	(17)	4,021	(12)	531	(29)	4,552	3
Agency commercial MBS	(3,789)	784,939	(27,330)	689,386	(31,119)	1,474,325	35
Total	$ (3,814)	$790,226	$ (27,912)	$ 706,858	$ (31,726)	$1,497,084	61
Held-to-maturity:							
U.S. Government-sponsored agency securities	$ (592)	$ 57,908	$ (32,996)	$ 953,416	$ (33,588)	$1,011,324	39
Agency residential MBS	—	—	(69,487)	1,799,100	(69,487)	1,799,100	49
Agency commercial MBS	(5,084)	233,573	(131,513)	2,716,170	(136,597)	2,949,743	82
Securities of U.S. states and political subdivisions:							
Tax-exempt municipal securities	(9,429)	644,391	(116,296)	2,206,671	(125,725)	2,851,062	309
Tax-exempt nonprofit debentures	(1,167)	57,918	(1,743)	19,240	(2,910)	77,158	4
Total	$(16,272)	$993,790	$(352,035)	$7,694,597	$(368,307)	$8,688,387	483

	December 31, 2017						
	Less than 12 months		12 months or more		Total		
($ in thousands)	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Total Number of Securities
Available-for-sale:							
U.S. Treasury securities	$ —	$ —	$ (441)	$ 54,998	$ (441)	$ 54,998	1
Agency residential MBS	(5)	1,707	(414)	16,712	(419)	18,419	22
Other residential MBS	—	—	(28)	4,860	(28)	4,860	3
Agency commercial MBS	(8,316)	749,649	(6,210)	292,648	(14,526)	1,042,297	26
Mutual funds and marketable equity securities	(179)	17,821	—	—	(179)	17,821	1
Total	$ (8,500)	$ 769,177	$ (7,093)	$ 369,218	$ (15,593)	$1,138,395	53
Held-to-maturity:							
U.S. Government-sponsored agency securities	$(11,550)	$ 664,869	$ (33,540)	$ 648,066	$ (45,090)	$1,312,935	48
Agency residential MBS	(2,976)	533,672	(36,769)	1,694,831	(39,745)	2,228,503	68
Other residential MBS	—	—	(11)	1,174	(11)	1,174	4
Agency commercial MBS	(13,819)	1,055,642	(58,911)	1,888,640	(72,730)	2,944,282	81
Securities of U.S. states and political subdivisions:							
Tax-exempt municipal securities	(62)	27,652	(20,342)	958,526	(20,404)	986,178	103
Tax-exempt nonprofit debentures	(468)	48,420	—	—	(468)	48,420	3
Total	$(28,875)	$2,330,255	$(149,573)	$5,191,237	$(178,448)	$7,521,492	307

The Bank conducts a regular assessment of its investment securities portfolio to determine whether securities are other-than-temporarily impaired considering, among other factors, the nature of the securities, credit ratings or financial condition of the issuer, the extent and duration of the unrealized loss, expected cash flows, market conditions and the Bank's ability to hold the securities through the anticipated recovery period.

The Bank does not intend to sell the available-for-sale or held-to-maturity investment securities included in the tables above and has concluded that it is more likely than not that it will not be required to sell any of the investments prior to recovery of the amortized cost basis.

U.S. Government-Sponsored Agency Securities. At December 31, 2018, the unrealized losses on the Bank's investments in U.S. Government-sponsored agency securities are primarily due to increases in market interest rates since the securities were purchased and are not due to credit losses, given the explicit or implicit guarantees provided by agencies of the U.S. Government. The Bank expects to continue to receive all contractual principal and interest payments. Therefore, the Bank does not consider these investments to be other-than-temporarily impaired.

Agency Residential MBS and Agency Commercial MBS. At December 31, 2018, the unrealized losses on the Bank's investments in agency residential MBS and agency commercial MBS are primarily due to increases in market interest rates since the securities were purchased and are not due to credit losses, given the explicit or implicit guarantees provided by the U.S. Government or agencies of the U.S. Government. The Bank expects to continue to receive all contractual principal and interest payments. Therefore, the Bank does not consider these investments to be other-than-temporarily impaired.

Tax-Exempt Municipal Securities. At December 31, 2018, the unrealized losses on the Bank's investments in tax-exempt municipal securities are primarily due to increases in market interest rates since the securities were purchased and are not due to the credit quality of the securities. The Bank monitors these securities regularly to determine if any changes in ratings have occurred and conducts its internal credit analysis to determine if the issuer has experienced any change in financial condition that may result in a potential loss of the contractual principal and interest payments. The Bank expects to continue to receive all contractual principal and interest payments.

There were no other-than-temporary impairment charges on securities during the years ended December 31, 2018, 2017 and 2016.

The following table presents proceeds received from sales of investment securities:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Available-for-sale:			
Sales proceeds	$2,533,694	$255,118	$1,706,640
Held-to-maturity:			
Sales proceeds	$ —	$ 33,664	$ 8,614

The following table presents gains and losses on investment securities:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Available-for-sale:			
Gross realized gains on sales	$ 72,573	$ 10	$ 5,137
Gross realized losses on sales	(65,773)	(2,361)	(4,090)
Held-to-maturity:			
Gross realized gains on sales	—	1,518	8
Equity (fair value):			
Net change in fair value	(1,598)	—	—
Total gain (loss) on investment securities, net	$ 5,202	$ (833)	$ 1,055

The following table presents interest income on investment securities:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Interest income on tax-exempt securities	$299,696	$296,958	$222,486
Interest income on taxable securities	241,057	224,879	156,233
Total	$540,753	$521,837	$378,719

The following table presents contractual maturities of debt securities available-for-sale and held-to-maturity. Actual maturities for certain U.S. Government agency securities, U.S. Government-sponsored agency securities and municipal securities may occur earlier than their stated contractual maturities because the note issuers may have the right to call outstanding amounts ahead of their contractual maturities. In addition, the remaining contractual principal maturities for MBS do not consider prepayments. Expected remaining maturities for MBS can differ from contractual maturities because borrowers have the right to prepay their mortgage obligations, with or without penalties, prior to contractual maturity.

	December 31, 2018		December 31, 2017	
($ in thousands)	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Available-for-sale:				
Due in one year or less	$ 12	$ 12	$ 55,465	$ 55,024
Due after one year through five years	352,542	352,845	314,796	315,614
Due after five years through ten years	659,459	655,810	1,183,278	1,185,208
Due after ten years	797,744	770,449	855,939	841,925
Total debt securities	$ 1,809,757	$ 1,779,116	$ 2,409,478	$ 2,397,771
Held-to-maturity:				
Due in one year or less	$ 386,762	$ 390,440	$ 160,597	$ 162,994
Due after one year through five years	499,827	536,214	699,546	741,423
Due after five years through ten years	736,569	729,623	571,893	582,245
Due after ten years	12,813,815	12,631,247	14,725,909	15,016,083
Total debt securities	$14,436,973	$14,287,524	$16,157,945	$16,502,745

Note 3. Loans and Allowance for Loan Losses

Loan Profile

The following table presents the recorded investment in the Bank's loan portfolio and allowance for loan losses:

($ in thousands)	December 31, 2018	December 31, 2017
Single family (1-4 units)	$37,955,252	$31,508,468
Home equity lines of credit	2,542,713	2,735,612
Multifamily (5+ units)	10,357,839	8,640,233
Commercial real estate	6,677,440	6,083,152
Single family construction	645,924	591,066
Multifamily/commercial construction	1,576,582	1,116,855
Total real estate mortgages	59,755,750	50,675,386
Business	10,998,503	8,295,224
Stock secured	1,432,911	1,083,553
Other secured	1,105,751	1,015,039
Unsecured	2,572,367	1,771,013
Total other loans	16,109,532	12,164,829
Total loans	75,865,282	62,840,215
Less:		
Allowance for loan losses	(439,048)	(365,932)
Loans, net	75,426,234	62,474,283
Loans held for sale	98,985	87,695
Total	$75,525,219	$62,561,978

Real estate loans are secured by single family, multifamily and commercial real estate properties and generally mature over periods of up to thirty years. At December 31, 2018 and 2017, approximately 50% and 51%, respectively, of the total loan portfolio was secured by California real estate. At December 31, 2018, approximately 68% of single family mortgages fully and evenly amortize until maturity following an initial interest-only period of generally ten years, compared to 69% at December 31, 2017.

As of December 31, 2018, the Bank had pledged $37.0 billion of loans to secure borrowings of $8.8 billion from the Federal Home Loan Bank (the "FHLB"), although only approximately $10.1 billion of collateral was required in connection with the outstanding FHLB advances.

Credit Quality

The Bank has three classes of loans: (1) purchased non-impaired loans; (2) originated non-impaired loans; and (3) impaired loans, which include both purchased and originated non-impaired loans that subsequently became impaired under ASC 310-10-35 and purchased credit-impaired loans subject to ASC 310-30, "Receivables—Loans and Debt Securities Acquired with Deteriorated Credit Quality."

A loan is considered past due if the required principal and interest payment has not been received as of the day after such payment was due. The tables below present an aging analysis of loans and loans on nonaccrual status by class. Of the loans on nonaccrual status, at December 31, 2018, $21.1 million were current, compared to $21.5 million at December 31, 2017.

($ in thousands)	30-59 Days Past Due	60-89 Days Past Due	90 Days or More Past Due	Total Past Due	Current	Total Loans	90 Days or More Past Due and Accruing	Nonaccrual
At December 31, 2018								
Single Family (1-4 units):								
Purchased non-impaired	$ 3,941	$1,214	$ 2,842	$ 7,997	$ 919,485	$ 927,482	$—	$ 4,119
Originated non-impaired	1,964	156	637	2,757	36,996,127	36,998,884	—	863
Impaired	—	288	8,927	9,215	19,671	28,886	—	18,848
	5,905	1,658	12,406	19,969	37,935,283	37,955,252	—	23,830
Home Equity Lines of Credit:								
Purchased non-impaired	—	—	133	133	163,075	163,208	—	1,044
Originated non-impaired	2,130	—	474	2,604	2,364,472	2,367,076	—	474
Impaired	2,892	1,512	2,843	7,247	5,182	12,429	—	8,008
	5,022	1,512	3,450	9,984	2,532,729	2,542,713	—	9,526
Multifamily (5+ units):								
Purchased non-impaired	—	—	—	—	73,501	73,501	—	—
Originated non-impaired	—	—	—	—	10,271,970	10,271,970	—	—
Impaired	—	—	—	—	12,368	12,368	—	2,056
	—	—	—	—	10,357,839	10,357,839	—	2,056
Commercial Real Estate:								
Purchased non-impaired	—	—	—	—	110,729	110,729	—	—
Originated non-impaired	—	—	—	—	6,560,225	6,560,225	—	266
Impaired	—	—	—	—	6,486	6,486	—	—
	—	—	—	—	6,677,440	6,677,440	—	266
Single Family Construction:								
Purchased non-impaired	—	—	—	—	2,907	2,907	—	—
Originated non-impaired	—	—	—	—	643,017	643,017	—	—
	—	—	—	—	645,924	645,924	—	—
Multifamily/Commercial Construction:								
Purchased non-impaired	—	—	—	—	1,163	1,163	—	—
Originated non-impaired	—	—	—	—	1,575,419	1,575,419	—	—
	—	—	—	—	1,576,582	1,576,582	—	—
Business:								
Purchased non-impaired	—	—	—	—	174,465	174,465	—	177
Originated non-impaired	—	—	—	—	10,813,633	10,813,633	—	154
Impaired	—	—	3,252	3,252	7,153	10,405	—	6,209
	—	—	3,252	3,252	10,995,251	10,998,503	—	6,540
Stock Secured:								
Purchased non-impaired	—	—	—	—	297	297	—	—
Originated non-impaired	—	—	—	—	1,432,614	1,432,614	—	—
	—	—	—	—	1,432,911	1,432,911	—	—
Other Secured:								
Purchased non-impaired	—	—	—	—	2,578	2,578	—	—
Originated non-impaired	—	—	—	—	1,103,173	1,103,173	—	—
	—	—	—	—	1,105,751	1,105,751	—	—
Unsecured:								
Purchased non-impaired	—	—	—	—	24,874	24,874	—	52
Originated non-impaired	200	286	—	486	2,544,512	2,544,998	—	1,702
Impaired	—	2,493	—	2,493	2	2,495	—	2,493
	200	2,779	—	2,979	2,569,388	2,572,367	—	4,247
Total	$11,127	$5,949	$19,108	$36,184	$75,829,098	$75,865,282	$—	$46,465

($ in thousands)	30-59 Days Past Due	60-89 Days Past Due	90 Days or More Past Due	Total Past Due	Current	Total Loans	90 Days or More Past Due and Accruing	Nonaccrual
At December 31, 2017								
Single Family (1-4 units):								
Purchased non-impaired	$ 596	$1,706	$ —	$ 2,302	$ 1,374,793	$ 1,377,095	$—	$ 631
Originated non-impaired	371	—	166	537	30,104,977	30,105,514	—	1,070
Impaired	—	—	10,216	10,216	15,643	25,859	—	15,196
	967	1,706	10,382	13,055	31,495,413	31,508,468	—	16,897
Home Equity Lines of Credit:								
Purchased non-impaired	246	—	—	246	238,348	238,594	—	918
Originated non-impaired	6,105	—	474	6,579	2,477,605	2,484,184	—	474
Impaired	2,553	1,119	1,605	5,277	7,557	12,834	—	7,193
	8,904	1,119	2,079	12,102	2,723,510	2,735,612	—	8,585
Multifamily (5+ units):								
Purchased non-impaired	—	—	—	—	116,822	116,822	—	—
Originated non-impaired	—	—	—	—	8,508,385	8,508,385	—	—
Impaired	—	—	—	—	15,026	15,026	—	4,651
	—	—	—	—	8,640,233	8,640,233	—	4,651
Commercial Real Estate:								
Purchased non-impaired	—	—	—	—	201,202	201,202	—	—
Originated non-impaired	—	—	—	—	5,868,912	5,868,912	—	286
Impaired	—	—	—	—	13,038	13,038	—	—
	—	—	—	—	6,083,152	6,083,152	—	286
Single Family Construction:								
Purchased non-impaired	2,914	—	—	2,914	—	2,914	—	—
Originated non-impaired	—	—	—	—	588,152	588,152	—	—
	2,914	—	—	2,914	588,152	591,066	—	—
Multifamily/Commercial Construction:								
Purchased non-impaired	—	—	—	—	1,167	1,167	—	—
Originated non-impaired	—	—	—	—	1,115,688	1,115,688	—	—
	—	—	—	—	1,116,855	1,116,855	—	—
Business:								
Purchased non-impaired	23	—	—	23	153,462	153,485	—	129
Originated non-impaired	1,638	1,799	—	3,437	8,128,329	8,131,766	—	620
Impaired	—	—	—	—	9,973	9,973	—	5,016
	1,661	1,799	—	3,460	8,291,764	8,295,224	—	5,765
Stock Secured:								
Purchased non-impaired	—	—	—	—	3,578	3,578	—	—
Originated non-impaired	—	—	—	—	1,079,975	1,079,975	—	—
	—	—	—	—	1,083,553	1,083,553	—	—
Other Secured:								
Purchased non-impaired	—	—	—	—	7,941	7,941	—	—
Originated non-impaired	—	—	—	—	1,007,098	1,007,098	—	—
	—	—	—	—	1,015,039	1,015,039	—	—
Unsecured:								
Purchased non-impaired	—	—	—	—	27,476	27,476	—	314
Originated non-impaired	4	—	—	4	1,742,608	1,742,612	—	250
Impaired	—	—	—	—	925	925	—	908
	4	—	—	4	1,771,009	1,771,013	—	1,472
Total	$14,450	$4,624	$12,461	$31,535	$62,808,680	$62,840,215	$—	$37,656

The interest income related to nonaccrual loans at each respective period end is presented in the following table:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Actual interest income recognized	$ —	$ —	$ —
Interest income under original terms	$ 1,821	$ 1,565	$ 2,089

The majority of the Bank's loan portfolio is secured by real estate. A decline in real estate values can negatively impact our ability to recover our investment should the borrower become delinquent. We safeguard against this risk by rarely exceeding a loan-to-value ratio of 80% with respect to real estate lending.

We perform annual reviews of our larger multifamily, commercial real estate and commercial business loans. As part of these review procedures, we analyze recent financial statements of the property and/or borrower to determine the current level of occupancy, revenues and expenses and to investigate any deterioration in the value of the real estate collateral or in the borrower's financial condition. Upon completion, we update the grade assigned to each loan. We maintain a list of loans that receive additional attention if we believe there may be a potential credit risk.

For loans that are criticized or classified, the Bank's Special Assets Committee reviews loan grades, reserves and accrual status on a quarterly or more frequent basis. This review includes an evaluation of the market conditions, the property's trends, the borrower and guarantor status, the level of reserves required and loan accrual status. Additionally, we have an independent, third-party review performed on our loan grades and our credit administration functions each year. The results of the third-party review are presented to the Audit Committee of the Board of Directors. These asset review procedures provide management with additional information for assessing our asset quality. In addition, for business and personal loans that are not secured by real estate, we perform frequent evaluations and regular monitoring.

The Special Assets Committee is primarily responsible for review of loan grades, reserves and accrual status. Adversely classified loan asset grades are reviewed on a quarterly or more frequent basis. The Bank's internal loan grades apply to all loans and are as follows:

Pass—These loans are performing substantially as agreed, with no current identified material weakness in repayment ability. Any credit or collateral exceptions existing with respect to the loan should be minimal and immaterial, in the process of correction, and not such that they could subsequently impair credit quality and introduce risk of collection.

Special Mention—These loans have potential weaknesses and deserve management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the loan or of the Bank's credit position at some future date. However, these loans do not expose the Bank to sufficient risk to warrant adverse classification.

Substandard—These loans are inadequately protected by the current worth and paying capacity of the obligor or of the collateral pledged, if any. These loans have a well-defined weakness that jeopardizes the liquidation of the debt.

Doubtful—These loans have weaknesses that make collection or liquidation in full highly improbable. The possibility of some loss is extremely high, but because of certain important and reasonable specific pending factors that may work to the advantage and strengthening of the loan, its classification as a loss is deferred until a more exact status may be determined.

The following tables present the recorded investment in loans, by credit quality indicator and by class:

($ in thousands)	Pass	Special Mention	Substandard	Doubtful	Total
At December 31, 2018					
Single Family (1-4 units):					
Purchased non-impaired	$ 901,761	$ 5,980	$ 19,741	$ —	$ 927,482
Originated non-impaired	36,940,287	38,342	20,255	—	36,998,884
Impaired	9,578	—	19,308	—	28,886
	37,851,626	44,322	59,304	—	37,955,252
Home Equity Lines of Credit:					
Purchased non-impaired	161,572	297	1,339	—	163,208
Originated non-impaired	2,353,467	12,430	1,179	—	2,367,076
Impaired	1,107	—	11,322	—	12,429
	2,516,146	12,727	13,840	—	2,542,713
Multifamily (5+ units):					
Purchased non-impaired	73,501	—	—	—	73,501
Originated non-impaired	10,271,970	—	—	—	10,271,970
Impaired	10,312	—	2,056	—	12,368
	10,355,783	—	2,056	—	10,357,839
Commercial Real Estate:					
Purchased non-impaired	110,729	—	—	—	110,729
Originated non-impaired	6,546,898	9,039	4,288	—	6,560,225
Impaired	1,986	—	4,500	—	6,486
	6,659,613	9,039	8,788	—	6,677,440
Single Family Construction:					
Purchased non-impaired	—	—	2,907	—	2,907
Originated non-impaired	643,017	—	—	—	643,017
	643,017	—	2,907	—	645,924
Multifamily/Commercial Construction:					
Purchased non-impaired	—	—	1,163	—	1,163
Originated non-impaired	1,575,419	—	—	—	1,575,419
	1,575,419	—	1,163	—	1,576,582
Business:					
Purchased non-impaired	166,367	5,000	2,921	177	174,465
Originated non-impaired	10,761,125	41,096	11,258	154	10,813,633
Impaired	4,197	—	6,208	—	10,405
	10,931,689	46,096	20,387	331	10,998,503
Stock Secured:					
Purchased non-impaired	297	—	—	—	297
Originated non-impaired	1,432,614	—	—	—	1,432,614
	1,432,911	—	—	—	1,432,911
Other Secured:					
Purchased non-impaired	2,578	—	—	—	2,578
Originated non-impaired	1,102,923	250	—	—	1,103,173
	1,105,501	250	—	—	1,105,751
Unsecured:					
Purchased non-impaired	24,428	—	394	52	24,874
Originated non-impaired	2,537,830	1,231	4,235	1,702	2,544,998
Impaired	—	—	2,495	—	2,495
	2,562,258	1,231	7,124	1,754	2,572,367
Total	$75,633,963	$113,665	$115,569	$2,085	$75,865,282

($ in thousands)	Pass	Special Mention	Substandard	Doubtful	Total
At December 31, 2017					
Single Family (1-4 units):					
Purchased non-impaired	$ 1,360,496	$ 3,927	$ 12,672	$ —	$ 1,377,095
Originated non-impaired	30,090,559	2,474	12,481	—	30,105,514
Impaired	9,856	162	15,841	—	25,859
	31,460,911	6,563	40,994	—	31,508,468
Home Equity Lines of Credit:					
Purchased non-impaired	229,732	6,964	1,898	—	238,594
Originated non-impaired	2,482,189	764	1,231	—	2,484,184
Impaired	769	766	11,299	—	12,834
	2,712,690	8,494	14,428	—	2,735,612
Multifamily (5+ units):					
Purchased non-impaired	116,822	—	—	—	116,822
Originated non-impaired	8,502,516	5,869	—	—	8,508,385
Impaired	10,235	—	4,791	—	15,026
	8,629,573	5,869	4,791	—	8,640,233
Commercial Real Estate:					
Purchased non-impaired	192,907	—	8,295	—	201,202
Originated non-impaired	5,839,741	11,415	17,756	—	5,868,912
Impaired	8,538	—	4,500	—	13,038
	6,041,186	11,415	30,551	—	6,083,152
Single Family Construction:					
Purchased non-impaired	—	—	2,914	—	2,914
Originated non-impaired	587,153	999	—	—	588,152
	587,153	999	2,914	—	591,066
Multifamily/Commercial Construction:					
Purchased non-impaired	—	—	1,167	—	1,167
Originated non-impaired	1,115,688	—	—	—	1,115,688
	1,115,688	—	1,167	—	1,116,855
Business:					
Purchased non-impaired	151,435	366	1,555	129	153,485
Originated non-impaired	8,057,791	12,818	61,157	—	8,131,766
Impaired	—	4,913	5,060	—	9,973
	8,209,226	18,097	67,772	129	8,295,224
Stock Secured:					
Purchased non-impaired	3,578	—	—	—	3,578
Originated non-impaired	1,079,975	—	—	—	1,079,975
	1,083,553	—	—	—	1,083,553
Other Secured:					
Purchased non-impaired	7,941	—	—	—	7,941
Originated non-impaired	1,006,849	249	—	—	1,007,098
	1,014,790	249	—	—	1,015,039
Unsecured:					
Purchased non-impaired	27,005	—	157	314	27,476
Originated non-impaired	1,739,163	—	3,199	250	1,742,612
Impaired	—	—	925	—	925
	1,766,168	—	4,281	564	1,771,013
Total	$62,620,938	$51,686	$166,898	$693	$62,840,215

Other Real Estate Owned and Residential Mortgage Loans in the Process of Foreclosure

As of December 31, 2018 and 2017, the Bank did not have any residential real estate owned (acquired through foreclosure).

The carrying amount of residential mortgage loans in the process of foreclosure was $6.2 million and $5.5 million at December 31, 2018 and 2017, respectively.

Allowance for Loan Losses

The Bank's allowance for loan losses is evaluated based on its three classes of loans: (1) purchased non-impaired loans; (2) originated non-impaired loans; and (3) impaired loans, which include both purchased and originated non-impaired loans that subsequently became impaired under ASC 310-10-35, and purchased credit-impaired loans subject to ASC 310-30.

Purchased non-impaired loans are monitored to determine if these loans have experienced a deterioration in credit quality based upon their payment status and loan grade. If a deterioration in credit quality has occurred, the Bank evaluates the estimated loss content in the individual loan as compared to the loan's current carrying value, which includes any related purchase accounting discount.

Originated non-impaired loans are collectively evaluated for estimated losses in accordance with ASC 450, "Contingencies," based on groups of loans with similar risk characteristics that align with the loan portfolio segments. The Bank has maintained an allowance for loan loss model that computes loss factors for each segment based upon our historical losses and current portfolio trends.

Any purchased non-impaired and originated non-impaired loans that subsequently became impaired are evaluated under ASC 310-10-35. If determined necessary, a specific reserve will be recorded for these loans. In addition, purchased credit-impaired loans are subject to a quarterly review of expected cash flows. These loans are generally evaluated quarterly by the Bank's Special Assets Committee, unless they have been upgraded to a pass loan. If there is further credit deterioration, an additional specific reserve will be recorded.

The Bank also maintains a qualitative reserve, which represents the qualitative portion of the allowance for loan losses. This qualitative reserve is determined based on management's assessments of the risks that may lead to a loan loss experience different than our historical loss experience and therefore not reflected in the quantitative model. The Bank uses qualitative factors that are intended to address developing external and internal environmental trends and include considerations such as changes in current economic and business conditions, the nature and volume of the Bank's loan portfolio, the existence and effects of credit concentrations, and problem loan trends, along with other external factors, such as competition and the legal and regulatory environment. The allocation to the individual loan portfolios considers the qualitative factors relevant to each portfolio, the degree to which the relevant qualitative factors impacted each loan portfolio, and relative portfolio balances.

The following tables present an analysis of the allowance for loan losses:

($ in thousands)	Single Family (1-4 units)	Home Equity Lines of Credit	Multifamily (5+ units)	Commercial Real Estate	Single Family Construction	Multifamily/ Commercial Construction	Business	Stock Secured	Other Secured	Unsecured	Total
At or for the Year Ended December 31, 2018											
Rollforward of allowance for loan losses:											
Balance at beginning of period	$ 52,011	$ 13,046	$ 67,605	$ 52,268	$ 2,758	$ 10,513	$ 137,956	$ 6,596	$ 7,850	$ 15,329	$ 365,932
Provision	13,553	228	12,529	2,639	315	4,174	31,118	2,128	451	8,957	76,092
Charge-offs	(239)	(497)	—	—	—	—	(1,748)	—	—	(1,074)	(3,558)
Recoveries	77	110	—	—	—	—	265	—	—	130	582
Balance at end of period	$ 65,402	$ 12,887	$ 80,134	$ 54,907	$ 3,073	$ 14,687	$ 167,591	$ 8,724	$ 8,301	$ 23,342	$ 439,048
Allowance for loan losses by impairment methodology:											
Purchased non-impaired	$ 1,665	$ 76	$ —	$ —	$ 137	$ 4	$ 711	$ —	$ —	$ 150	$ 2,743
Originated non-impaired	63,737	12,811	80,134	54,642	2,936	14,683	166,832	8,724	8,301	23,192	435,992
Impaired	—	—	—	265	—	—	48	—	—	—	313
Total	$ 65,402	$ 12,887	$ 80,134	$ 54,907	$ 3,073	$ 14,687	$ 167,591	$ 8,724	$ 8,301	$ 23,342	$ 439,048
Recorded investment in loans:											
Purchased non-impaired	$ 927,482	$ 163,208	$ 73,501	$ 110,729	$ 2,907	$ 1,163	$ 174,465	$ 297	$ 2,578	$ 24,874	$ 1,481,204
Originated non-impaired	36,998,884	2,367,076	10,271,970	6,560,225	643,017	1,575,419	10,813,633	1,432,614	1,103,173	2,544,998	74,311,009
Impaired	28,886	12,429	12,368	6,486	—	—	10,405	—	—	2,495	73,069
Total	$37,955,252	$2,542,713	$10,357,839	$6,677,440	$645,924	$1,576,582	$10,998,503	$1,432,911	$1,105,751	$2,572,367	$75,865,282

($ in thousands)	Single Family (1-4 units)	Home Equity Lines of Credit	Multifamily (5+ units)	Commercial Real Estate	Single Family Construction	Multifamily/ Commercial Construction	Business	Stock Secured	Other Secured	Unsecured	Unallocated [1]	Total
At or for the Year Ended December 31, 2017												
Rollforward of allowance for loan losses:												
Balance at beginning of period	$ 40,787	$ 12,083	$ 53,373	$ 48,880	$ 2,112	$ 8,823	$ 118,874	$ 5,102	$ 5,822	$ 10,542	$ —	$ 306,398
Provision (reversal of provision)	12,370	(356)	14,232	3,388	646	1,690	19,651	1,494	2,028	5,038	—	60,181
Charge-offs	(1,176)	(848)	—	—	—	—	(616)	—	—	(346)	—	(2,986)
Recoveries	30	2,167	—	—	—	—	47	—	—	95	—	2,339
Balance at end of period	$ 52,011	$ 13,046	$ 67,605	$ 52,268	$ 2,758	$ 10,513	$ 137,956	$ 6,596	$ 7,850	$ 15,329	$ —	$ 365,932
Allowance for loan losses by impairment methodology:												
Purchased non-impaired	$ 839	$ 476	$ —	$ 484	$ 136	$ 3	$ 379	$ —	$ —	$ 354	$ —	$ 2,671
Originated non-impaired	51,108	12,320	67,591	51,654	2,622	10,510	137,377	6,596	7,850	14,975	—	362,603
Impaired	64	250	14	130	—	—	200	—	—	—	—	658
Total	$ 52,011	$ 13,046	$ 67,605	$ 52,268	$ 2,758	$ 10,513	$ 137,956	$ 6,596	$ 7,850	$ 15,329	$ —	$ 365,932
Recorded investment in loans:												
Purchased non-impaired	$ 1,377,095	$ 238,594	$ 116,822	$ 201,202	$ 2,914	$ 1,167	$ 153,485	$ 3,578	$ 7,941	$ 27,476		$ 2,130,274
Originated non-impaired	30,105,514	2,484,184	8,508,385	5,868,912	588,152	1,115,688	8,131,766	1,079,975	1,007,098	1,742,612		60,632,286
Impaired	25,859	12,834	15,026	13,038	—	—	9,973	—	—	925		77,655
Total	$31,508,468	$2,735,612	$8,640,233	$6,083,152	$591,066	$1,116,855	$8,295,224	$1,083,553	$1,015,039	$1,771,013		$62,840,215
At or for the Year Ended December 31, 2016												
Rollforward of allowance for loan losses:												
Balance at beginning of period	$ 27,614	$ 5,530	$ 25,416	$ 24,690	$ 644	$ 4,218	$ 92,568	$ 1,809	$ 6,610	$ 6,918	$ 65,041	$ 261,058
Provision (reversal of provision)	14,852	6,722	27,957	24,190	1,468	4,605	26,282	3,293	(788)	3,652	(65,041)	47,192
Charge-offs	(1,694)	(272)	—	—	—	—	(93)	—	—	(57)	—	(2,116)
Recoveries	15	103	—	—	—	—	117	—	—	29	—	264
Balance at end of period	$ 40,787	$ 12,083	$ 53,373	$ 48,880	$ 2,112	$ 8,823	$ 118,874	$ 5,102	$ 5,822	$ 10,542	$ —	$ 306,398

[1] As of December 31, 2016, the unallocated qualitative reserve is allocated to the individual loan portfolios.

Reserve for Unfunded Commitments

The Bank evaluates reserves for unfunded commitments for home equity lines of credit, single family construction, commercial real estate and multifamily lines of credit, multifamily/commercial construction, business lines of credit and secured/unsecured lines of credit. In determining the level of reserves, the Bank determines the probability of funding for each portfolio segment based on historical utilization statistics specific to that portfolio segment. Construction commitments are assumed to be fully funded, since the construction projects are expected to be completed. Additionally, for unfunded commitments, the Bank applies a loss factor that is consistent with that applied against the funded balance for each portfolio segment. The reserve for unfunded commitments was $13.2 million and $14.2 million at December 31, 2018 and 2017, respectively.

Impaired Loans

The following tables present information related to impaired loans:

	Total		With no related allowance recorded		With an allowance recorded		
($ in thousands)	Recorded Investment	Unpaid Principal Balance	Recorded Investment	Unpaid Principal Balance	Recorded Investment	Unpaid Principal Balance	Related Allowance
At December 31, 2018							
Single family (1-4 units)	$28,886	$29,219	$28,886	$29,219	$ —	$ —	$ —
Home equity lines of credit	12,429	12,527	12,429	12,527	—	—	—
Multifamily (5+ units)	12,368	12,546	12,368	12,546	—	—	—
Commercial real estate	6,486	6,516	1,986	2,016	4,500	4,500	265
Business	10,405	10,436	9,163	9,194	1,242	1,242	48
Unsecured	2,495	2,630	2,495	2,630	—	—	—
Total	$73,069	$73,874	$67,327	$68,132	$ 5,742	$ 5,742	$313
At December 31, 2017							
Single family (1-4 units)	$25,859	$26,307	$25,053	$25,491	$ 806	$ 816	$ 64
Home equity lines of credit	12,834	12,970	10,329	10,472	2,505	2,498	250
Multifamily (5+ units)	15,026	15,282	14,887	15,142	139	140	14
Commercial real estate	13,038	13,156	8,538	8,656	4,500	4,500	130
Business	9,973	10,972	5,060	6,009	4,913	4,963	200
Unsecured	925	1,057	925	1,057	—	—	—
Total	$77,655	$79,744	$64,792	$66,827	$12,863	$12,917	$658

	Year Ended December 31,					
	2018		2017		2016	
($ in thousands)	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized
Single family (1-4 units)	$26,109	$ 474	$33,416	$ 902	$ 39,018	$ 837
Home equity lines of credit	12,854	298	13,005	263	13,690	235
Multifamily (5+ units)	14,542	525	15,832	950	23,704	1,278
Commercial real estate	8,255	407	11,929	1,121	16,323	1,323
Multifamily/commercial construction	—	—	—	—	1,662	—
Business	14,205	1,171	11,821	623	23,858	1,126
Unsecured	560	24	1,113	59	553	55
Total	$76,525	$2,899	$87,116	$3,918	$118,808	$4,854

Troubled Debt Restructurings

The Bank restructures loans generally because of the borrower's financial difficulties by granting concessions to reduce the interest rate or to defer payments. Loans that have been modified in troubled debt restructurings are generally reported as nonaccrual loans until at least six consecutive payments are received and the loan meets the Bank's other criteria for returning to accrual status. The following table presents the recorded investment in loans modified in troubled debt restructurings:

	At December 31, 2018			At December 31, 2017		
($ in thousands)	Restructured - Nonaccrual	Restructured - Accruing	Total	Restructured - Nonaccrual	Restructured - Accruing	Total
Single Family (1-4 units):						
Purchased non-impaired	$ —	$ 459	$ 459	$ —	$ 479	$ 479
Impaired	5,694	4,019	9,713	3,398	4,112	7,510
	5,694	4,478	10,172	3,398	4,591	7,989
Home Equity Lines of Credit:						
Purchased non-impaired	79	—	79	—	—	—
Impaired	4,559	2,057	6,616	4,907	2,968	7,875
	4,638	2,057	6,695	4,907	2,968	7,875
Multifamily (5+ units):						
Purchased non-impaired	—	—	—	—	282	282
Commercial Real Estate:						
Purchased non-impaired	—	215	215	—	219	219
Impaired	—	4,500	4,500	—	4,500	4,500
	—	4,715	4,715	—	4,719	4,719
Business:						
Originated non-impaired	—	165	165	620	—	620
Impaired	2,957	—	2,957	5,016	45	5,061
	2,957	165	3,122	5,636	45	5,681
Unsecured:						
Originated non-impaired	—	99	99	—	—	—
Impaired	—	—	—	802	—	802
	—	99	99	802	—	802
Total	$13,289	$11,514	$24,803	$14,743	$12,605	$27,348

During the years ended December 31, 2018, 2017 and 2016, troubled debt restructurings were primarily modified through payment deferrals, extensions of the maturity date or reductions in interest rate, both temporary and permanent. The following table presents the recorded investment in loans modified in troubled debt restructurings during the periods indicated:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Single Family (1-4 units):			
Purchased non-impaired	$ 2,025	$ —	$ —
Impaired	4,336	—	1,543
	6,361	—	1,543
Home Equity Lines of Credit:			
Purchased non-impaired	1,242	—	1,997
Impaired	3,331	4,724	—
	4,573	4,724	1,997
Commercial Real Estate:			
Originated non-impaired	—	6,500	—
Business:			
Originated non-impaired	2,081	685	—
Impaired	1,818	—	4,799
	3,899	685	4,799
Unsecured:			
Originated non-impaired	—	843	—
Total	$14,833	$12,752	$8,339

The majority of the Bank's restructured loans are considered impaired and are evaluated individually for impairment under ASC 310-10-35. The resulting impairment, if any, would have an impact on the allowance for loan losses as a specific reserve and be measured under the same criteria as all other impaired loans. For those restructured loans that are purchased credit-impaired, any required allowance is evaluated based upon ASC 310-30. Certain restructured accruing loans may be deemed non-impaired and would therefore be evaluated for estimated losses under ASC 450. No loans defaulted during the years ended December 31, 2018, 2017 or 2016 that were modified in the previous twelve months.

Note 4. Mortgage Banking Activities

The recorded value of MSRs is amortized in proportion to, and over the period of, estimated net servicing income. The Bank values MSRs by stratifying loans by the year they are sold, by product type (fixed, hybrid or adjustable) and interest rate coupon range. Hybrid loans are further stratified by their initial fixed-rate period.

The following table presents information on the level of loans originated, loans sold and gain on sale of loans:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Total loans originated	$ 32,067,923	$ 27,633,219	$ 25,720,874
Single family loans originated	$ 10,784,654	$ 11,568,111	$ 10,615,621
Loans sold:			
Flow sales:			
Agency	$ 42,081	$ 131,111	$ 434,094
Non-agency	172,077	309,482	323,454
Total flow sales	214,158	440,593	757,548
Bulk sales:			
Non-agency	773,041	2,436,584	2,389,879
Securitizations	251,931	—	—
Total loans sold	$ 1,239,130	$ 2,877,177	$ 3,147,427
Gain on sale of loans:			
Amount	$ 5,616	$ 9,233	$ 4,828
Gain as a percentage of loans sold	0.45%	0.32%	0.15%

The following table presents changes in the portfolio of loans serviced for others and changes in the carrying value of the Bank's MSRs and valuation statistics:

($ in thousands)	At or for the Year Ended December 31, 2018	2017	2016
Loans serviced for others:			
Beginning balance	$12,495,321	$11,655,453	$10,531,418
Loans sold	1,239,130	2,877,177	3,147,427
Repayments	(1,882,719)	(2,003,276)	(2,018,384)
Loans purchased	(278,406)	(617)	(3,923)
Loans repurchased	—	(33,416)	(1,085)
Ending balance	$11,573,326	$12,495,321	$11,655,453
MSRs:			
Beginning balance	$ 66,139	$ 62,410	$ 53,538
Additions due to new loans sold	6,126	20,208	22,878
Amortization expense	(16,785)	(16,269)	(13,985)
Reductions due to purchases	(1,010)	(6)	(15)
Reductions due to repurchases	—	(204)	(6)
Ending balance	$ 54,470	$ 66,139	$ 62,410
Estimated fair value of MSRs	$ 95,205	$ 93,009	$ 85,453
MSRs as a percent of loans serviced	0.47%	0.53%	0.54%
Weighted average servicing fee collected for the period	0.25%	0.25%	0.25%
MSRs as a multiple of weighted average servicing fee	1.88x	2.10x	2.13x

There was no valuation allowance related to MSRs as of or during the years ended December 31, 2018, 2017 and 2016.

The following table presents loan servicing fees:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Contractually specified servicing fees	$30,087	$30,069	$27,450
Late charges and ancillary fees, net of costs	$ (746)	$ 827	$ 3,943

During the year ended December 31, 2018, the Bank sold $251.9 million of originated multifamily loans through a securitization with the Federal Home Loan Mortgage Corporation ("Freddie Mac"). These loans are included in the Bank's servicing portfolio, since the Bank performs servicing of the loans.

The following table presents the Bank's key assumptions used in measuring the fair value of MSRs and the pre-tax sensitivity of the fair values to an immediate 10% and 20% adverse change in these assumptions:

($ in thousands)	December 31, 2018	2017
Fair value of MSRs	$95,205	$93,009
Weighted average prepayment speed (CPR)	13.2%	13.1%
Impact on fair value of 10% adverse change	$ (3,589)	$ (4,516)
Impact on fair value of 20% adverse change	$ (6,927)	$ (8,644)
Weighted average discount rate	13.1%	13.1%
Impact on fair value of 10% adverse change	$ (3,996)	$ (3,532)
Impact on fair value of 20% adverse change	$ (7,680)	$ (6,810)

The sensitivity analysis above is hypothetical and should be used with caution. In particular, the effect of a variation in a particular assumption on the fair value of MSRs is calculated independent of changes in any other assumption; in practice, changes in one factor may result in changes in another factor, which may magnify or counteract the sensitivities. Further changes in fair value based on a single variation in assumptions generally cannot be extrapolated because the relationship of the change in a single assumption to the change in fair value may not be linear.

Refer to Note 9, "Goodwill and Intangible Assets," for disclosures of the gross carrying value, accumulated amortization and estimated future amortization expense of MSRs.

Note 5. Variable Interest Entities

The Bank's involvement with variable interest entities ("VIEs") includes its interests from tax credit investments, other investments and securitizations.

The Bank has variable interests in low-income housing tax credit funds that are designed to generate a return primarily through the realization of federal tax credits. These investments are typically limited partnerships in which the general partner, other than the Bank, holds the power over significant activities of the VIE. Since the Bank is not the primary beneficiary of these investments, it does not consolidate these interests.

In addition, the Bank has variable interests in other investments, which are accounted for under the equity method. Since the Bank is not the primary beneficiary of these investments, it does not consolidate these investments.

The Bank has a variable interest related to its obligation to reimburse Freddie Mac for certain losses from the securitization of multifamily loans. At December 31, 2018, the liability for estimated losses was $488,000. Since the Bank is not the primary beneficiary of the VIE, it does not consolidate this interest.

As of December 31, 2018, the Bank held no variable interests in real estate mortgage investment conduits ("REMICs"). As of December 31, 2017, the Bank held variable interests in one REMIC (formed in 2001) sponsored by the Bank, which was not consolidated.

The following table summarizes the assets and liabilities recorded on the Bank's balance sheet associated with transactions with VIEs:

	VIEs		
($ in thousands)	Not consolidated	Consolidated	Total
December 31, 2018			
Assets:			
Tax credit investments	$1,057,541	$—	$1,057,541
Other investments	31,917	—	31,917
Total Assets	1,089,458	—	1,089,458
Liabilities:			
Reimbursement obligation	488	—	488
Unfunded commitments—tax credit investments	352,438	—	352,438
Unfunded commitments—other investments	5,256	—	5,256
Total Liabilities	358,182	—	358,182
Net Assets	$ 731,276	$—	$ 731,276
December 31, 2017			
Assets:			
Investment securities held-to-maturity	$ 1,631	$—	$ 1,631
Tax credit investments	1,107,546	—	1,107,546
Other investments	19,560	—	19,560
Total Assets	1,128,737	—	1,128,737
Liabilities:			
Unfunded commitments—tax credit investments	431,132	—	431,132
Unfunded commitments—other investments	3,991	—	3,991
Total Liabilities	435,123	—	435,123
Net Assets	$ 693,614	$—	$ 693,614

The Bank's exposure to loss with respect to VIEs that are not consolidated includes the Bank's investment in these assets of $1.1 billion at both December 31, 2018 and December 31, 2017. The Bank's exposure to loss related to the reimbursement obligation is 12% of the loans securitized, or $30.2 million at December 31, 2018.

Note 6. Tax Credit Investments

The Bank invests in low income housing tax credit funds that are designed to generate a return primarily through the realization of federal tax credits and tax losses from partnerships. The cost of tax credit investments is amortized over the life of the investment using a proportional amortization method and tax credit investment amortization expense is a component of provision for income taxes.

The following table presents the balances of the Bank's tax credit investments and related unfunded commitments:

($ in thousands)	December 31, 2018	December 31, 2017
Tax credit investments	$1,057,541	$1,107,546
Unfunded commitments—tax credit investments	$ 352,438	$ 431,132

The unfunded commitments related to tax credit investments are estimated to be funded as follows:

($ in thousands)	December 31, 2018
Unfunded commitments—tax credit investments:	
2019	$199,206
2020	68,344
2021	29,111
2022	7,470
2023	3,563
2024 and thereafter	44,744
Total	$352,438

The following table presents other information related to the Bank's tax credit investments:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Tax credits and other tax benefits recognized	$159,228	$163,072	$135,060
Tax credit amortization expense included in provision for income taxes	$131,911	$120,994	$103,363

The Bank did not recognize any impairment losses on tax credit investments during 2018, 2017 or 2016.

Note 7. Prepaid Expenses and Other Assets

Prepaid expenses and other assets are summarized in the table below:

($ in thousands)	December 31, 2018	December 31, 2017
Deferred tax assets	$ 336,548	$ 237,700
Interest receivable	333,708	290,210
FHLB stock, at cost	273,240	282,150
Other prepaid expenses and assets	595,475	444,660
Total	$1,538,971	$1,254,720

Dividend income on FHLB stock was $25.2 million in 2018, compared to $14.9 million in 2017 and $19.3 million in 2016. The dividend income in 2018 and 2016 includes special dividends from the FHLB of $4.8 million and $5.9 million, respectively.

Note 8. Premises, Equipment and Leasehold Improvements

Premises, equipment and leasehold improvements are summarized in the table below:

	December 31, 2018			December 31, 2017		
($ in thousands)	Cost	Accumulated Depreciation and Amortization	Carrying Value	Cost	Accumulated Depreciation and Amortization	Carrying Value
Land, buildings and improvements	$ 2,795	$ (1,105)	$ 1,690	$ 2,795	$ (1,028)	$ 1,767
Furniture and equipment	211,328	(143,759)	67,569	177,212	(123,411)	53,801
Leasehold improvements	291,632	(154,122)	137,510	253,446	(134,000)	119,446
Software	216,609	(90,895)	125,714	169,906	(48,723)	121,183
Premises, equipment and leasehold improvements, net	$722,364	$(389,881)	$332,483	$603,359	$(307,162)	$296,197

Depreciation and amortization expense was $97.0 million in 2018, $76.3 million in 2017 and $50.2 million in 2016.

Rent and related occupancy expense, net of sublease income, was $95.0 million in 2018, $83.1 million in 2017 and $71.0 million in 2016.

Future minimum rental payments contractually required under operating leases, net of sublease income, including the Bank's office facilities that have initial or remaining noncancelable terms in excess of one year, were as follows:

($ in thousands)	December 31, 2018
Operating leases:	
2019	$ 99,576
2020	102,498
2021	91,680
2022	89,326
2023	83,629
2024 and thereafter	537,810
Total	$1,004,519

Many of our leases contain renewal options, escalation clauses or periodic adjustments of rent expense based on changes in various market indices.

Note 9. Goodwill and Intangible Assets

The following table presents the Bank's intangible assets (excluding MSRs) and goodwill:

($ in thousands)	December 31, 2018 Gross Carrying Value	2018 Accumulated Amortization	2018 Carrying Value	2017 Gross Carrying Value	2017 Accumulated Amortization	2017 Carrying Value
Intangible assets:						
Customer relationship intangibles	$133,100	$(102,535)	$ 30,565	$133,100	$ (89,834)	$ 43,266
Core deposit intangibles	87,550	(85,488)	2,062	87,550	(81,942)	5,608
Trade name	42,900	—	42,900	42,900	—	42,900
Intangible assets	$263,550	$(188,023)	75,527	$263,550	$(171,776)	91,774
Goodwill			198,447			198,447
Total			$273,974			$290,221

Amortization of intangible assets (excluding MSRs) was $16.2 million in 2018, $20.6 million in 2017 and $25.0 million in 2016.

The following table presents the Bank's MSRs:

($ in thousands)	December 31, 2018 Gross Carrying Value	2018 Accumulated Amortization	2018 Carrying Value	2017 Gross Carrying Value	2017 Accumulated Amortization	2017 Carrying Value
MSRs [1]	$140,746	$(86,276)	$54,470	$137,196	$(71,057)	$66,139

(1) Amortization of MSRs is included in loan servicing fees, net on the consolidated statements of income and comprehensive income.

Refer to Note 4, "Mortgage Banking Activities," for further discussion on MSRs.

The following table presents goodwill by business segment:

($ in thousands)	Commercial Banking	Wealth Management	Total
Balance as of December 31, 2016	$ 56,165	$ 147,012	$ 203,177
Gradifi acquisition adjustment	(4,730)	—	(4,730)
Balance as of December 31, 2017 and December 31, 2018	$ 51,435	$ 147,012	$ 198,447

The Bank is required to test goodwill for impairment at least annually at the reporting unit level. The Bank did not recognize any impairment in 2018, 2017 or 2016 based on the results of the annual test.

The following table presents the estimated future amortization for amortizable intangible assets as of December 31, 2018. The projections of amortization expense are based on existing asset balances as of December 31, 2018. Future amortization expense may vary from these projections.

($ in thousands)	Customer relationship intangibles	Core deposit intangibles	MSRs
2019	$ 10,063	$ 1,809	$ 12,102
2020	7,504	253	9,439
2021	5,527	—	7,363
2022	3,671	—	5,743
2023	2,235	—	4,479

Note 10. Deposits

Total deposits were $79.1 billion at December 31, 2018, and were comprised of noninterest-bearing deposits of $30.0 billion and interest-bearing deposits of $49.0 billion. At December 31, 2017, total deposits were $68.9 billion, and consisted of noninterest-bearing deposits of $26.4 billion and interest-bearing deposits of $42.5 billion. At December 31, 2018, total deposits included $1.7 billion of brokered certificates of deposit ("CDs").

At December 31, 2018, the annual contractual maturities of the Bank's CDs were as follows:

($ in thousands)	December 31, 2018
CDs:	
2019	$ 8,245,951
2020	2,707,089
2021	172,217
2022	111,187
2023	82,882
2024 and thereafter	58,189
Total	$ 11,377,515

At December 31, 2018, CDs of greater than $250,000 totaled $4.8 billion, or 6% of total deposits, compared to $3.5 billion, or 5% of total deposits, at December 31, 2017.

The following table presents interest expense on deposits:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Interest-bearing checking	$ 21,892	$ 10,818	$ 3,703
Money market checking	68,597	30,199	7,803
Money market savings and passbooks	39,693	15,653	7,502
CDs	159,858	78,116	54,757
Total	$ 290,040	$ 134,786	$ 73,765

Note 11. Borrowings

The Bank uses FHLB advances primarily as a funding source for long-term debt, and, in certain cases, for short-term borrowings. Other sources of funding include federal funds purchased, senior notes and subordinated notes. Short-term borrowings have an original maturity of one year or less. Long-term debt has an original maturity in excess of one year. The following table presents the carrying values, interest expense and components of short-term borrowings and long-term debt:

			Interest Expense		
	December 31,		Year Ended December 31,		
($ in thousands)	2018	2017	2018	2017	2016
Short-term borrowings:					
FHLB advances	$ 100,000	$ 100,000	$ 15,276	$ 6,810	$ 1,644
Other	—	—	1	791	1,667
Total	100,000	100,000	15,277	7,601	3,311
Long-term debt:					
FHLB advances	8,700,000	8,300,000	165,081	105,272	68,487
Senior notes [(1)]	896,432	894,723	23,709	17,883	10,295
Subordinated notes [(1)]	777,475	777,084	36,391	34,197	7,377
Other	—	—	—	416	476
Total	10,373,907	9,971,807	225,181	157,768	86,635
Total borrowings	$ 10,473,907	$ 10,071,807	$ 240,458	$ 165,369	$ 89,946

(1) Carrying value represents the principal balance, net of unamortized issuance discounts and deferred issuance costs. Interest expense includes amortization of issuance discounts and deferred issuance costs, which are amortized over the contractual life using a level yield methodology.

FHLB Advances

FHLB advances may be either adjustable-rate in nature or fixed for a specific term. At December 31, 2018, the Bank had short-term FHLB advances of $100.0 million. At December 31, 2018, all of the long-term FHLB advances were fixed-rate for a specific term. At December 31, 2018, the contractual maturities and weighted average contractual rates of long-term FHLB advances were as follows:

	December 31, 2018	
($ in thousands)	Amount	Rate
FHLB advances maturing in:		
2019	$ 3,550,000	1.62%
2020	3,950,000	2.25%
2021	1,200,000	2.50%
Total	$ 8,700,000	2.03%

In connection with outstanding FHLB advances, the Bank owned FHLB stock of $273.2 million and $282.2 million at December 31, 2018 and 2017, respectively. At December 31, 2018 and 2017, the Bank was required to own FHLB stock at least equal to 2.7% of outstanding FHLB advances.

Senior Notes and Subordinated Notes

The following table presents the carrying values, coupon rates and maturity dates of the Bank's unsecured, term, fixed-rate senior notes and subordinated notes as of December 31, 2018:

	December 31, 2018		
($ in thousands)	Carrying Value [(1)]	Rate	Maturity Date
Senior notes:			
Fixed rate, issued June 2014	$ 399,607	2.375%	June 2019
Fixed rate, issued June 2017	$ 496,825	2.500%	June 2022
Subordinated notes:			
Fixed rate, issued August 2016	$ 387,810	4.375%	August 2046
Fixed rate, issued February 2017	$ 389,665	4.625%	February 2047

(1) Principal balance, net of unamortized issuance discounts and deferred issuance costs.

Note 12. Derivative Financial Instruments

In accordance with ASC 815, the Bank recognizes all derivatives on the balance sheet at fair value. The Bank has elected to present its derivative assets and derivative liabilities on a gross basis on its balance sheet. The Bank accounts for changes in the fair value of a derivative depending on the intended use of the derivative and its resulting designation under specified criteria. The Bank currently does not have any derivatives designated as hedging instruments.

The Bank has derivative assets and liabilities consisting of foreign exchange contracts executed with clients. In these transactions, the Bank offsets the client exposure with another financial institution counterparty, such as a major investment bank or a large commercial bank. The Bank does not retain significant foreign exchange risk. The Bank does retain credit risk, both to the client and the financial institution counterparty, which is evaluated and managed by the Bank in the normal course of its operations. Management does not currently anticipate non-performance by any of the counterparties. The amounts presented in the table below include the foreign exchange contracts with both the client and the financial institution counterparties.

The Bank also creates derivative instruments when it enters into interest rate lock commitments for single family mortgage loans that will be sold to investors. The Bank's interest rate risk exposure to these commitments is not significant as these derivatives are economically hedged with forward commitments to sell the loans to investors.

The following table presents the total notional or contractual amounts and fair values of derivatives:

($ in thousands)	December 31, 2018 Notional or Contractual Amount	2018 Fair Value Derivative Assets [1]	2018 Fair Value Derivative Liabilities [2]	December 31, 2017 Notional or Contractual Amount	2017 Fair Value Derivative Assets [1]	2017 Fair Value Derivative Liabilities [2]
Foreign exchange contracts	$ 4,696,285	$ 41,646	$ 27,466	$ 1,884,142	$ 23,170	$ 15,780
Interest rate contracts with borrowers	$ 8,207	9	—	$ 34,099	11	91
Forward loan sale commitments	$ 106,922	—	9	$ 121,556	91	11
Total		$ 41,655	$ 27,475		$ 23,272	$ 15,882

(1) Included in prepaid expenses and other assets on the consolidated balance sheets.
(2) Included in other liabilities on the consolidated balance sheets.

The credit risk associated with these derivative instruments is the risk of non-performance by the counterparties to the contracts. The Bank's counterparty credit exposure is equal to the amount reported as a derivative asset on the Bank's balance sheet. To mitigate this risk, the Bank enters into master netting and bilateral collateral agreements with certain counterparties. These agreements allow the Bank to settle its derivative contracts with such counterparties on a net basis and to offset the net derivative exposure against the related collateral in the event of default.

The following table presents additional information related to the Bank's foreign exchange derivative contracts:

($ in thousands)	Total: Gross Amounts Recognized	Contracts Not Subject to Master Netting Arrangements: Gross Amounts Recognized	Contracts Subject to Master Netting Arrangements: Gross Amounts Recognized	Gross Amounts Offset on the Balance Sheet	Net Amounts Presented on the Balance Sheet	Gross Amounts Not Offset on the Balance Sheet: Derivative Amount	Cash Collateral [1]	Net Amount
December 31, 2018								
Derivative assets:								
Foreign exchange contracts	$ 41,646	$ 12,641	$ 29,005	$—	$ 29,005	$13,395	$ 15,610	$—
Derivative liabilities:								
Foreign exchange contracts	$ 27,466	$ 14,071	$ 13,395	$—	$ 13,395	$13,395	$ —	$—
December 31, 2017								
Derivative assets:								
Foreign exchange contracts	$ 23,170	$ 14,471	$ 8,699	$—	$ 8,699	$ 8,699	$ —	$—
Derivative liabilities:								
Foreign exchange contracts	$ 15,780	$ 2,404	$ 13,376	$—	$ 13,376	$ 8,699	$ 4,677	$—

(1) Collateral presented in the table above is limited to the amount required to settle the net derivative position and does not include any excess collateral.

Note 13. Fair Value Measurements

The Bank uses fair value measurements to record fair value adjustments to certain assets and liabilities and to determine fair value disclosures. Under ASC 820, "Fair Value Measurement," the Bank bases its fair values on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Securities available-for-sale and derivative instruments are recorded at fair value on a recurring basis. Additionally, from time to time, the Bank may be required to record other assets at fair value on a nonrecurring basis, which typically involve application of the lower-of-cost-or-market accounting or write-downs of individual assets. Nonrecurring fair value adjustments of loans held for sale, MSRs and other real estate owned result from the application of lower-of-cost-or-market accounting. Nonrecurring fair value adjustments of real estate secured mortgages represent a write-down based on the fair value of the underlying collateral of the loan, adjusted for certain factors such as estimated costs to sell and current market conditions.

Although management uses its best judgment in estimating fair value, there are inherent weaknesses in any estimates that are made at a discrete point in time based on relevant market data, information about the financial instruments and other factors. Estimates of fair value of instruments without quoted market prices are subjective in nature and involve various assumptions that are matters of judgment. Changes in the assumptions used could significantly affect these estimates.

The estimated fair values presented neither include nor give effect to the values associated with the Bank's existing client relationships, lending and deposit office networks, or certain tax implications related to the realization of unrealized gains or losses.

Fair Value Hierarchy

Under ASC 820, the Bank groups its assets and liabilities at fair value in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. These levels are:

- Level 1—Valuation is based on quoted prices for identical instruments traded in active markets.
- Level 2—Valuation is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant assumptions are observable in the market.
- Level 3—Valuation is generated from model-based techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect estimates of assumptions that market participants would use in pricing the asset or liability. Valuation techniques include use of option pricing models, discounted cash flow models and similar techniques.

It is the Bank's policy to maximize the use of observable inputs and minimize the use of unobservable inputs when developing fair value measurements, in accordance with the fair value hierarchy of ASC 820.

Recurring Fair Value Measurements

The following is a description of valuation methodologies used for assets and liabilities recorded at fair value on a recurring basis.

Available-for-sale investment securities: The Bank's U.S. Treasury securities are valued using quoted market prices from the active exchange on which the securities are traded. Mutual funds are valued using the net asset value ("NAV") per share using quoted market prices. For most other investment securities, the Bank uses quoted prices obtained through third-party valuation sources. Management reviews the valuation techniques and assumptions used by

the providers to ensure that such valuation techniques are based on observable market inputs appropriate for the type of security being measured. In some instances, prices are obtained from dealer quotes. The fair value of tax-exempt nonprofit debentures and certain municipal securities is determined using estimated future cash flows or other model-based valuation methods using inputs similar to market pricing, adjusted for liquidity risk. Prior to January 1, 2018, the Bank's mutual funds and marketable equity securities were classified as securities available-for-sale, and were valued using quoted market prices from the active exchange on which the securities are traded.

Equity securities measured at fair value: Following the adoption of ASU 2016-01 on January 1, 2018, the Bank's mutual funds and marketable equity securities continue to be measured at fair value, but are no longer classified as securities available-for-sale. These securities are valued using quoted market prices from the active exchange on which the securities are traded. Mutual funds are valued using the NAV per share using quoted market prices.

Derivative financial instruments: Derivative assets and liabilities consist of foreign exchange contracts, interest rate lock commitments and forward loan sale commitments. The Bank uses current market prices to determine the fair value of foreign exchange contracts. The fair values of interest rate lock commitments and forward loan sale commitments are estimated using analysis based on current market prices.

The following table presents the balances of assets and liabilities measured at fair value on a recurring basis:

($ in thousands)	Level 1	Level 2	Level 3	Total
December 31, 2018				
Assets:				
Investment securities available-for-sale:				
Agency residential MBS	$ —	$ 26,095	$ —	$ 26,095
Other residential MBS	—	4,552	—	4,552
Agency commercial MBS	—	1,701,021	—	1,701,021
Securities of U.S. states and political subdivisions—taxable	—	—	47,448	47,448
Equity securities (fair value):				
Mutual funds and marketable equity securities	18,719	—	—	18,719
Derivative assets	—	41,655	—	41,655
Total	$ 18,719	$ 1,773,323	$ 47,448	$ 1,839,490
Liabilities:				
Derivative liabilities	$ —	$ 27,475	$ —	$ 27,475
December 31, 2017				
Assets:				
Investment securities available-for-sale:				
U.S. Treasury securities	$ 54,998	$ —	$ —	$ 54,998
Agency residential MBS	—	34,574	—	34,574
Other residential MBS	—	4,860	—	4,860
Agency commercial MBS	—	2,255,890	—	2,255,890
Securities of U.S. states and political subdivisions—taxable	—	—	47,449	47,449
Mutual funds and marketable equity securities	20,317	—	—	20,317
Derivative assets	—	23,272	—	23,272
Total	$ 75,315	$ 2,318,596	$ 47,449	$ 2,441,360
Liabilities:				
Derivative liabilities	$ —	$ 15,882	$ —	$ 15,882

There were no transfers in or out of Levels 1, 2 or 3 assets measured at fair value on a recurring basis in the years ended December 31, 2018, 2017 or 2016.

The following table presents changes in Level 3 assets measured at fair value on a recurring basis:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Available-for-sale securities of U.S. states and political subdivisions—taxable:			
Balance at beginning of period	$47,449	$47,493	$47,436
Unrealized gains (losses) included in other comprehensive income	(18)	(55)	48
Accretion included in interest income	17	11	9
Balance at end of period	$47,448	$47,449	$47,493

The table and discussion below provide information about the significant unobservable inputs in our recurring Level 3 fair value measurements:

($ in thousands)	Fair Value	Valuation Technique	Unobservable Input
December 31, 2018			
Available-for-sale securities of U.S. states and political subdivisions—taxable	$47,448	Discounted cash flow	Weighted average liquidity risk yield premium of 50 bps
December 31, 2017			
Available-for-sale securities of U.S. states and political subdivisions—taxable	$47,449	Discounted cash flow	Weighted average liquidity risk yield premium of 50 bps

For taxable municipal securities, the Bank calculates the fair value using estimated future cash flows on a quarterly basis. In addition to the inputs listed above, the Bank's management considers interest rate reset frequency, spread to index, market yield curves and the underlying bond rating at the time of valuation. The liquidity risk yield premium is applied to account for liquidity considerations since the bond is not publicly traded. An unfavorable change in the general business and credit environments could cause an increase in the liquidity risk yield premium, resulting in a decrease in the fair value of the investment.

Nonrecurring Fair Value Measurements

The following is a description of valuation methodologies used in estimating the fair value of assets measured at fair value on a nonrecurring basis.

Loans: The fair value of loans with nonrecurring fair value adjustments is based on the fair value of the underlying collateral, primarily real estate, adjusted for certain factors such as estimated costs to sell.

Loans held for sale: The fair value of loans held for sale is derived from actual prices at which loans were committed for sale adjusted for loan servicing value.

MSRs: The fair value of MSRs is based on a present value calculation of expected future cash flows, with assumptions regarding prepayments, discount rates, cost to service, escrow account earnings, contractual servicing fees and ancillary income.

Other real estate owned: Other real estate owned includes foreclosed properties securing mortgage loans. Fair value is generally based upon independent market prices or appraised values of the collateral, adjusted for estimated costs to sell.

The following table presents the assets measured at fair value on a nonrecurring basis that were held on the balance sheet at December 31, 2018 and 2017:

($ in thousands)	Level 1	Level 2	Level 3	Total
December 31, 2018				
Assets:				
Loans	$—	$—	$5,417	$5,417
December 31, 2017				
Assets:				
Loans	$—	$—	$1,078	$1,078

The following table presents losses related to nonrecurring fair value measurements. The losses relate to assets held on the balance sheet at each respective period end.

	Year Ended December 31,		
($ in thousands)	2018	2017	2016
Loans	$(1,588)	$(48)	$(676)

Fair Value of Financial Instruments

The following tables present the carrying values, estimated fair values and the levels in the fair value hierarchy of financial instruments, excluding those measured at fair value on a recurring basis:

	December 31, 2018				
	Carrying	Fair Value			
($ in thousands)	Amount	Total	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	$ 2,811,159	$ 2,811,159	$2,811,159	$ —	$ —
Investment securities held-to-maturity:					
U.S. Government-sponsored agency securities	1,044,912	1,011,324	—	1,011,324	—
Agency residential MBS	1,868,587	1,799,100	—	1,799,100	—
Agency commercial MBS	3,375,409	3,240,852	—	3,240,852	—
Securities of U.S. states and political subdivisions:					
Tax-exempt municipal securities	7,952,605	8,035,143	—	7,935,574	99,569
Tax-exempt nonprofit debentures	142,508	139,826	—	—	139,826
Taxable municipal securities	52,952	61,279	—	61,279	—
Loans, net:					
Real estate secured mortgages	59,524,660	57,183,416	—	36,659,706	20,523,710
Other loans	15,901,574	14,677,426	—	—	14,677,426
Loans held for sale	98,985	99,226	—	99,226	—
Investments in life insurance	1,376,579	1,376,579	—	—	1,376,579
MSRs	54,470	95,205	—	—	95,205
FHLB stock	273,240	273,240	—	—	273,240
Liabilities:					
Deposits: [1]					
Certificates of deposit	$11,377,515	$11,442,054	$ —	$ —	$11,442,054
Short-term borrowings	100,000	100,000	—	100,000	—
Long-term FHLB advances	8,700,000	8,735,714	—	8,735,714	—
Senior notes	896,432	881,618	—	881,618	—
Subordinated notes	777,475	744,293	—	744,293	—

(1) The Bank adopted ASU 2016-01 effective January 1, 2018 and is no longer required to disclose the fair value of deposits with no maturity.

($ in thousands)	December 31, 2017				
	Carrying Amount	Fair Value			
		Total	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	$ 2,297,021	$ 2,297,021	$2,297,021	$ —	$ —
Investment securities held-to-maturity:					
U.S. Government-sponsored agency securities	1,400,025	1,354,936	—	1,354,936	—
Agency residential MBS	2,734,819	2,698,045	—	2,698,045	—
Other residential MBS	1,631	1,654	—	1,654	—
Agency commercial MBS	3,017,012	2,944,282	—	2,944,282	—
Securities of U.S. states and political subdivisions:					
Tax-exempt municipal securities	8,804,924	9,289,702	—	9,181,038	108,664
Tax-exempt nonprofit debentures	146,529	150,527	—	—	150,527
Taxable municipal securities	53,005	63,599	—	63,599	—
Loans, net:					
Real estate secured mortgages	50,477,185	48,770,074	—	30,634,418	18,135,656
Other loans	11,997,098	11,125,170	—	—	11,125,170
Loans held for sale	87,695	87,989	—	87,989	—
Investments in life insurance	1,330,652	1,330,652	—	—	1,330,652
MSRs	66,139	93,009	—	—	93,009
FHLB stock	282,150	282,150	—	—	282,150
Liabilities:					
Deposits:					
Deposits with no maturity	$61,683,914	$61,683,914	$ —	$61,683,914	$ —
Certificates of deposit	7,234,794	7,258,022	—	—	7,258,022
Short-term borrowings	100,000	100,000	—	100,000	—
Long-term FHLB advances	8,300,000	8,254,221	—	8,254,221	—
Senior notes	894,723	892,847	—	892,847	—
Subordinated notes	777,084	827,782	—	827,782	—

Note 14. Commitments and Contingencies

In the ordinary course of business, the Bank enters into transactions that involve financial instruments with off-balance sheet risks, to meet the financing needs of the Bank's clients. These financial instruments include conditional commitments to originate loans, commitments to disburse additional funds on existing loans and lines of credit, and commitments issued under standby letters of credit. Such instruments involve elements of credit risk and interest rate risk. These financial instruments are subject to the same underwriting standards as on-balance sheet instruments. The Bank generally requires collateral or other security to support instruments with credit risk. The maximum credit risk for such commitments will generally be lower than the contractual amount because a significant portion of these commitments is not expected to be fully used or will expire without being used by the client.

The Bank's conditional commitments to originate loans and commitments to disburse additional funds on existing loans and lines of credit are agreements to lend to a client as long as there is no violation of any of several credit or other established conditions. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since commitments may expire without being drawn, the total commitment amounts do not necessarily represent future cash requirements. At December 31, 2018 and 2017, the Bank had conditional commitments to originate loans of $870.7 million and $1.6 billion, respectively, and to disburse additional funds on existing loans and lines of credit of $22.3 billion and $17.8 billion, respectively.

The Bank's standby letters of credit are conditional lending commitments issued by the Bank to guarantee the performance of a client to a third party under certain arrangements. At December 31, 2018 and 2017, the Bank had undisbursed standby letters of credit of $783.7 million and $609.7 million, respectively.

The Bank has also entered into operating lease agreements for premises and equipment. See Note 8, "Premises, Equipment and Leasehold Improvements," for additional information regarding the Bank's operating lease commitments.

In connection with the securitization of loans with Freddie Mac, the Bank has an obligation to reimburse Freddie Mac for losses up to $30.2 million, or 12% of the multifamily loans securitized. At December 31, 2018, the liability for estimated losses related to the reimbursement obligation was $488,000.

The Bank has been named as a defendant in legal actions arising in the ordinary course of business, none of which, in the opinion of management, are material.

Note 15. Preferred Stock

At December 31, 2018, the Bank was authorized to issue 25,000,000 shares of preferred stock, par value $0.01 per share, of which 940,000 shares were issued and outstanding. Each share of preferred stock has a liquidation preference of $1,000. The following table presents the authorized, issued and outstanding shares for each series of the Bank's preferred stock:

(in thousands, except share amounts)	December 31, 2018	December 31, 2017
5.625% Noncumulative Perpetual Series C—No shares authorized, issued or outstanding at December 31, 2018; 172,500 shares authorized; 150,000 shares issued and outstanding at December 31, 2017	$ —	$150,000
5.50% Noncumulative Perpetual Series D—200,000 shares authorized; 190,000 shares issued and outstanding	190,000	190,000
7.00% Noncumulative Perpetual Series E—No shares authorized, issued or outstanding at December 31, 2018; 200,000 shares authorized, issued and outstanding at December 31, 2017	—	200,000
5.70% Noncumulative Perpetual Series F—115,000 shares authorized; 100,000 shares issued and outstanding	100,000	100,000
5.50% Noncumulative Perpetual Series G—172,500 shares authorized; 150,000 shares issued and outstanding	150,000	150,000
5.125% Noncumulative Perpetual Series H—200,000 shares authorized, issued and outstanding	200,000	200,000
5.50% Noncumulative Perpetual Series I—300,000 shares authorized, issued and outstanding at December 31, 2018 and no shares authorized, issued or outstanding at December 31, 2017	300,000	—
Total	$940,000	$990,000

The Bank's preferred stock activity for 2016 through 2018 was as follows:

On February 10, 2016, the 5.50% Noncumulative Perpetual Series G Preferred Stock ("Series G Preferred Stock") was issued. Net proceeds, after underwriting discounts and expenses, were $145.2 million. The public offering consisted of 6,000,000 depositary shares, each representing a 1/40th interest in a share of the Series G Preferred Stock, at a public offering price of $25.00 per depositary share. The Series G Preferred Stock is redeemable at the option of the Bank, subject to all applicable regulatory approvals, on or after March 30, 2021.

On January 30, 2017 (the "Series A Redemption Date"), the Bank redeemed all of the outstanding shares of its 6.70% Noncumulative Perpetual Series A Preferred Stock ("Series A Preferred Stock"). All 7,981,000 depositary shares, representing a 1/40th interest in the Series A Preferred Stock, were redeemed at a redemption price of $25.00 per share, representing an aggregate amount of $199.5 million plus all accrued and unpaid dividends as of the Series A Redemption Date.

On June 7, 2017, the 5.125% Noncumulative Perpetual Series H Preferred Stock ("Series H Preferred Stock") was issued. Net proceeds, after underwriting discounts and expenses, were $193.7 million. The public offering consisted of 8,000,000 depositary shares, each representing a 1/40th interest in a share of the Series H Preferred Stock, at a public offering price of $25.00 per depositary share. The Series H Preferred Stock is redeemable at the option of the Bank, subject to all applicable regulatory approvals, on or after June 30, 2022.

On June 16, 2017 (the “Series B Redemption Date”), the Bank redeemed all of the outstanding shares of its 6.20% Noncumulative Perpetual Series B Preferred Stock (“Series B Preferred Stock”). All 6,000,000 depositary shares, representing a 1/40th interest in the Series B Preferred Stock, were redeemed at a redemption price of $25.00 per share, representing an aggregate amount of $150.0 million plus all accrued and unpaid dividends as of the Series B Redemption Date.

On January 2, 2018 (the “Series C Redemption Date”), the Bank redeemed all of the outstanding shares of its 5.625% Noncumulative Perpetual Series C Preferred Stock (“Series C Preferred Stock”). All 6,000,000 depositary shares, representing a 1/40th interest in the Series C Preferred Stock, were redeemed at a redemption price of $25.00 per share, representing an aggregate amount of $150.0 million plus all accrued and unpaid dividends as of the Series C Redemption Date.

On June 12, 2018, the 5.50% Noncumulative Perpetual Series I Preferred Stock (“Series I Preferred Stock”) was issued. Net proceeds, after underwriting discounts and expenses, were $290.2 million. The public offering consisted of 12,000,000 depositary shares, each representing a 1/40th interest in a share of the Series I Preferred Stock, at a public offering price of $25.00 per depositary share. The Series I Preferred Stock is redeemable at the option of the Bank, subject to all applicable regulatory approvals, on or after June 30, 2023.

On December 28, 2018 (the “Series E Redemption Date”), the Bank redeemed all of the outstanding shares of its 7.00% Noncumulative Perpetual Series E Preferred Stock (“Series E Preferred Stock”). All 8,000,000 depositary shares, representing a 1/40th interest in the Series E Preferred Stock, were redeemed at a redemption price of $25.00 per share, representing an aggregate amount of $200.0 million plus all accrued and unpaid dividends as of the Series E Redemption Date.

Dividends on each series of the Bank’s outstanding shares of preferred stock are paid each March 30, June 30, September 30 and December 30. The following table presents dividends paid on preferred stock:

	Year Ended December 31,					
	2018		2017		2016	
(in thousands, except per share amounts)	Total	Per Share	Total	Per Share	Total	Per Share
6.70% Noncumulative Perpetual Series A	$ —	$ —	$ 1,117	$ 5.60	$ 13,368	$67.00
6.20% Noncumulative Perpetual Series B	—	—	4,305	$28.70	9,300	$62.00
5.625% Noncumulative Perpetual Series C	60	$ 0.40	8,438	$56.25	8,438	$56.25
5.50% Noncumulative Perpetual Series D	10,450	$55.00	10,450	$55.00	10,450	$55.00
7.00% Noncumulative Perpetual Series E	13,940	$69.70	14,000	$70.00	14,000	$70.00
5.70% Noncumulative Perpetual Series F	5,700	$57.00	5,700	$57.00	5,700	$57.00
5.50% Noncumulative Perpetual Series G	8,250	$55.00	8,250	$55.00	7,333	$48.89
5.125% Noncumulative Perpetual Series H	10,250	$51.25	5,780	$28.90	—	—
5.50% Noncumulative Perpetual Series I	9,075	$30.25	—	—	—	—
Total	$ 57,725		$ 58,040		$ 68,589	

Note 16. Common Stock and Stock Plans

Common Stock

At December 31, 2018, the Bank was authorized to issue 400,000,000 shares of common stock, par value $0.01 per share. At December 31, 2018 and 2017, the Bank had 164,901,950 and 161,695,803 shares issued and outstanding, respectively. During 2018, the Bank sold 2,000,000 shares of common stock in an underwritten offering, which added $200.6 million to common equity.

First Republic Bank Employee Stock Purchase Plan

Under the Bank's Employee Stock Purchase Plan (the "Purchase Plan"), the Bank is authorized to sell 2,000,000 shares of common stock to its full-time and part-time employees who are regularly employed for 20 hours or more per week. For 2018, 2017 and 2016, employees could purchase shares of the Bank's common stock at 90% of the closing price of the common stock on the New York Stock Exchange on the date of purchase or the nearest prior trading day, subject to an annual limitation of common stock valued at $25,000. A total of 765,396 shares have been sold to employees under the Purchase Plan since its inception in 2011. In 2018, a total of 151,825 shares were sold to employees, compared to 124,766 in 2017 and 129,051 in 2016. The Bank recognizes compensation costs for the Purchase Plan, since it meets the criteria of a compensatory plan under ASC 718-50, "Compensation—Stock Compensation—Employee Share Purchase Plans." For 2018, 2017 and 2016, compensation expense for the Purchase Plan was approximately $1.4 million, $1.2 million and $920,000, respectively.

First Republic Bank 2017 Omnibus Award Plan

In May 2017, the Bank adopted the 2017 Omnibus Award Plan (the "Stock Award Plan"), which replaced the 2010 Omnibus Award Plan. Stock awards outstanding that were previously granted under the 2010 Omnibus Award Plan were not affected by the adoption of the Stock Award Plan, and the terms of the 2010 Omnibus Award Plan will remain effective for such awards.

The Bank is authorized to grant shares of common stock in the form of stock options, stock appreciation rights, shares of restricted stock, restricted stock units or performance share units to its employees, officers and directors under the 2017 Omnibus Award Plan. Upon termination of service, unvested awards are generally forfeited. At December 31, 2018, the Bank had 2,629,477 shares reserved for future stock award grants.

Stock Options

At December 31, 2018 and 2017, the Bank had stock options outstanding, less forfeitures, of 1,764,407 and 2,386,352, respectively. Under the Bank's stock option agreements, the exercise price of each option equals the market price of the Bank's common stock at the grant date. Generally, stock options vest over a period of up to four years from the grant date and have a maximum contractual life of ten years. The Bank has granted options that have time vesting requirements ("Time Options") and performance vesting criteria ("Performance Options").

The following table presents information related to Time Options and Performance Options:

	Time Options				Performance Options			
	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value ($ in thousands)	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value ($ in thousands)
Options outstanding as of December 31, 2015	4,088,364	$15.01			2,329,144	$16.08		
Granted	—	—			—	—		
Canceled or forfeited	—	—			—	—		
Exercised	(1,006,714)	$15.05			(596,415)	$15.98		
Options outstanding as of December 31, 2016	3,081,650	$15.00	3.5 years	$237,706	1,732,729	$16.11	3.6 years	$131,742
Granted	—	—			—	—		
Canceled or forfeited	—	—			—	—		
Exercised	(1,727,503)	$15.00			(700,524)	$16.32		
Options outstanding as of December 31, 2017	1,354,147	$15.01	2.5 years	$ 96,999	1,032,205	$15.96	2.6 years	$ 72,951
Granted	—	—			—	—		
Canceled or forfeited	—	—			—	—		
Exercised	(266,865)	$15.00			(355,080)	$15.69		
Options outstanding as of December 31, 2018	1,087,282	$15.01	1.5 years	$ 78,163	677,125	$16.11	1.6 years	$ 47,935

Time Options vest 25% per annum over four years or on a monthly basis in equal amounts over a term of 48 months. Performance Options vest 25% per annum over four years provided that certain criteria, including return on average tangible common equity, nonperforming asset ratios and growth in non-certificates of deposit accounts, are achieved. The measurement of the performance criteria occurs at the calendar year-end, with vesting generally early in the second calendar quarter of the following year. All options were fully vested as of December 31, 2016. The following table presents options that vested during the periods indicated:

	Number of Options Vested	
Year Ended December 31,	**Time Options**	**Performance Options**
2016	—	29,992

At December 31, 2018, the weighted average exercise price of all outstanding options was $15.43 and the weighted average remaining contractual term was 1.5 years.

The intrinsic value of all options exercised was $50.6 million in 2018, compared to $193.3 million in 2017 and $91.4 million in 2016. Stock option exercises are satisfied by issuing shares from the Bank's authorized shares. The number of shares of common stock issued from stock option exercises are generally net of shares withheld to pay the exercise price or taxes due upon the exercise.

Restricted Stock Units

The Bank granted restricted stock units ("RSUs") to certain of its employees, officers and directors. Upon vesting, one share of common stock is issued from the Bank's authorized shares for each RSU. The number of shares of common stock issued at the time of vesting is generally net of shares withheld to pay taxes due upon vesting. Participants are entitled to dividends and voting rights only upon vesting.

RSUs have time-based vesting requirements ("Time RSUs") or both time-based and performance-based vesting requirements ("Performance RSUs"). RSUs vest evenly over periods ranging from one year to five years from the date of grant. Performance RSUs vest over these periods, provided that certain performance criteria, such as return on average tangible common equity, are met, based on performance periods that are specified for each grant. The following table presents information related to Performance RSUs and Time RSUs:

	Performance RSUs			Time RSUs		
	Number of Awards	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term	Number of Awards	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term
Nonvested awards as of December 31, 2015	1,388,869	$ 54.70		124,154	$ 37.07	
Granted	783,518	$ 70.55		653,077	$ 67.43	
Vested	(432,098)	$ 52.46		(123,904)	$ 37.36	
Canceled or forfeited	(73,925)	$ 57.51		(19,150)	$ 64.53	
Nonvested awards as of December 31, 2016	1,666,364	$ 62.61	3.0 years	634,177	$ 67.45	2.7 years
Granted	828,659	$100.54		34,867	$ 94.42	
Vested	(560,410)	$ 57.85		(203,563)	$ 67.62	
Canceled or forfeited	(33,525)	$ 74.63		(22,656)	$ 69.62	
Nonvested awards as of December 31, 2017	1,901,088	$ 80.33	3.0 years	442,825	$ 69.38	1.8 years
Granted	1,040,244	$ 99.18		78,449	$100.44	
Vested	(637,317)	$ 73.60		(195,209)	$ 70.25	
Canceled or forfeited	(67,332)	$ 90.85		(5,162)	$ 66.79	
Nonvested awards as of December 31, 2018	2,236,683	$ 90.70	3.0 years	320,903	$ 76.49	1.4 years

The total fair value of Performance RSUs that vested in 2018, 2017 and 2016 was approximately $64.1 million, $54.6 million and $30.0 million, respectively. The total fair value of Time RSUs that vested in 2018, 2017 and 2016 was approximately $18.2 million, $19.2 million and $8.8 million, respectively. No cash consideration was received in connection with the vesting of these awards.

Performance Share Units

The Bank has granted performance share units ("PSUs") to certain of its employees and officers. Upon vesting, one share of common stock is issued from the Bank's authorized shares for each PSU. The number of shares of common stock issued at the time of vesting is generally net of shares withheld to pay taxes due upon vesting. Participants are entitled to dividends and voting rights only upon vesting. Certain PSUs vest in full after three years, subject to achieving certain performance criteria, while other PSUs vest evenly over periods ranging from three years to five years from the date of grant, provided that certain performance criteria are met. Performance criteria include metrics such as return on equity, return on average tangible common equity and the Tier 1 leverage ratio, and are based on performance periods that are specified for each grant. The following table presents information related to PSUs:

	Number of Awards	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term
Nonvested awards as of December 31, 2015	522,500	$ 51.15	
Granted	322,500	$ 70.54	
Vested	(127,000)	$ 43.09	
Canceled or forfeited	—	—	
Nonvested awards as of December 31, 2016	718,000	$ 61.29	2.7 years
Granted	299,750	$100.53	
Vested	(279,000)	$ 52.99	
Canceled or forfeited	—	—	
Nonvested awards as of December 31, 2017	738,750	$ 80.34	3.1 years
Granted	434,784	$ 96.80	
Vested	(221,450)	$ 71.89	
Canceled or forfeited	—	—	
Nonvested awards as of December 31, 2018	952,084	$ 89.82	3.0 years

The total fair value of PSUs that vested during 2018, 2017 and 2016 was $22.2 million, $26.2 million and $8.9 million, respectively. No cash consideration was received in connection with the vesting of these awards.

Restricted Stock Awards

The Bank previously granted restricted stock awards ("RSAs") to certain of its employees and officers. Upon grant, one share of common stock is issued from the Bank's authorized shares for each RSA. Upon vesting, common stock shares are transferred to the employee or officer. At the time of vesting, shares are generally withheld to pay the taxes due upon vesting. Participants are entitled to dividends and voting rights for all RSAs, regardless of whether the award has vested.

RSAs have time-based vesting requirements ("Time RSAs") or both time-based and performance-based vesting requirements ("Performance RSAs"). The majority of Performance RSAs generally vest on a quarterly basis through the end of 2019. Time RSAs and certain Performance RSAs vest 25% per annum over four years. Performance RSAs vest over these periods, provided that certain performance criteria are achieved, such as return on average tangible common equity, return on average tangible assets and nonperforming asset ratios, for performance periods that are specified for each grant. Time RSAs were fully vested as of December 31, 2016. The following table presents information related to Performance RSAs and Time RSAs:

	Performance RSAs			Time RSAs		
	Number of Awards	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term	Number of Awards	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term
Nonvested awards as of December 31, 2015	220,000	$32.72		28,250	$31.50	
Granted	—	—		—	—	
Vested	(127,500)	$32.59		(28,250)	$31.50	
Canceled or forfeited	—	—		—	—	
Nonvested awards as of December 31, 2016	92,500	$32.89	2.0 years	—	—	—
Granted	—	—		—	—	
Vested	(57,500)	$33.56		—	—	
Canceled or forfeited	—	—		—	—	
Nonvested awards as of December 31, 2017	35,000	$31.80	2.0 years	—	—	—
Granted	—	—		—	—	
Vested	(17,500)	$31.80		—	—	
Canceled or forfeited	—	—		—	—	
Nonvested awards as of December 31, 2018	17,500	$31.80	1.0 years	—	—	—

The total fair value of Performance RSAs that vested during 2018, 2017 and 2016 was $1.6 million, $5.5 million and $9.4 million, respectively. The total fair value of Time RSAs that vested during 2016 was $1.9 million. No cash consideration was received in connection with the vesting of these awards.

Compensation Expense

RSUs, PSUs and RSAs are valued at the closing market price of the Bank's common stock at the grant date, and compensation expense is recognized over the requisite service period, which is generally the vesting period. The Bank accounts for forfeitures of stock awards in the period they occur. All compensation costs related to stock options had been fully recognized as of December 31, 2016.

The following tables present information regarding share-based compensation expense:

	Year Ended December 31,					
	2018		2017		2016	
($ in thousands)	Expense Recognized	Related Tax Benefit	Expense Recognized	Related Tax Benefit	Expense Recognized	Related Tax Benefit
Stock options	$ —	$ —	$ —	$ —	$ 115	$ 47
RSUs	69,201	20,622	58,174	24,550	41,278	17,421
PSUs	21,944	6,539	14,997	6,329	10,258	4,329
RSAs	557	166	893	377	3,929	1,658
Total	$91,702	$27,327	$74,064	$31,256	$55,580	$23,455

($ in thousands)	At December 31, 2018	
	Unrecognized Expense	Weighted Average Expected Recognition Period
RSUs	$176,785	3.1 years
PSUs	64,922	3.2 years
RSAs	555	1.0 years
Total	$242,262	

Excess Tax Benefits

Excess tax benefits from exercise or vesting of share-based awards are recorded as a reduction in provision for income taxes in the period of exercise or vesting. The following table presents excess tax benefits recognized, by award type:

($ in thousands)	Year Ended December 31,					
	2018		2017		2016	
	Number of Awards Exercised or Vested	Related Excess Tax Benefit	Number of Awards Exercised or Vested	Related Excess Tax Benefit	Number of Awards Exercised or Vested	Related Excess Tax Benefit
Stock options	621,945	$13,986	2,428,027	$75,825	1,603,129	$34,708
RSUs	832,526	6,827	763,973	12,015	556,002	5,152
PSUs	221,450	1,960	279,000	4,986	127,000	1,530
RSAs	17,500	323	57,500	1,545	155,750	2,672
Total	1,693,421	$23,096	3,528,500	$94,371	2,441,881	$44,062

Note 17. Accumulated Other Comprehensive Income (Loss)

The following table presents the changes in the components of accumulated other comprehensive income (loss):

($ in thousands)	Securities Available-For-Sale	Securities Transferred from Available-For-Sale to Held-to-Maturity	Total
Balance at December 31, 2015	**$ (5,220)**	**$ —**	**$ (5,220)**
Net unrealized gain on securities available-for-sale	23,336	—	23,336
Related tax effect	(9,848)	—	(9,848)
Reclassification of gain on securities available-for-sale to net income [(1)]	(1,047)	—	(1,047)
Related tax effect [(2)]	442	—	442
Unrealized gains on securities transferred from available-for-sale to held-to-maturity	(8,574)	8,574	—
Related tax effect	3,644	(3,644)	—
Amortization of unrealized gains on securities transferred from available-for-sale to held-to-maturity [(3)]	—	(2,244)	(2,244)
Related tax effect [(2)]	—	920	920
Other comprehensive income	7,953	3,606	11,559
Balance at December 31, 2016	**2,733**	**3,606**	**6,339**
Net unrealized loss on securities available-for-sale	(18,186)	—	(18,186)
Related tax effect	7,622	—	7,622
Reclassification of loss on securities available-for-sale to net income [(1)]	2,351	—	2,351
Related tax effect [(2)]	(992)	—	(992)
Amortization of unrealized gains on securities transferred from available-for-sale to held-to-maturity [(3)]	—	(1,776)	(1,776)
Related tax effect [(2)]	—	802	802
Other comprehensive loss	(9,205)	(974)	(10,179)
Balance at December 31, 2017	**(6,472)**	**2,632**	**(3,840)**
Cumulative adjustments from adoption of new accounting guidance [(4)]	(1,182)	—	(1,182)
Balance at January 1, 2018	**(7,654)**	**2,632**	**(5,022)**
Net unrealized gain on securities transferred from held-to-maturity to available-for-sale	17,528	—	17,528
Related tax effect	(5,223)	—	(5,223)
Net unrealized loss on securities available-for-sale	(12,134)	—	(12,134)
Related tax effect	3,616	—	3,616
Reclassification of gain on securities available-for-sale to net income [(1)]	(24,328)	—	(24,328)
Related tax effect [(2)]	7,250	—	7,250
Amortization of unrealized gains on securities transferred from available-for-sale to held-to-maturity [(3)]	—	(1,524)	(1,524)
Related tax effect [(2)]	—	454	454
Other comprehensive loss	(13,291)	(1,070)	(14,361)
Balance at December 31, 2018	**$(20,945)**	**$ 1,562**	**$(19,383)**

(1) Included in gain (loss) on investment securities, net on the consolidated statements of income and comprehensive income.
(2) Included in provision for income taxes on the consolidated statements of income and comprehensive income.
(3) Included in interest income on investments on the consolidated statements of income and comprehensive income.
(4) Consists of adjustments from the adoption of ASU 2016-01 and ASU 2018-02.

Note 18. Employee Benefit Plans

The Bank's 401(k) Plan is a qualified defined contribution plan under section 401(k) of the Internal Revenue Code ("IRC") of 1986, as amended. Generally, full-time and part-time employees who are regularly employed for 20 hours or more per week are automatically enrolled in the Bank's 401(k) Plan upon their date of hire. The 401(k) Plan assets are invested by plan participants in a family of investment funds. Eligible employees may contribute up to 50% of their pre-tax and post-tax eligible compensation as defined in the 401(k) Plan, subject to certain IRC limitations. Under the 401(k) Plan, the Bank makes matching contributions every pay period up to a maximum of 4% of the participant's eligible compensation, and the matching contributions vest immediately. The Bank's contributions to the 401(k) Plan were approximately $22.3 million, $14.7 million and $12.1 million for 2018, 2017 and 2016, respectively.

The Bank has a Deferred Compensation Plan under which eligible employees may defer receipt of a portion of salary or incentive compensation. The Deferred Compensation Plan was amended in 2018 to allow its participants to invest their deferred compensation in certain mutual funds. Compensation deferred prior to this amendment was and may continue to be invested in an interest-bearing deposit account. Deferred amounts will be distributed to employees in accordance with their elections. At December 31, 2018 and 2017, the deferred compensation liability was $44.3 million and $36.8 million, respectively.

Since inception, the Bank has not offered any other employee benefit plans and, at December 31, 2018, has no requirement to accrue additional expenses for any pension or other post-employment benefits.

Note 19. Income Taxes

Beginning in 2018, federal tax reform legislation reduced the federal tax rate for corporations from 35% to 21% and changed or limited certain tax deductions.

In accordance with ASC 323-740, tax credit investment amortization expense is presented as a component of provision for income taxes. The following table presents the components of the Bank's provision for income taxes:

($ in thousands)	Year Ended December 31, 2018	2017	2016
Federal:			
Current	$ 40,963	$ (139,238)	$ 9,024
Deferred	(70,523)	112,410	(21,561)
Subtotal	(29,560)	(26,828)	(12,537)
State:			
Current	119,104	44,824	69,778
Deferred	(23,541)	15,552	(6,436)
Subtotal	95,563	60,376	63,342
Tax credit investment amortization	131,911	120,994	103,363
Total provision for income taxes	$ 197,914	$ 154,542	$ 154,168

The following table presents a reconciliation between the effective income tax rate and the federal statutory rate:

	Year Ended December 31,		
	2018	2017	2016
Statutory rate	21.0%	35.0%	35.0%
State taxes, net of federal benefits	7.8%	6.1%	5.9%
Tax-exempt income	(7.0)%	(13.4)%	(12.0)%
Investments in life insurance	(0.8)%	(1.5)%	(2.0)%
Tax credits	(14.3)%	(16.9)%	(15.5)%
Tax credit investment amortization	12.6%	13.3%	12.4%
Excess tax benefits—stock options	(1.3)%	(8.3)%	(4.2)%
Excess tax benefits—other stock awards	(0.9)%	(2.1)%	(1.1)%
Deferred tax assets valuation adjustment	—%	4.4%	—%
FDIC assessments	1.1%	—%	—%
Other, net	0.6%	0.3%	0.1%
Effective tax rate	18.8%	16.9%	18.6%

The following table presents the tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities:

	December 31,	
($ in thousands)	2018	2017
Deferred tax assets:		
Excess tax credit carryforwards	$ 147,711	$ 135,477
Allowance for loan losses	130,264	109,048
Accrued compensation	77,766	24,613
Stock award expense	22,643	21,040
Depreciation	18,202	12,539
Deferred rent	12,954	8,897
Loan discounts	10,894	8,468
State income taxes	15,652	6,060
Reserve for unfunded loan commitments	3,921	4,232
Net operating losses	3,137	3,267
Unrealized losses on securities available-for-sale	8,229	1,980
Intangible assets	—	1,243
Other deferred tax assets	2,733	2,410
Gross deferred tax assets	454,106	339,274
Deferred tax liabilities:		
Deferred loan costs	(101,572)	(83,981)
Mortgage servicing rights	(13,223)	(16,294)
Intangible assets	(1,123)	—
Other deferred tax liabilities	(1,640)	(1,299)
Gross deferred tax liabilities	(117,558)	(101,574)
Net deferred tax assets	$ 336,548	$ 237,700

Gross deferred tax assets represent recoverable taxes. At December 31, 2018, the Bank has excess tax credit carryforwards and net operating losses of $147.7 million and $3.1 million, respectively, which expire in varying amounts between 2035 and 2038. At December 31, 2018 and 2017, management believes a valuation allowance is not needed because it is more likely than not that deferred tax assets will be realized based on our history of earnings and our ability to implement tax planning strategies.

The table below presents a reconciliation of the beginning and ending amount of unrecognized tax benefits:

($ in thousands)	At or for the Year Ended December 31,	
	2018	2017
Balance at beginning of period	$ 98	$170
Additions for tax positions related to the current year	—	—
Additions for tax positions related to prior years	6	9
Subtractions for tax positions related to prior years	(4)	(81)
Balance at end of period	$100	$ 98

At December 31, 2018 and 2017, the amount of net current taxes receivable was $2.6 million and $79.3 million, respectively.

At December 31, 2018 and 2017, the Bank has accrued current taxes payable of approximately $100,000 and $98,000, respectively, related to uncertain tax positions. If recognized, the entire amount of unrecognized tax benefits at December 31, 2018 would affect the Bank's consolidated effective tax rate. The Bank also recognized interest and penalties of approximately $6,000 and $9,000 (recorded in income tax expense) related to uncertain tax positions for the years ended December 31, 2018 and 2017, respectively.

The Bank continues to monitor the progress of ongoing income tax controversies and the impact, if any, of the expected tolling of the statute of limitations in various taxing jurisdictions. The Bank's tax returns for the years ended December 31, 2013 through 2018 remain subject to examination by the Internal Revenue Service, the California Franchise Tax Board or various other state taxing authorities. The Bank does not currently believe there is a reasonable possibility of any significant change to our total unrecognized tax benefits within the next twelve months.

Note 20. Earnings Per Common Share ("EPS")

The following table presents a reconciliation of the income and share amounts used in the basic and diluted earnings per common share computations:

(in thousands, except per share amounts)	Year Ended December 31, 2018	2017	2016
Basic EPS:			
Net income	$ 853,828	$ 757,660	$ 673,428
Less: Dividends on preferred stock	57,725	58,040	68,589
Net income available to common shareholders	$ 796,103	$ 699,620	$ 604,839
Weighted average common shares outstanding	162,948	157,624	148,752
Net income per common share—basic	$ 4.89	$ 4.44	$ 4.07
Diluted EPS:			
Net income available to common shareholders	$ 796,103	$ 699,620	$ 604,839
Weighted average shares:			
Common shares outstanding	162,948	157,624	148,752
Dilutive effect of stock options	1,721	3,465	4,388
Dilutive effect of restricted stock awards, restricted stock units and performance share units	943	1,251	955
Weighted average diluted common shares outstanding	165,612	162,340	154,095
Net income per common share—diluted	$ 4.81	$ 4.31	$ 3.93

Stock options, restricted stock awards, restricted stock units and performance share units that are anti-dilutive are not included in the calculation of diluted earnings per common share. The following table presents the weighted average shares of outstanding stock awards that were anti-dilutive for the periods indicated:

(in thousands)	Year Ended December 31, 2018	2017	2016
Restricted stock units	40	6	2

Note 21. Regulatory Capital

The Bank is subject to various regulatory capital requirements administered by the FDIC. 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 the Bank's consolidated financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Bank must meet specific capital guidelines that involve quantitative measures of the Bank's assets, liabilities, and certain off-balance sheet items as calculated under regulatory capital requirements. The Bank's capital amounts and classification will also be subject to qualitative judgments by the regulators about components, risk weightings and other factors.

The Bank's capital ratios exceeded all applicable regulatory requirements at December 31, 2018 and 2017 for well-capitalized institutions. The following table presents the Bank's regulatory capital information at December 31, 2018 and 2017 and the standards for both well-capitalized depository institutions and applicable minimum capital requirements:

	Actual		Regulatory Requirements		
	December 31,				
($ in thousands)	2018	2017	Well-Capitalized Ratio	Minimum Capital Ratio	Minimum Capital Conservation Buffer (1)
Capital Ratios					
Tier 1 leverage ratio (Tier 1 capital to average assets)	8.68%	8.85%	5.00%	4.00%	—%
Common Equity Tier 1 capital to risk-weighted assets	10.38%	10.63%	6.50%	4.50%	1.875%
Tier 1 capital to risk-weighted assets	11.70%	12.22%	8.00%	6.00%	1.875%
Total capital to risk-weighted assets	13.43%	14.11%	10.00%	8.00%	1.875%
Regulatory Capital (2)					
Common Equity Tier 1 capital	$ 7,379,997	$ 6,488,618			
Tier 1 capital	$ 8,319,997	$ 7,457,944			
Total capital	$ 9,549,738	$ 8,615,389			
Assets (2)					
Average assets	$95,905,266	$84,238,404			
Risk-weighted assets	$71,116,459	$61,054,077			

(1) Beginning on January 1, 2016, a capital conservation buffer is required to be held by banking institutions. The minimum required capital conservation buffer was 1.875% in 2018 and was phased in through January 1, 2019 when it reached 2.5%. As of December 31, 2018, our capital conservation buffer was 5.43%, which exceeded both the 2018 transitional buffer of 1.875% and the fully phased-in minimum requirement of 2.5%.

(2) As defined by regulatory capital rules.

The Bank's ability to declare a cash dividend or other distribution with respect to capital is subject to federal and state statutory and regulatory restrictions and possible approval requirements based upon earnings, financial condition, cash needs and general business conditions. Federal and state banking agencies also have authority to prohibit the Bank from engaging in business practices that are considered unsafe or unsound, possibly including the payment of dividends or other distributions with respect to capital. In addition, the Bank cannot declare or pay dividends on common stock or redeem or repurchase common stock for any period for which dividends on preferred stock have not been declared and paid in full.

Note 22. Revenue from Contracts with Customers

Adoption of ASC 606

The Bank adopted ASC 606 effective January 1, 2018. There were no changes to the timing or amount of revenue recognized from the Bank's contracts with customers, and no cumulative effect adjustment from the adoption of this guidance. Refer to Note 1, "Summary of Significant Accounting Policies," for additional information.

Revenue Recognition

The following table presents revenue from contracts with customers, disaggregated by revenue stream, as well as other noninterest income:

($ in thousands)	Year Ended December 31, 2018	2017 (1)	2016 (1)
Noninterest income:			
Revenue from contracts with customers:			
Investment management fees	$341,539	$282,868	$224,626
Brokerage and investment fees	28,974	24,228	24,694
Insurance fees	10,090	5,555	4,207
Trust fees	14,633	13,658	12,365
Deposit fees	24,974	22,633	20,699
Other income	2,569	1,661	502
Total revenue from contracts with customers	422,779	350,603	287,093
Other sources of noninterest income	120,666	109,858	107,719
Total noninterest income	$543,445	$460,461	$394,812

(1) There were no adjustments to the Bank's financial statements as a result of the Bank's adoption of ASC 606. For comparability, the Bank has adjusted certain prior period amounts to conform to the current period presentation.

The Bank earns revenues from contracts with customers primarily for performing investment management, brokerage, sales of insurance and annuity policies, trust and deposit services. Most of the Bank's contracts with customers are open-ended, and the Bank provides services on an ongoing basis for an unspecified contract term. For these ongoing services, the fees are variable, since they are dependent on factors such as the value of underlying assets under management, assets under administration or volume of transactions. The Bank recognizes revenue over the period services are provided to customers and when the uncertainties that determine the amount of revenue are resolved, and the actual fees are known or can be estimated. For certain services that are provided at a specific point in time, the Bank recognizes revenue in full at the time such services are provided. Each of the Bank's revenue streams are described in additional detail below.

Investment Management Fees

The Bank performs investment management services for its clients through FRIM, who acts as the client's investment advisor, performing traditional portfolio management, and in some cases, brokerage services through FRSC. FRIM also acts as an advisor to alternative investment funds. Investment management fees are variable, since they are based on assets under management ("AUM"), which are subject to changes in market conditions and asset inflows and outflows. Investment management fees are recognized over the period services are provided, and when actual AUM values are known or can be estimated. For traditional portfolio management services, AUM is known at the end of each quarter, and alternative investments' AUM can be estimated each quarter.

Brokerage and Investment Fees

The Bank performs brokerage services for its clients through FRSC. Brokerage fees consist of transaction fees earned from trade execution and distribution fees from mutual funds or money market mutual funds. Brokerage transaction fees are fixed and determinable, based on security type and trade volume, and are recognized upon trade execution. Distribution fees from mutual funds or money market mutual funds are

variable, since they are based on the underlying fund's value, which is subject to market conditions and amounts invested by clients. Distribution fees are recognized over the period that services are provided, and when the fund values are known or can be estimated at the end of each quarter.

Insurance Fees

The Bank earns revenue from selling insurance and annuity policies to its clients through FRSC and FRIM. Insurance fees consist of initial commissions when a policy is sold and subsequent commissions each year that a policy is renewed. Both initial and renewal fees are variable, since they are determined by the value and type of each insurance or annuity policy sold. Initial commissions are recognized when the policy is in effect, and renewal commissions are recognized upon renewal of the policy.

Trust Fees

The Bank performs trust and custody services for its clients through First Republic Trust Company and FRTC Delaware (collectively, the "Trust Company"). The Trust Company holds cash, securities and other assets in trust or custody accounts for its customers, and manages the day to day administration of the accounts. Trust and custody fees are variable, since they are based upon assets under administration ("AUA"), which are subject to market conditions and asset inflows and outflows. Trust fees are recognized over the period services are provided, and when actual AUA values are known or can be estimated.

Deposit Fees

The Bank performs deposit account services for its deposit clients. Deposit account fees are variable, since they are based on average account balances, type of account and transactions. Deposit account fees are recognized over the period that services are provided, and when the average account balances and transactions are known. Average account balances are known at the end of each month and transactions are known as they occur. In addition, other deposit-related fees consist of ATM fees from non-Bank cardholders, which is a fixed amount recognized at the time of the transaction, and interchange fees from debit card transactions, which are variable and recognized at the time of the transaction. Interchange fees are a percentage of the dollar value of the debit cardholder's transaction.

Other Income

Other income primarily includes revenue earned from ancillary services the Bank and its subsidiaries provide to customers.

Principal versus Agent

For brokerage services, FRSC utilizes a third-party clearing broker to execute and settle trades. FRSC is a principal in this relationship and, therefore, brokerage revenue is recognized as the gross amount of consideration, and payments to the clearing broker are recorded as an expense. For trustee services, the Bank utilizes a third-party custodian to provide custody over trust assets. FRTC is the principal in this relationship, therefore, trustee services revenue is recognized as the gross amount of consideration from the customer, and payments to the custodian are recorded as an expense.

Contract Balances and Receivables

The Bank records contract liabilities, or deferred revenue, when payments from customers are received or due in advance of providing services to customers. The Bank generally receives payments for its services during the period or at the time services are provided, therefore, does not have deferred revenue balances at period-end.

Receivables from contracts with customers were $17.3 million, $25.4 million and $14.4 million at December 31, 2018, 2017 and 2016, respectively, and consist primarily of investment management and brokerage receivables, which are included in prepaid expenses and other assets on the consolidated balance sheets.

Contract Acquisition Costs

The Bank pays its employees incentive compensation in the form of commissions, which are considered incremental and recoverable costs to obtain the contract. The Bank utilizes the practical expedient not to capitalize such costs as the amortization period of the asset is less than 12 months, and therefore expenses the commissions as incurred. These costs are recorded in salaries and employee benefits expense in the consolidated income statements.

Note 23. Segment Reporting

ASC 280-10, "Segment Reporting," requires that a public business enterprise report certain financial and descriptive information about its reportable operating segments on the basis that is used internally for evaluating segment performance and deciding how to allocate resources to segments. The Bank's two reportable segments are Commercial Banking and Wealth Management.

The Commercial Banking segment represents most of the operations of the Bank, including real estate secured lending, retail deposit gathering, private banking activities, mortgage sales and servicing, and managing capital, liquidity and interest rate risk.

The Wealth Management segment consists of (i) the investment management activities of FRIM, which manages assets for individuals and institutions in equity securities, fixed income securities, balanced portfolios and alternative investments; (ii) First Republic Trust Company, a division of the Bank that offers personal trust and custody services; (iii) FRTC Delaware, a wholly-owned subsidiary of the Bank that provides personal trust and custody services; (iv) the Bank's mutual fund activities through third-party providers; (v) the brokerage activities of FRSC; and (vi) the Bank's foreign exchange activities conducted on behalf of clients. In addition, the Wealth Management segment earns fee income for offering sales of life insurance and annuity products to clients. Further, the Wealth Management segment earns fees for the Bank's investment portfolio and earns a deposit earnings credit for client deposit accounts that are maintained at the Bank, including sweep deposit accounts.

Income tax expense for the segments is presented based on the segment's contribution to total consolidated tax expense. Tax preference items are allocated to the segment responsible for the related investments resulting in the tax preference item.

The following tables present the operating results, goodwill and total assets of the Bank's two reportable segments, as well as any reconciling items:

($ in thousands)	Commercial Banking	Wealth Management	Reconciling Items	Consolidated Total
At or for the Year Ended December 31, 2018				
Net interest income	$ 2,420,252	$ 80,856	$ —	$ 2,501,108
Provision for loan losses	76,092	—	—	76,092
Noninterest income from contracts with customers [1]	24,935	432,317	(34,473)	422,779
Other noninterest income	83,107	37,559	—	120,666
Noninterest income	108,042	469,876	(34,473)	543,445
Amortization of intangibles	3,546	12,701	—	16,247
Other noninterest expense	1,516,089	418,856	(34,473)	1,900,472
Noninterest expense	1,519,635	431,557	(34,473)	1,916,719
Income before provision for income taxes	932,567	119,175	—	1,051,742
Provision for income taxes	164,002	33,912	—	197,914
Net income	$ 768,565	$ 85,263	$ —	$ 853,828
Goodwill	$ 51,435	$ 147,012	$ —	$ 198,447
Total Assets	$ 98,709,441	$ 681,869	$(186,106)	$ 99,205,204
At or for the Year Ended December 31, 2017				
Net interest income	$ 2,084,137	$ 67,326	$ —	$ 2,151,463
Provision for loan losses	60,181	—	—	60,181
Noninterest income from contracts with customers [1], [2]	22,884	361,353	(33,634)	350,603
Other noninterest income [2]	77,249	32,609	—	109,858
Noninterest income	100,133	393,962	(33,634)	460,461
Amortization of intangibles	5,281	15,344	—	20,625
Other noninterest expense	1,317,555	334,995	(33,634)	1,618,916
Noninterest expense	1,322,836	350,339	(33,634)	1,639,541
Income before provision for income taxes	801,253	110,949	—	912,202
Provision for income taxes	110,593	43,949	—	154,542
Net income	$ 690,660	$ 67,000	$ —	$ 757,660
Goodwill	$ 51,435	$ 147,012	$ —	$ 198,447
Total Assets	$ 87,401,617	$ 585,468	$(206,578)	$ 87,780,507

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($ in thousands)	Commercial Banking	Wealth Management	Reconciling Items	Consolidated Total
At or for the Year Ended December 31, 2016				
Net interest income	$ 1,757,319	$ 59,843	$ —	$ 1,817,162
Provision for loan losses	47,192	—	—	47,192
Noninterest income from contracts with customers [1], [2]	20,748	291,060	(24,715)	287,093
Other noninterest income [2]	82,158	25,561	—	107,719
Noninterest income	102,906	316,621	(24,715)	394,812
Amortization of intangibles	7,019	17,983	—	25,002
Other noninterest expense	1,070,432	266,467	(24,715)	1,312,184
Noninterest expense	1,077,451	284,450	(24,715)	1,337,186
Income before provision for income taxes	735,582	92,014	—	827,596
Provision for income taxes	117,468	36,700	—	154,168
Net income	$ 618,114	$ 55,314	$ —	$ 673,428
Goodwill	$ 56,165	$ 147,012	$ —	$ 203,177
Total Assets	$ 72,867,678	$ 537,300	$(127,206)	$ 73,277,772

[1] The Commercial Banking segment consists of noninterest income from contracts with customers related to deposit fees and the Wealth Management segment consists of investment management, brokerage and investment, and trust fees.

[2] There were no adjustments to the Bank's financial statements as a result of the Bank's adoption of ASC 606. For comparability, the Bank has adjusted certain prior period amounts to conform to the current period presentation.

The reconciling items for revenues include intercompany management fees related to the training and licensing of the Bank's licensed representatives by FRSC and fees for managing the Bank's investment portfolio by FRIM. The reconciling items for assets include subsidiary funds on deposit with the Bank and any intercompany receivable that is reimbursed at least on a quarterly basis.

Note 24. Subsequent Events

The Bank evaluated the effects of events that have occurred subsequent to the year ended December 31, 2018.

On December 31, 2018, the Bank offered 2,000,000 new shares of common stock as part of an "at-the-market" equity offering program, in conjunction with the addition of our common stock in the Standard and Poor's 500 ("S&P 500") Index on January 2, 2019. This offering settled on January 3, 2019, and net proceeds, after commissions and expenses, were $170.6 million, which will be included as an addition to common equity in the first quarter of 2019.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
First Republic Bank:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of First Republic Bank and subsidiaries (the Bank) as of December 31, 2018 and 2017, the related consolidated statements of income and comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). We also have audited the Bank's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Bank as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Bank maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Bank's management is responsible for these consolidated 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 Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Bank's consolidated financial statements and an opinion on the Bank'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 Bank 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 consolidated 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 consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated 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 consolidated 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.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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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.

/s/ KPMG LLP

We have served as the Bank's auditor since 2010.

San Francisco, California
February 28, 2019

FIRST REPUBLIC BANK
MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of the First Republic Bank and subsidiaries (the Bank) is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. The Bank's internal control over financial reporting is designed by, or under the supervision of the Bank's principal executive and principal financial officers and effected by the Bank's board of directors, management and other personnel, 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. The Bank's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Bank;

(ii) 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 Bank are being made only in accordance with authorizations of management and directors of the Bank; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank'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.

The Bank's management assessed the effectiveness of the Bank's internal control over financial reporting as of December 31, 2018, using the criteria for effective internal control over financial reporting set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control—Integrated Framework (2013)*. Based on this assessment, management concluded that, as of December 31, 2018, the Bank's internal control over financial reporting was effective.

KPMG LLP, the independent registered public accounting firm that audited the Bank's consolidated financial statements as of December 31, 2018 included in this Annual Report on Form 10-K, issued an audit report on the Bank's internal control over financial reporting. KPMG's audit report appears on page 173.

FIRST REPUBLIC BANK
QUARTERLY FINANCIAL DATA
(UNAUDITED)

($ in thousands, except per share amounts)	2018 Quarter Ended				2017 Quarter Ended			
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
Interest income	$828,655	$780,038	$734,439	$688,474	$662,801	$637,167	$599,155	$552,495
Interest expense	161,452	145,584	122,746	100,716	93,940	86,214	67,191	52,810
Net interest income	667,203	634,454	611,693	587,758	568,861	550,953	531,964	499,685
Provision for loan losses	25,089	18,633	19,370	13,000	17,042	10,113	23,938	9,088
Noninterest income	143,547	134,375	132,421	133,102	130,297	119,333	109,372	101,459
Noninterest expense	498,582	483,999	472,557	461,581	445,543	418,359	397,100	378,539
Income before provision for income taxes	287,079	266,197	252,187	246,279	236,573	241,814	220,298	213,517
Net income	231,418	213,546	209,781	199,083	194,277	200,009	186,600	176,774
Net income available to common shareholders	215,190	196,434	197,618	186,861	180,005	185,737	172,256	161,622
Diluted EPS	$ 1.29	$ 1.19	$ 1.20	$ 1.13	$ 1.10	$ 1.14	$ 1.06	$ 1.01

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

As required by Securities and Exchange Commission rules, we carried out an evaluation of the effectiveness of the design and operation of our "disclosure controls and procedures," as such term is defined in Rule 13a-15(e) under the Securities Exchange Act as of the end of the period covered by this report. Our management, including our chief executive officer and chief financial officer, supervised and participated in the evaluation. Based on that evaluation, the chief executive officer and the chief financial officer concluded that our disclosure controls and procedures, as of December 31, 2018, were effective for providing reasonable assurance that information required to be disclosed by us in such reports was accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

See "Item 8. Financial Statements and Supplementary Data."

Changes in Internal Control Over Financial Reporting

There was no significant change in our internal control over financial reporting during the quarter ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

This information is incorporated by reference to the Bank's 2019 Proxy Statement that will be filed with the FDIC pursuant to Regulation 14A not later than 120 days after the end of the Bank's fiscal year.

Item 11. Executive Compensation.

This information is incorporated by reference to the Bank's 2019 Proxy Statement that will be filed with the FDIC pursuant to Regulation 14A not later than 120 days after the end of the Bank's fiscal year.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by Item 201(d) of Regulation S-K regarding securities authorized for issuance under equity compensation plans and other information regarding security ownership is incorporated by reference to the Bank's 2019 Proxy Statement that will be filed with the FDIC pursuant to Regulation 14A not later than 120 days after the end of the Bank's fiscal year.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

This information is incorporated by reference to the Bank's 2019 Proxy Statement that will be filed with the FDIC pursuant to Regulation 14A not later than 120 days after the end of the Bank's fiscal year.

Item 14. Principal Accounting Fees and Services.

This information is incorporated by reference to the Bank's 2019 Proxy Statement that will be filed with the FDIC pursuant to Regulation 14A not later than 120 days after the end of the Bank's fiscal year.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(1) Financial Statements:

See "Item 8. Financial Statements and Supplementary Data."

(2) Financial Statement Schedules:

Financial Statement schedules are omitted either because they are not required or are not applicable, or because the required information is shown in the Financial Statements or notes thereto.

(3) Exhibits:

The exhibits to this Annual Report on Form 10-K listed below have been included with, or incorporated into, the copy of this report filed with the Federal Deposit Insurance Corporation and on our website. Copies of individual exhibits will be furnished to shareholders upon written request to First Republic Bank.

Exhibit No.	Description
3.1	Restated Articles of Incorporation of First Republic Bank, incorporated by reference to Exhibit 3.1 of Form 8-K filed on February 20, 2019.
3.2	Amended and Restated Bylaws of First Republic Bank, incorporated by reference to Exhibit 3.1 of Form 8-K filed on May 16, 2016.
4.1	Specimen stock certificate of First Republic Bank's common stock, incorporated by reference to Exhibit 4.1 of Amendment No. 2 to the Bank's Registration Statement on Form 10 filed on December 7, 2010.
4.2	Deposit Agreement, dated April 23, 2013, by and among the Bank, Computershare Shareowner Services LLC and the holders from time to time of the Depositary Receipts described therein, incorporated by reference to Exhibit 4.1 of Form 8-K filed on April 23, 2013.
4.3	Form of Depositary Receipt (included in Exhibit 4.2).
4.4	Deposit Agreement, dated October 28, 2013, by and among the Bank, Computershare Inc., Computershare Trust Company, N.A. and the holders from time to time of the Depositary Receipts described therein, incorporated by reference to Exhibit 4.1 of Form 8-K filed on October 28, 2013.
4.5	Form of Depositary Receipt (included in Exhibit 4.4).
4.6	Fiscal and Agency Paying Agreement, dated June 17, 2014, by and among the Bank and The Bank of New York Mellon Trust Company, N.A., incorporated by reference to Exhibit 4.1 of Form 8-K filed on June 17, 2014.
4.7	Form of Note (included in Exhibit 4.6).

Exhibit No.	Description
4.8	Deposit Agreement, dated May 27, 2015, by and among the Bank, Computershare Inc., Computershare Trust Company, N.A. and the holders from time to time of the Depositary Receipts described therein, incorporated by reference to Exhibit 4.1 of Form 8-K filed on May 27, 2015.
4.9	Form of Depositary Receipt (included in Exhibit 4.8).
4.10	Deposit Agreement, dated February 10, 2016, by and among the Bank, Computershare Inc., Computershare Trust Company, N.A. and the holders from time to time of the Depositary Receipts described therein, incorporated by reference to Exhibit 4.1 of Form 8-K filed on February 10, 2016.
4.11	Form of Depositary Receipt (included in Exhibit 4.10).
4.12	Fiscal and Agency Paying Agreement, dated August 1, 2016, between the Bank and The Bank of New York Mellon Trust Company, N.A., incorporated by reference to Exhibit 4.1 of Form 8-K filed on August 1, 2016.
4.13	Form of Note (included in Exhibit 4.12).
4.14	Fiscal and Agency Paying Agreement, dated February 13, 2017, between the Bank and The Bank of New York Mellon Trust Company, N.A., incorporated by reference to Exhibit 4.1 of Form 8-K filed on February 13, 2017.
4.15	Form of Note (included in Exhibit 4.14).
4.16	Fiscal and Paying Agency Agreement, dated June 6, 2017, between the Bank and The Bank of New York Mellon Trust Company, N.A., incorporated by reference to Exhibit 4.1 of Form 8-K filed on June 6, 2017.
4.17	Form of Note (included in Exhibit 4.16).
4.18	Deposit Agreement, dated June 7, 2017, by and among the Bank, Computershare Inc., Computershare Trust Company, N.A. and the holders from time to time of the Depositary Receipts described therein, incorporated by reference to Exhibit 4.1 of Form 8-K filed on June 7, 2017.
4.19	Form of Depositary Receipt (included in Exhibit 4.18).
4.20	Deposit Agreement, dated June 12, 2018, by and among the Bank, Computershare Inc., Computershare Trust Company, N.A. and the holders from time to time of the Depositary Receipts described therein, incorporated by reference to Exhibit 4.1 of Form 8-K filed on June 12, 2018.
4.21	Form of Depositary Receipt (included in Exhibit 4.20).
4.22	Other instruments defining the rights of debt holders. The registrant hereby agrees to furnish to the FDIC, upon request, copies of instruments defining the rights of holders of long-term debt of the registrant and its consolidated subsidiaries; currently no issuance of debt of the registrant exceeds 10% of the assets of the registrant and its subsidiaries on a consolidated basis.
10.1	Employment Agreement, dated June 15, 2010, between First Republic Bank and James H. Herbert, II, incorporated by reference to Exhibit 10.1 of Form 10-Q filed on May 8, 2012. (1)
10.2	Employment Agreement, dated June 15, 2010, between First Republic Bank and Katherine August-deWilde, incorporated by reference to Exhibit 10.2 of Form 10-Q filed on May 8, 2012. (1)
10.3	(i) Amendment No. 1, dated February 23, 2012, to the Employment Agreement, dated June 15, 2010, between James H. Herbert, II and the Bank, and (ii) the Restricted Stock Agreement, dated as of February 27, 2012, between James H. Herbert, II and the Bank, attached as Attachment A thereto, incorporated by reference to Exhibit 10.3 of Form 10-Q filed on May 8, 2012. (1)

Exhibit No.	Description
10.4	(i) Amendment No. 1, dated February 23, 2012, to the Employment Agreement, dated June 15, 2010, between Katherine August-deWilde and the Bank, and the Nonqualified Stock Option Agreement, dated July 1, 2010, between Katherine August-deWilde and the Bank, (ii) the Consulting Agreement, effective January 1, 2015, between Katherine August-deWilde and the Bank, attached as Exhibit A thereto (the "Consulting Agreement"), and (iii) the Restricted Stock Agreement, dated as of February 27, 2012, by and between Katherine August-deWilde and the Bank, attached as Attachment A to the Consulting Agreement, incorporated by reference to Exhibit 10.4 of Form 10-Q filed on May 8, 2012. (1)
10.5	Employment Agreement Amendment No. 2, dated September 20, 2013, to the Employment Agreement, dated June 15, 2010, as amended effective February 27, 2012, between Katherine August-deWilde and First Republic Bank, incorporated by reference to Exhibit 10.1 of Form 8-K filed on September 23, 2013. (1)
10.6	Employment Agreement Amendment No. 2, effective February 25, 2014, to the Employment Agreement, dated June 15, 2010, as amended effective February 27, 2012, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.6 of Form 10-K filed on February 28, 2014. (1)
10.7	Employment Agreement Amendment No. 3, Consulting Agreement Amendment No. 1, and Restricted Stock Agreement Amendment No. 1, effective February 25, 2014, to the Employment Agreement, dated June 15, 2010, as amended effective February 27, 2012 and December 31, 2013, between Katherine August-deWilde and the Bank, the Consulting Agreement, effective January 1, 2015, between Katherine August-deWilde and the Bank, the Restricted Stock Agreement, dated as of February 27, 2012, between Katherine August-deWilde and the Bank, and Letter Agreement, dated February 26, 2014, between Katherine August-deWilde and the Bank, incorporated by reference to Exhibit 10.7 of Form 10-K filed on February 28, 2014. (1)
10.8	Employment Agreement Amendment No. 3, effective December 1, 2015, to the Employment Agreement, dated June 15, 2010, as amended effective February 27, 2012 and February 25, 2014, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.1 of Form 8-K filed on December 2, 2015. (1)
10.9	Employment Agreement Amendment No. 4, effective May 10, 2017, to the Employment Agreement dated June 15, 2010, as amended effective February 27, 2012, February 25, 2014 and December 1, 2015, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.1 of Form 8-K filed on May 12, 2017. (1)
10.10	Amendment No. 2, effective September 13, 2017, to the Consulting Agreement, effective January 1, 2016, as amended, between Katherine August-deWilde and the Bank, incorporated by reference to Exhibit 10.1 of Form 8-K filed on September 15, 2017. (1)
10.11	Advances and Security Agreement, dated as of July 1, 2010, between the Federal Home Loan Bank of San Francisco and First Republic Bank, incorporated by reference to Exhibit 10.6 of the Bank's Registration Statement on Form 10 filed on November 10, 2010.
10.12	Form of Director and Officer Indemnification Agreement, incorporated by reference to Exhibit 10.7 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)
10.13	2010 Omnibus Award Plan, as amended and restated effective May 12, 2015, incorporated by reference to the Bank's Definitive Proxy Statement for the 2015 Annual Meeting of Shareholders on Schedule 14A filed on March 31, 2015.
10.14	Form of Nonqualified Stock Option Agreement under the 2010 Omnibus Award Plan—Time Vesting for California Resident, incorporated by reference to Exhibit 10.9 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)

Exhibit No.	Description
10.15	Form of Nonqualified Stock Option Agreement under the 2010 Omnibus Award Plan—Performance Vesting for California Resident, incorporated by reference to Exhibit 10.10 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)
10.16	Form of Nonqualified Stock Option Agreement under the 2010 Omnibus Award Plan—Time Vesting for Non-California Resident, incorporated by reference to Exhibit 10.11 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)
10.17	Form of Nonqualified Stock Option Agreement under the 2010 Omnibus Award Plan—Performance Vesting for Non-California Resident, incorporated by reference to Exhibit 10.12 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)
10.18	Form of Supplemental Executive Retirement Plan, incorporated by reference to Exhibit 10.13 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)
10.19	Form of Endorsement Method Split-Dollar Agreement, incorporated by reference to Exhibit 10.14 of the Bank's Registration Statement on Form 10 filed on November 10, 2010. (1)
10.20	Performance Share Unit Agreement, dated as of June 1, 2015, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.1 of Form 10-Q filed on August 6, 2015. (1)
10.21	Performance Share Unit Agreement, dated as of June 1, 2015, between Katherine August-deWilde and the Bank, incorporated by reference to Exhibit 10.2 of Form 10-Q filed on August 6, 2015. (1)
10.22	Form of Performance Share Unit Agreement—Performance Vesting under the 2010 Omnibus Award Plan, incorporated by reference to Exhibit 10.3 of Form 10-Q filed on August 6, 2015. (1)
10.23	First Republic Deferred Compensation Plan, incorporated by reference to Exhibit 10.24 of Form 10-K filed on February 28, 2014. (1)
10.24	Performance Share Unit Agreement, dated as of June 8, 2016, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.1 of Form 10-Q filed on August 5, 2016. (1)
10.25	Form of Performance Share Unit Agreement—Performance Vesting under the 2010 Omnibus Award Plan, incorporated by reference to Exhibit 10.2 of Form 10-Q filed on August 5, 2016. (1)
10.26	First Republic Bank 2017 Executive Incentive Plan, incorporated by reference to Annex A of the Bank's Definitive Proxy Statement for the 2017 Annual Meeting of Shareholders on Schedule 14A filed on March 27, 2017. (1)
10.27	First Republic Bank 2017 Omnibus Award Plan, incorporated by reference to Annex B of the Bank's Definitive Proxy Statement for the 2017 Annual Meeting of Shareholders on Schedule 14A filed on March 27, 2017. (1)
10.28	Performance Share Unit Agreement, dated as of June 16, 2017, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.1 of Form 10-Q filed on August 8, 2017. (1)
10.29	Form of Performance Share Unit Agreement—Performance Vesting under the 2017 Omnibus Award Plan, incorporated by reference to Exhibit 10.2 of Form 10-Q filed on August 8, 2017. (1)
10.30	Form of Restricted Stock Unit Agreement—Time Vesting under the 2017 Omnibus Award Plan, incorporated by reference to Exhibit 10.3 of Form 10-Q filed on August 8, 2017. (1)
10.31	Form of Performance Share Unit Agreement—Performance Vesting under the 2017 Omnibus Award Plan, incorporated by reference to Exhibit 10.1 of Form 10-Q filed on May 9, 2018. (1)
10.32	Performance Share Unit Agreement, dated as of June 15, 2018, between James H. Herbert, II and the Bank, incorporated by reference to Exhibit 10.1 of Form 10-Q filed on August 8, 2018. (1)

Exhibit No.	Description
10.33	Form of Performance Share Unit Agreement—Performance Vesting under the 2017 Omnibus Award Plan, incorporated by reference to Exhibit 10.2 of Form 10-Q filed on August 8, 2018. (1)
10.34	Form of Restricted Stock Unit Agreement—Time Vesting under the 2017 Omnibus Award Plan, incorporated by reference to Exhibit 10.3 of Form 10-Q filed on August 8, 2018. (1)
10.35	Form of Performance Share Unit Agreement—Performance Vesting under the 2017 Omnibus Award Plan, filed herewith. (1)
10.36	First Republic Bank Deferred Compensation Plan, as amended effective July 1, 2018, filed herewith. (1)
21	Subsidiaries of First Republic Bank.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

(1) This exhibit is a management contract or a compensatory plan or arrangement.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Bank has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

FIRST REPUBLIC BANK

By: /s/ MICHAEL J. ROFFLER **Michael J. Roffler**	Executive Vice President and Chief Financial Officer	February 28, 2019

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 Bank and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ JAMES H. HERBERT, II **(James H. Herbert, II)**	Chairman, Chief Executive Officer and Director	February 28, 2019
/s/ HAFIZE GAYE ERKAN **(Hafize Gaye Erkan)**	President and Director	February 28, 2019
/s/ MICHAEL J. ROFFLER **(Michael J. Roffler)**	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2019
/s/ OLGA TSOKOVA **(Olga Tsokova)**	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 28, 2019
/s/ KATHERINE AUGUST-DEWILDE **(Katherine August-deWilde)**	Vice Chair and Director	February 28, 2019
/s/ THOMAS J. BARRACK, JR. **(Thomas J. Barrack, Jr.)**	Director	February 28, 2019
/s/ FRANK J. FAHRENKOPF, JR. **(Frank J. Fahrenkopf, Jr.)**	Director	February 28, 2019
/s/ L. MARTIN GIBBS **(L. Martin Gibbs)**	Director	February 28, 2019
/s/ BORIS GROYSBERG **(Boris Groysberg)**	Director	February 28, 2019
/s/ SANDRA R. HERNÁNDEZ **(Sandra R. Hernández)**	Director	February 28, 2019
/s/ PAMELA J. JOYNER **(Pamela J. Joyner)**	Director	February 28, 2019
/s/ REYNOLD LEVY **(Reynold Levy)**	Director	February 28, 2019
/s/ DUNCAN L. NIEDERAUER **(Duncan L. Niederauer)**	Director	February 28, 2019
/s/ GEORGE G.C. PARKER **(George G.C. Parker)**	Director	February 28, 2019
/s/ CHERYL SPIELMAN **(Cheryl Spielman)**	Director	February 28, 2019

Exhibit 10.35

FIRST REPUBLIC BANK

2017 OMNIBUS AWARD PLAN

PERFORMANCE SHARE UNIT AGREEMENT

THIS PERFORMANCE SHARE UNIT AGREEMENT (this "Agreement"), dated as of _______________ (the "Date of Grant"), is made by and between **First Republic Bank**, a California state-chartered bank ("Bank") and ________________________ ("Participant").

WHEREAS, Bank adopted the **First Republic Bank** 2017 Omnibus Award Plan (the "Plan"), pursuant to which performance share unit awards may be granted with respect to Common Stock of Bank;

WHEREAS, Bank desires to grant Participant a performance share unit award with respect to the number of shares of Common Stock provided for herein; and

WHEREAS, Bank's grant of performance share units is conditioned on Participant's agreeing to the Restrictive Covenants attached as Appendix A (which is an integral part of this Agreement) (the "Restrictive Covenants").

NOW, THEREFORE, in consideration of the recitals and the mutual agreements herein contained, the parties hereto agree as follows:

1. Grant of Performance Share Units.

(a) Pursuant to Sections 8 and 9(a) of the Plan, Bank hereby grants to Participant an Award for a target number of ________________ performance share units ("Target Award"). Each performance share unit ("PSU") represents the right to receive one share of Common Stock of Bank (each, a "Share") subject to the terms and conditions set forth in this Agreement and the Plan. The number of PSUs that Participant actually earns for the Restricted Period (up to the target number) will be determined by the level of achievement of the performance goals as described in section 2(a).

(b) Incorporation by Reference, Etc. The provisions of the Plan are hereby incorporated herein by reference. Except as otherwise expressly set forth herein, this Agreement shall be construed in accordance with the provisions of the Plan and any capitalized terms not otherwise defined in this Agreement shall have the meaning set forth in the Plan. In the event of conflict between the terms herein and the terms of the Plan, the terms of the Plan will govern the PSUs.

(c) Compliance with Employment Policies and Restrictive Covenants. Notwithstanding anything to the contrary contained herein, Participant agrees that his or her entitlement to retain any PSUs and to receive Shares (including any cash or other securities or property payable in lieu thereof and any dividend equivalents in respect thereof) upon settlement of the PSUs shall be conditioned on Participant's compliance with the covenants and other obligations set forth in the Restrictive Covenants and otherwise in the employment policies of Bank, as such covenants, obligations and policies may be revised from time to time by Bank

(collectively, the "Employment Policies"), and Participant further agrees that the Committee may in its sole discretion cancel any PSU, in whole or in part, if Participant, without the consent of Bank, shall fail to comply with any of the Employment Policies, or otherwise engages in activity that is in conflict with or adverse to the interest of Bank or any Affiliate, including fraud or conduct contributing to any financial restatements or irregularities, as determined by the Committee in its sole discretion. Participant agrees that Bank may condition the settlement of the PSUs upon Participant's written certification of his or her compliance with any of the Employment Policies and the other provisions of this Section 1(c).

2. Terms and Conditions.

(a) Restricted Period. The period of time between the Date of Grant and the vesting of PSUs (and the termination of restrictions thereon) will be referred to herein as the "Restricted Period." Except as may otherwise be provided herein, 25% of the PSUs shall become vested on each twelve-month anniversary of the Date of Grant, subject to both (i) the Committee's certification of Bank's achievement of a 10.5% or greater return on average tangible common equity ("ROATCE") in the 12-month period ending on the last day of the calendar quarter immediately preceding the vesting date, and (ii) Participant's continuous service as an employee or, if determined by the Committee, a consultant ("Continuous Service") with Bank or its Affiliates through each such vesting date. ROATCE is computed as net income available to common shareholders divided by average tangible common equity. For purposes of calculating ROATCE, all averages shall be calculated using quarter end average numbers. Except as may otherwise be provided herein, if Participant's Continuous Service with Bank is terminated at any time for any reason prior to the lapse of the Restricted Period, all PSUs granted hereunder that have not vested on or prior to such termination of Continuous Service shall be forfeited by Participant.

(b) Impact of a Change In Control on PSUs.

(i) Substitution or Assumption by Successor. Upon a Change in Control, as defined in the Plan, in which this Award is assumed or substituted with an equivalent value award, the performance conditions described in Section 2(a) will be deemed to be met in full, and the Award (including any substitute or replacement award) will convert to a non-performance based award (without proration) and will vest on the vesting dates described in Section 2(a) in accordance with this Section 2 subject only to Continuous Service through each such date (except as otherwise set forth in this Section 2).

(ii) (No Substitution or Assumption by Successor. Subject to Participant's Continuous Service through the date thereof, and notwithstanding Section 2(a) above, the performance conditions described in Section 2(a) will be deemed to be met in full, and the vesting of the PSUs shall be accelerated upon any Change in Control, as defined in the Plan, in which the PSUs are not substituted, assumed, replaced or continued by a successor pursuant to the terms of the Plan.

(c) Treatment of PSUs Upon Termination of Continuous Service.

(i) General. Except as provided in Section 2(b)(ii) above or Section 2(c)(ii) below, if Participant's Continuous Service terminates prior to the last day of the Restricted Period applicable to any outstanding PSUs for any reason (other than by reason of death or Disability as set forth below), then Participant shall forfeit all outstanding, unvested PSUs, which shall terminate and expire on the date of such termination of Continuous Service without consideration to Participant and without any action by Bank or any Affiliate. Neither Participant nor any successors, heirs, assigns, or legal representatives of Participant shall thereafter have any rights or interest in such PSUs or consideration therefor.

(ii) Involuntary Termination following Change in Control. If Participant's Continuous Service is terminated during the Restricted Period within 24 months following a Change in Control as a result of termination by Bank without Cause, as defined in the Plan, or Participant's resignation for Good Reason, as defined below, the vesting of all of the outstanding PSUs will accelerate in full upon such termination.

For purposes of this Agreement, "Good Reason" means the occurrence of any of the following, without Participant's express written consent:

(1) A material reduction in Participant's authority, duties or responsibilities;

(2) A material reduction in Participant's base compensation; or

(3) A material change in the geographic location at which Participant must perform his services; provided that in no instance will the relocation of Participant to a facility or a location of thirty-five (35) miles or less from Participant's then current office location be deemed material for purposes of this Agreement;

provided, however, that a termination of Continuous Service shall not be considered for "Good Reason" unless Participant provides written notice of the initial occurrence of one of the foregoing events to Bank within ninety (90) days thereafter, and provides Bank thirty (30) days to cure, and then terminates employment within one hundred eighty (180) days following such initial occurrence.

(d) Disability. Notwithstanding Section 2(c)(i) above, if Participant's Continuous Service terminates during the Restricted Period because Participant becomes disabled within the meaning of that term under Section 409A(a)(2)(C) of the Code ("Disability"), PSUs will continue to be eligible to vest during the Restricted Period in accordance with the schedule set forth in Section 2(a), subject to Bank's achievement of ROATCE described in Section 2(a)(i), but without regard to Participant's Continuous Service as set forth in Section 2(a)(ii).

(e) Death. Notwithstanding Section 2(c)(i) above, if Participant's Continuous Service terminates during the Restricted Period as a result of Participant's death, Participant will fully vest in the Target Award on the date of death.

(f) Settlement of PSUs. As soon as practicable after vesting, each outstanding PSU will be settled through the delivery by Bank of one share of Bank Common Stock and any dividend equivalents credited with respect to such PSU. Notwithstanding any contrary provision of this Agreement, pursuant to Section 8(d)(ii) of the Plan, the Committee may, in its sole discretion, elect to pay cash or part cash and part Shares in lieu of delivering only Shares in respect of any vested PSUs.

(g) Dividend Equivalents. If a cash dividend is paid with respect to the Shares, a cash dividend equivalent equal to the total cash dividend Participant would have received had his or her outstanding PSUs been actual Shares will be accumulated and paid in cash to Participant through payroll if and when such PSUs become vested and settled. Neither Participant nor any successors, heirs, assigns, or legal representatives of Participant shall have any rights or interest in dividend equivalent amounts in respect of any PSUs which are forfeited.

(h) Transferability. Unless otherwise permitted by the Committee pursuant to Section 13(c) of the Plan, the PSUs may not be assigned, alienated, pledged, attached, sold or otherwise transferred or encumbered by Participant other than by will or by the laws of descent and distribution, and any such purported assignment, alienation, pledge, attachment, sale, transfer or encumbrance shall be void and unenforceable against Bank; provided, that the designation of a beneficiary shall not constitute an assignment, alienation, pledge, attachment, sale, transfer or encumbrance.

(i) Rights as Shareholder. Participant shall not be deemed for any purpose to be the owner of any of the Shares underlying the PSUs unless, until and to the extent that (i) the PSU shall have become vested pursuant to its terms and (ii) Bank shall have issued and delivered to Participant the Shares underlying such PSUs.

(j) Withholding Taxes. To the extent that the vesting of the PSUs or the receipt of Shares (including any cash or other securities or property payable in lieu thereof), or the vesting or receipt of dividend equivalents, results in income to Participant for federal or state tax purposes, Participant shall make adequate arrangements satisfactory to Bank, at its discretion, to meet Bank's obligations under applicable tax withholding laws or regulations. Unless Bank shall otherwise provide, Bank shall withhold Shares that would otherwise be issued upon vesting of the PSUs to cover applicable withholding taxes, equal to the greatest number of whole shares having a Fair Market Value on the date immediately preceding the date on which the applicable tax liability is determined not in excess of the minimum amount required to satisfy the statutory withholding tax obligations with respect to the PSUs. Alternatively, Bank, in its sole discretion, may provide for the withholding of applicable taxes from the proceeds of the sale of Shares acquired upon vesting of the PSUs, either through a voluntary sale or through a mandatory sale arranged by Bank (on Participant's behalf pursuant to this authorization). Bank may also require Participant to deliver to Bank at the time of vesting of the PSUs or receipt of Shares, or the vesting or receipt of other amounts, as the case may be, such amount of money as Bank may require to satisfy all tax withholding obligations of Bank, and Participant also authorizes Bank to satisfy all such tax withholding obligations from his or her wages or other cash compensation payable to Participant by Bank. Bank may refuse to issue or deliver the Shares or other amounts unless all withholding taxes that may be due as a result of this award have been paid.

3. Miscellaneous.

(a) Notices. All notices, demands or other communications provided for or permitted hereunder shall be made in writing and shall be by registered or certified first class mail, return receipt requested, telecopier, courier service, overnight mail or personal delivery:

(i) if to Bank:

First Republic Bank
111 Pine Street
San Francisco, CA 94111
Attention: Michael Roffler
Facsimile No.: (415) 262-4131

(ii) if to Participant, at Participant's last known address on file with Bank.

(b) No Right to Continued Employment or Service. Nothing in the Plan or in this Agreement shall confer upon Participant any right to continue in the service of Bank or its Affiliates or shall interfere with or restrict in any way the right of Bank or its Affiliates, which are hereby expressly reserved, to remove, terminate or discharge Participant at any time for any reason whatsoever.

(c) Bound by Plan. By signing this Agreement, Participant acknowledges that he has received a copy of the Plan and has had an opportunity to review the Plan and agrees to be bound by all the terms and provisions of the Plan (other than those terms expressly excluded from application in this Agreement).

(d) Successors. The terms of this Agreement shall be binding upon and inure to the benefit of Bank, its successors and assigns, and of Participant and the beneficiaries, executors, administrators, heirs and successors of Participant.

(e) Modifications. No change, modification or waiver of any provision of this Agreement shall be valid unless the same is in writing and signed by the parties hereto.

(f) Code Section 409A. To the fullest extent applicable, this Agreement and the benefits payable hereunder are intended to be exempt from the definition of "nonqualified deferred compensation" under Section 409A of the Code in accordance with the "short-term deferral" exception available under the regulations promulgated under Section 409A. In that regard, Shares (including any cash or securities or other property payable in lieu thereof) and any dividend equivalents shall be issued to Participant no later than March 15 following the calendar year in which Participant's right to receive such Shares or other amounts pursuant to this Agreement is no longer subject to a substantial risk of forfeiture within the meaning of Section 409A and the regulations thereunder. To the extent that any such benefit is or becomes subject to Section 409A due to a failure to qualify for an exemption from the definition of nonqualified deferred compensation in accordance with such regulations, this Agreement is intended to comply with the applicable requirements of Section 409A with respect to such benefits. This Agreement shall be interpreted and administered to the extent possible in a manner consistent

with the foregoing statement of intent, and any ambiguity as to its compliance with Section 409A will be read in such a manner so that all payments hereunder comply with Section 409A of the Code. If the Committee determines that any Shares issued or amounts payable hereunder will be taxable to Participant under Section 409A of the Code and related Department of Treasury guidance, prior to delivery to such Participant of such Shares or payment to such Participant of such amount, Bank may (a) adopt such amendments to this Agreement and the Plan, and appropriate policies and procedures, including amendments and policies with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the PSUs granted hereunder and/or (b) take such other actions as the Committee determines necessary or appropriate to avoid or limit the imposition of an additional tax under Section 409A of the Code. Further, each installment of a series of payments hereunder will be deemed to be a separate payment for purposes of Section 409A of the Code. Finally, solely to the extent required by Section 409A of the Code, and notwithstanding any other provision of the Plan or this Agreement, any payments made hereunder on account of the "separation from service" (within the meaning of Section 409A(a)(2)(A)(i) of the Code) of a Participant who is determined to be a "specified employee" (within the meaning of Section 409A(a)(2)(B)(i) of the Code) shall not actually be paid before the date which is six months after Participant's separation from service (or, if earlier, the date of death of Participant) or a "change in control event" within the meaning of Section 409A of the Code).

(g) Severability. If any provision of this Agreement (including Appendix A) or the application thereof is held invalid, the invalidity shall not affect other provisions or applications of this Agreement which can be given effect without the invalid provisions or applications and to this end the provisions of this Agreement are declared to be severable. If any term or provision of this Agreement is invalid, illegal or incapable of being enforced by any applicable law or public policy, all other conditions and provisions of this Agreement shall nonetheless remain in full force and effect so long as the economic and legal substance of the transactions contemplated by this Agreement is not affected in any manner materially adverse to any party.

(h) Entire Agreement. This Agreement and the Plan, including all appendices and exhibits thereto, contain the entire agreement and understanding of the parties hereto with respect to the subject matter contained herein and therein and supersede all prior communications, representations and negotiations in respect thereto.

(i) Venue and Governing Law. The parties agree that the exclusive jurisdiction and venue for any action or proceeding arising under or related to this Agreement shall be the state or federal courts located in the State of the Bank office to which Participant is assigned as of (i) the Date of Grant, or (ii) in the event Participant previously received a grant of PSUs, the date on which Participant received the first grant of PSUs (the "Forum State"). This Agreement and the rights and obligations of Participant hereunder shall be construed and determined in accordance with the laws of the Forum State, without regard to the Forum State's internal conflict of laws principles.

(j) Headings. The headings of the Sections hereof are provided for convenience only and are not to serve as a basis for interpretation or construction, and shall not constitute a part, of this Agreement.

(k) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, this Agreement (which includes all of the terms of Appendix A) has been executed and delivered by the parties hereto on the first date set forth above. For the avoidance of doubt, Appendix A contains restrictive covenants that limit the ability of Participant to engage in certain practices following employment with Bank and is an integral part of this Agreement, without which Bank would not have granted the opportunity to earn the PSUs.

First Republic Bank

By: /s/ Michael J. Roffler

APPENDIX A

RESTRICTIVE COVENANTS

The Restrictive Covenants set forth in this Appendix A to the Performance Share Unit Agreement (the "Agreement") limit the ability of Participant to engage in certain practices following employment with Bank and is an integral part of the Agreement, without which Bank would not have granted the opportunity to earn the PSUs.

1. Non-Competition; Garden Leave.

(a) Non-Competition. You agree that while you are employed by Bank or its Affiliates, you shall not, directly or indirectly (without the prior written consent of Bank), (i) participate in or associate with (including as a director, officer, employee, partner, consultant, agent or advisor) a Competitive Business, nor (ii) hold a 5% or greater equity (including stock options, whether or not exercisable), voting or profit participation interest in a Competitive Business.

(b) Garden Leave. You agree that upon the termination of your employment by Bank or its Affiliates or by you for any reason you shall, upon request by Bank or such Affiliate, and its undertaking to pay you an amount equal to your then base monthly salary (subject to any applicable withholdings) during such period, maintain yourself available to consult with Bank or such Affiliate for 90 days following such termination (the "Consulting Period") for the purpose of assuring an orderly transition of your duties and responsibilities to another employee of Bank and, during such period, you shall not engage in any Competitive Business. For the avoidance of doubt, during the Consulting Period you shall not be eligible to receive any bonus payments, awards or other incentive compensation, unless provided otherwise pursuant to the terms of any applicable award agreements, the Consulting Period not being part of your Continuous Service for purposes of the Agreement or concepts similar to continuous service under any other applicable award agreements.

2. Non-Solicitation. You agree that (a) during your employment and for a period ending on the first anniversary following termination of your employment by Bank or its Affiliates or by you for any reason, you shall not take any action, directly or indirectly (without the prior written consent of Bank), that causes or could reasonably be expected to cause any person who is then an employee of Bank or its Affiliates to resign from Bank or its Affiliates or to apply for or accept employment with any other business or enterprise or (b) during your employment, except to the extent otherwise agreed in writing by Bank, you shall not take any action, directly or indirectly (without the prior written consent of Bank), that causes or could reasonably be expected to cause any customer or prospective customer of Bank or its Affiliates, to whom you provided services or with whom you otherwise had contact to (i) become a customer of or transact any business with a Competitive Business, or (ii) reduce or refrain from doing any business with Bank or its Affiliates.

3. Non-Disparagement and Non-Disclosure. You agree that, while you are employed by Bank or its Affiliates, you will not, in any manner, directly or indirectly disparage, portray in a negative light, or make any statement which would be harmful to, or lead to unfavorable publicity for, Bank or its Affiliates or any of its or their current or former directors, officers or associates, including without limitation, in any and all interviews, oral statements, written materials, electronically-displayed materials and materials or information displayed on internet- or internet-related sites, except that you may make such disclosure on a confidential basis to your tax, financial or legal advisors, your immediate family members or any prospective employer or business partner, *provided that*, in each case, such third party agrees to keep such circumstances confidential. Nothing in this Section 3 shall prohibit or restrict you from (A) providing information to, or otherwise assisting in, an internal investigation, an investigation by Congress, the Securities and Exchange Commission ("SEC"), or any other regulatory or law enforcement agency or self-regulatory organization ("SRO"); (B) testifying, participating, or otherwise assisting in a proceeding relating to an alleged violation of any law relating to fraud or any rule or regulation of the SEC or any SRO or other regulatory agency or in an internal investigation by Bank or its Affiliates; (C) initiating testifying, participating, or otherwise assisting in any case, administrative investigation or proceeding relating to an alleged violation of any discrimination or wage law or other law; or (D) responding to a duly served subpoena, *provided that* you promptly give Bank written notice thereof so that Bank may consider what steps it can take to preserve the confidentiality of such information.

4. Confidential and Proprietary Information. You agree that all inventions, copyrightable material, trade secrets or other work conceived, developed or otherwise performed by you in the scope of your employment (during or after business hours) that are related to the financial services industry or related to Bank products, services or supporting activities were or will promptly be disclosed to your manager, are the sole property of Bank and its Affiliates and are "works for hire" that are owned by Bank. You agree that while you are employed by Bank or its Affiliates and following termination of your employment for any reason, you will do whatever Bank deems necessary to transfer to Bank or its Affiliates, or to document Bank's ownership of, any such property. You further agree not to challenge Bank's ownership rights in such intellectual property, or claim that such intellectual property is owned or co-owned by another person or entity, including yourself. Furthermore, you agree not to use such intellectual property in any way or to attempt to transfer such intellectual property to any other person or entity. The above requirements will not apply to any invention that you develop entirely on your

own time and to which all of the following apply: (a) no equipment, supplies, facilities, software or Confidential Information (as defined below) of Bank or any of its Affiliates are used; (b) such invention is not related to Bank's actual or demonstrably anticipated research and development (or that of any of Bank's Affiliates); and (c) such invention does not result from any work performed by you for Bank or any of its Affiliates. You agree that Bank and its Affiliates expend substantial time, effort and resources identifying customers with particular needs or characteristics which Bank and its Affiliates seek to address and that information or lists of any kind pertaining to the identity, contact date, needs and characteristics of such customers, or to the terms and conditions of such customers' business relationship with Bank or its Affiliates, constitutes Confidential Information (as defined below) and is proprietary to and a trade secret of Bank and its Affiliates and may not be used by you for any purpose other than in your employment by or service to Bank or its Affiliates. You also agree that the provisions of the immediately preceding sentence shall apply to information pertaining to prospective customers of Bank or its Affiliates. You further agree that following termination of your employment for any reason, you will not, without prior written consent or as otherwise required by law, disclose or publish (directly or indirectly) any Confidential Information to any person or use copy, transmit or remove (or attempt to use, copy, transmit or remove) any Confidential Information for any purpose. Nothing in this Section 4 shall prohibit or restrict you from (A) providing information to, or otherwise assisting in, an internal investigation, an investigation by Congress, the SEC, or any other regulatory or law enforcement agency or SRO, (B) testifying, participating, or otherwise assisting in a proceeding relating to an alleged violation of any federal law relating to fraud or any rule or regulation of the SEC or any SRO or other regulatory agency or in an internal investigation by Bank or an Affiliate, (C) initiating, testifying, participating, or otherwise assisting in any case, administrative investigation or proceeding relating to an alleged violation of any discrimination or wage law or other law, or (D) responding to a duly served subpoena, *provided that* you promptly give Bank written notice thereof so that Bank may consider what steps it can take to preserve the confidentiality of such information. For the avoidance of doubt, you and Bank agree that no confidentiality, non-disparagement or other obligation you owe to Bank prohibits you from reporting possible violations of U.S. Federal law or regulation to any governmental agency or entity under any whistleblower protection provision of U.S. Federal or U.S. State law or regulation (including Section 21F of the Securities Exchange Act of 1934 or Section 806 of the Sarbanes-Oxley Act of 2002) or requires you to notify Bank of any such report. In making any such report, however, you are not authorized to disclose communications with counsel that were made for the purpose of receiving legal advice, that contain legal advice or that are protected by the attorney work product or similar privilege. You are hereby notified that the immunity provisions in Section 1833 of title 18 of the United States Code provide that an individual cannot be held criminally or civilly liable under any federal or state trade secret law for any disclosure of a trade secret that is made (a) in confidence to federal, state or local government officials, either directly or indirectly, or to an attorney, and is solely for the purpose of reporting or investigating a suspected violation of the law, (b) under seal in a complaint or other document filed in a lawsuit or other proceeding, or (c) to your attorney in connection with a lawsuit for retaliation for reporting a suspected violation of law (and the trade secret may be used in the court proceedings for such lawsuit) as long as any document containing the trade secret is filed under seal and the trade secret is not disclosed except pursuant to court order.

5. Cooperation. You agree (a) to provide truthful and complete cooperation, including but not limited to, your appearance at interviews and depositions, in all legal matters, including but not limited to, regulatory and litigation proceedings relating to your employment or areas of responsibility at Bank or its Affiliates, whether or not such matters have already been commenced, and (b) to provide Bank's counsel, upon request, all documents or electronic media in your possession or control relating to such regulatory or litigation matter.

6. Reasonableness of Covenant. You agree that the covenants contained herein are reasonable and necessary to protect the confidentiality of the customer lists, the terms, conditions and nature of customer relationships, and other trade secrets and Confidential Information concerning Bank and its Affiliates, acquired by you and to avoid actual or apparent conflicts of interest.

7. Injunctive Relief. Without limiting any remedies available to Bank, including the remedies set forth in Section 1(c) of the Agreement, you acknowledge and agree that a breach of the covenants contained in Sections 1-5 of this Appendix A will result in injury to Bank and its Affiliates for which there is no adequate remedy at law and that it will not be possible to measure damages for such injuries precisely. Therefore, you agree that, in the event of such a breach or threat thereof, Bank shall be entitled to seek a temporary restraining order and a preliminary and permanent injunction, without bond or other security, restraining you from engaging in activities prohibited by Sections 1-5 of this Appendix A or such other relief as may be required specifically to enforce any of the covenants in Sections 1-5 of this Appendix A.

8. Definitions. For purposes of these covenants, the following terms shall have the following meanings:

(a) "Competitive Business" means any business enterprise that either (i) engages in any activity that competes with the business of Bank or its Affiliates or (ii) holds a 5% or greater equity, voting or profit participation interest in any enterprise that engages in such a competitive activity.

(b) "Confidential Information" means any information concerning the business or affairs of Bank or any of its Affiliates which is not generally known to the public and includes, but is not limited to, any file, document, book, account, list (including without limitation customer lists), process, patent, specification, drawing, design, computer program or file, computer disk, method of operation, recommendation, report, plan, survey, data, manual, strategy, financial data, client information or data (including the terms and conditions of any business relationships between clients and Bank or its Affiliates), or contract which comes to your knowledge in the course of your employment or which is generated by you in the course of performing your obligations to Bank whether alone or with others.

PARTICIPANT NAME: ________________________

ACCEPTED ON: ________________________

Exhibit 10.36

First Republic Bank
Deferred Compensation Plan
As Amended And Restated, Effective July 1, 2018

Effective Date
July 1, 2018

First Republic Bank Deferred Compensation Plan

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ARTICLE I
Establishment and Purpose

First Republic Bank (the "Company") has adopted this First Republic Bank Deferred Compensation Plan, applicable to Compensation deferred under Compensation Deferral Agreements submitted on and after the Effective Date.

The purpose of the Plan is to attract and retain certain key employees and officers by providing them with an opportunity to defer receipt of a portion of their salary, bonus, and other specified compensation. Participating Employers may also make discretionary Company contributions to Participant accounts. The Plan is not intended to meet the qualification requirements of Code Section 401(a), but is intended to meet the requirements of Code Section 409A, and shall be operated and interpreted consistent with that intent.

The Plan constitutes an unsecured promise by a Participating Employer to pay benefits in the future. Participants in the Plan shall have the status of general unsecured creditors of the Company or the Participating Employer, as applicable. Each Participating Employer shall be solely responsible for payment of the benefits attributable to services performed for it. The Plan is unfunded for Federal tax purposes and is intended to be an unfunded arrangement for eligible employees who are part of a select group of management or highly compensated employees of the Employer within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA and independent contractors. Any amounts set aside to defray the liabilities assumed by the Company or an Participating Employer will remain the general assets of the Company or the Participating Employer and shall remain subject to the claims of the Company's or the Participating Employer's creditors until such amounts are distributed to the Participants.

ARTICLE II
Definitions

2.1 Account. Account means a bookkeeping account maintained by the Committee to record the payment obligation of a Participating Employer to a Participant as determined under the terms of the Plan. The Committee may maintain an Account to record the total obligation to a Participant and component Accounts to reflect amounts payable at different times and in different forms. Reference to an Account means any such Account established by the Committee, as the context requires. Accounts are intended to constitute unfunded obligations within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA.

2.2 Account Balance. Account Balance means, with respect to any Account, the total payment obligation owed to a Participant from such Account as of the most recent Valuation Date.

2.3 Affiliate. Affiliate means a corporation, trade or business that, together with the Company, is treated as a single employer under Code Section 414(b) or (c).

2.4 Base Compensation. Base Compensation means a Participant's regularly paid cash salary earned for the calendar year in which it is paid, and excludes, without limitation, payments from, and contributions by the Bank to, any insurance, pension or retirement, savings, severance or other employee benefit plan or arrangement for the applicable Plan Year.

2.5 Beneficiary. Beneficiary means a natural person, estate, or trust designated by a Participant in accordance with Section 6.5 hereof to receive payments to which a Beneficiary is entitled in accordance with provisions of the Plan.

2.6 Board of Directors. Board of Directors means, for a Participating Employer organized as a corporation, its board of directors and for a Participating Employer organized as a limited liability company, its board of managers.

2.7 Business Day. Business Day means each day on which the New York Stock Exchange is open for business.

2.8 Bonus. Bonus means the amount earned by the Participant under the Company's Executive Incentive Plan, or such other incentive compensation or bonus arrangement as may be designated by the Committee for deferral opportunities hereunder.

2.9 Change in Control. Change in Control means, with respect to a Participating Employer that is organized as a corporation, any of the following events: (i) a change in the ownership of the Participating Employer, (ii) a change in the effective control of the Participating Employer, or (iii) a change in the ownership of a substantial portion of the assets of the Participating Employer.

Change in Ownership. For purposes of this Section, a change in the ownership of the Participating Employer occurs on the date on which any one person, or more than one person acting as a group, acquires ownership of stock of the Participating Employer that, together with stock held by such person or group constitutes more than 50% of the total fair market value or total voting power of the stock of the Participating Employer. The acquisition by a person or group owning more than 50% of the total fair market value or total voting power of the stock of such Participating Employer of additional shares of such Participating Employer shall not constitute a "change of the ownership" of such Participating Employer.

Change in Effective Control. A change in the effective control of the Participating Employer occurs on the date on which either: (i) a person, or more than one person acting as a group, acquires ownership of stock of the Participating Employer possessing 35% or more of the total voting power of the stock of the Participating Employer, taking into account all such stock acquired during the 12-month period ending on the date of the most recent acquisition, provided that the acquisition by a person or group owning more than 35% of the total fair market value or total voting power of the stock of such Participating Employer of additional shares of such Participating Employer shall not constitute a "change of effective control" of such Participating Employer, or (ii) a

majority of the members of the Participating Employer's Board of Directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of such Board of Directors prior to the date of the appointment or election, but only if no other corporation is a majority shareholder of the Participating Employer.

Change in Ownership of Substantial Portion of Assets. A change in the ownership of a substantial portion of assets occurs on the date on which any one person, or more than one person acting as a group, other than a person or group of persons that is related to the Participating Employer, acquires assets from the Participating Employer that have a total gross fair market value equal to or more than 40% of the total gross fair market value of all of the assets of the Participating Employer immediately prior to such acquisition or acquisitions, taking into account all such assets acquired during the 12-month period ending on the date of the most recent acquisition. A transfer of assets shall not be treated as a "change in the ownership of a substantial portion of the assets" when such transfer is made to an entity that is controlled by the shareholders of the transferor corporation as determined under Treasury Regulations Section 1.409A-3(i)(5)(vii)(B).

An event constitutes a Change in Control with respect to a Participant only if the Participant performs services for the Participating Employer that has experienced the Change in Control, or the Participant's relationship to the affected Participating Employer otherwise satisfies the requirements of Treasury Regulations Section 1.409A-3(i)(5)(ii).

Notwithstanding anything to the contrary herein, with respect to a Participating Employer that is a partnership or limited liability company, Change in Control means only a change in the ownership of such entity or a change in the ownership of a substantial portion of the assets of such entity, and the provisions set forth above respecting such changes relative to a corporation shall be applied by analogy. Any reference to a "majority shareholder" shall be treated as referring to a partner or member that (a) owns more than 50% of the capital and profits interest of such entity, and (b) alone or together with others is vested with the continuing exclusive authority to make management decisions necessary to conduct the business for which the partnership or limited liability company was formed.

2.10 Claimant. Claimant means a Participant or Beneficiary filing a claim under Article XI of this Plan.

2.11 Code. Code means the Internal Revenue Code of 1986, as amended from time to time.

2.12 Code Section 409A. Code Section 409A means section 409A of the Code, and regulations and other guidance issued by the Treasury Department and Internal Revenue Service thereunder.

2.13 Committee. Committee means the Compensation Committee of the Board of Directors.

2.14 Company. Company means First Republic Bank.

2.15 Company Contribution. Company Contribution means a credit by a Participating Employer to a Participant's Account(s) in accordance with the provisions of Article V of the Plan. Unless the context clearly indicates otherwise, a reference to Company Contribution shall include Earnings attributable to such contribution.

2.16 Compensation. Compensation means a Participant's Base Compensation, Bonus(es), commission(s), and such other sources or components of cash or equity-based compensation approved by the Committee as Compensation that may be deferred under Section 4.2 of this Plan, excluding any compensation that has been previously deferred under this Plan or any other arrangement subject to Code Section 409A and excluding any compensation that is not U.S. source income.

2.17 Compensation Deferral Agreement. Compensation Deferral Agreement means an agreement between a Participant and a Participating Employer that specifies: (i) the amount of each component of Compensation that the Participant has elected to defer to the Plan in accordance with the provisions of Article IV, and (ii) the Payment Schedule applicable to one or more Accounts.

2.18 Deferral. Deferral means a credit to a Participant's Account(s) that records that portion of the Participant's Compensation that the Participant has elected to defer to the Plan in accordance with the provisions of Article IV. Unless the context of the Plan clearly indicates otherwise, a reference to Deferrals includes Earnings attributable to such Deferrals.

2.19 Earnings. Earnings means an adjustment to the value of an Account in accordance with Article VII.

2.20 Effective Date. Effective Date means July 1, 2018.

2.21 Eligible Employee. Eligible Employee means an Employee who is a member of a select group of management or a highly compensated employee, officer, or an independent contractor who has been notified during an applicable enrollment of his or her status as an Eligible Employee. The Committee has the discretion to determine which Employees and independent contractors are Eligible Employees for each enrollment.

2.22 Employee. Employee means a common-law employee of an Employer.

2.23 Employer. Employer means the Company and each Affiliate.

2.24 ERISA. ERISA means the Employee Retirement Income Security Act of 1974, as amended from time to time.

2.25 Participant. Participant means an individual described in Article III.

2.26 Participating Employer. Participating Employer means the Company and each Affiliate who has adopted the Plan with the consent of the Company. Each Participating Employer shall be identified on Schedule A attached hereto.

2.27 Payment Schedule. Payment Schedule means the date as of which payment of an Account under the Plan will commence and the form in which payment of such Account will be made.

2.28 Performance-Based Compensation. Performance-Based Compensation means Compensation where the amount of, or entitlement to, the Compensation is contingent on the satisfaction of pre-established organizational or individual performance criteria relating to a performance period of at least 12 consecutive months. Organizational or individual performance criteria are considered pre-established if established in writing by not later than 90 days after the commencement of the period of service to which the criteria relate, provided that the outcome is substantially uncertain at the time the criteria are established. Performance-Based Compensation shall not include any Compensation payable upon the Participant's death or disability (as defined in Treasury Regulations Section 1.409A-1(e)) without regard to the satisfaction of the performance criteria.

2.29 Plan. Plan means "First Republic Bank Deferred Compensation Plan" as documented herein and as may be amended from time to time hereafter. However, to the extent permitted or required under Code Section 409A, the term Plan may in the appropriate context also mean a portion of the Plan that is treated as a single plan under Treasury Regulations Section 1.409A-1(c), or the Plan or portion of the Plan and any other nonqualified deferred compensation plan or portion thereof that is treated as a single plan under such section.

2.30 Plan Year. Plan Year means January 1 through December 31.

2.31 Separation Account. Separation Account means an Account established by the Committee in accordance with a Participant's Compensation Deferral Agreement to record Deferrals allocated to such Account by the Participant and which are payable upon the Participant's Separation from Service s set forth in Section 6.3 in accordance with Section 6.3. The Committee may limit the number of Separation Accounts that may be maintained at any one time by a Participant, as set forth in the Plan's enrollment materials.

2.32 Separation from Service. Separation from Service means an Employee's termination of employment with the Employer and all Affiliates, as set forth in Section 409A(a)(2)(A)(i) of the Code and Treasury Regulations Sections 1.409A-1(h), including the default presumptions thereunder.

Except in the case of an Employee on a bona fide leave of absence as provided below, an Employee is deemed to have incurred a Separation from Service if the Employer and the Employee reasonably anticipated that the level of services to be performed by the Employee after a date certain would be reduced to 20% or less of the average services

rendered by the Employee during the immediately preceding 36-month period (or the total period of employment, if less than 36 months), disregarding periods during which the Employee was on a bona fide leave of absence.

An Employee who is absent from work due to military leave, sick leave, or other bona fide leave of absence shall incur a Separation from Service on the first date immediately following the later of: (i) the six month anniversary of the commencement of the leave, or (ii) the expiration of the Employee's right, if any, to reemployment under statute or contract.

If a Participant ceases to provide services as an Employee and begins providing services as an independent contractor for the Employer, a Separation from Service shall occur only if the parties anticipate that the level of services to be provided as an independent contractor are such that a Separation from Service would have occurred if the Employee had continued to provide services at that level as an Employee. If, in accordance with the preceding sentence, no Separation from Service occurs as of the date the individual's employment status changes, a Separation from Service shall occur thereafter only upon the 12-month anniversary of the date all contracts with the Employer have expired, provided the Participant does not perform services for the Employer during that time.

For purposes of determining whether a Separation from Service has occurred, the Employer means the Employer as defined in Section 2.23 of the Plan, except that in applying Code Sections 1563(a)(1), (2) and (3) for purposes of determining whether another organization is an Affiliate of the Company under Code Section 414(b), and in applying Treasury Regulations Section 1.414(c)-2 for purposes of determining whether another organization is an Affiliate of the Company under Code Section 414(c), "at least 50 percent" shall be used instead of "at least 80 percent" each place it appears in those sections.

The Committee specifically reserves the right to determine whether a sale or other disposition of substantial assets to an unrelated party constitutes a Separation from Service with respect to a Participant providing services to the seller immediately prior to the transaction and providing services to the buyer after the transaction.

2.33 Specified Date Account. Specified Date Account means an Account established by the Committee to record the amounts payable in a future year as specified in the Participant's Compensation Deferral Agreement. The Committee may limit the number of Specified Date Accounts that may be maintained at any one time by a Participant, as set forth in the Plan's enrollment materials.

2.34 Unforeseeable Emergency. Unforeseeable Emergency means a severe financial hardship to the Participant resulting from an illness or accident of the Participant, the Participant's spouse, the Participant's dependent (as defined in Code Section 152, without regard to Section 152(b)(1), (b)(2), and (d)(1)(B)), or a Beneficiary; loss of the Participant's property due to casualty (including the need to rebuild a home following damage to a home not otherwise covered by insurance, for example, as a result of a natural disaster);

or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The types of events which may qualify as an Unforeseeable Emergency may be limited by the Committee.

2.35 Valuation Date. Valuation Date means each Business Day.

ARTICLE III
Eligibility and Participation

3.1 Eligibility and Participation. All Eligible Employees may enroll in the Plan. Eligible Employees become Participants on the first to occur of (i) the date on which the first Compensation Deferral Agreement becomes irrevocable under Article IV, or (ii) the date Company Contributions are credited to an Account on behalf of such Eligible Employee.

3.2 Duration. Only Eligible Employees may submit Compensation Deferral Agreements during an enrollment and receive Company Contributions during the Plan Year. A Participant who is no longer an Eligible Employee but has not incurred a Separation from Service will not be allowed to submit Compensation Deferral Agreements but may otherwise exercise all of the rights of a Participant under the Plan with respect to his or her Account(s). On and after a Separation from Service, a Participant shall remain a Participant as long as his or her Account Balance is greater than zero (0). All Participants, regardless of employment status, will continue to be credited with Earnings and during such time may continue to make allocation elections as provided in Section 7.4. An individual shall cease being a Participant in the Plan when his Account has been reduced to zero (0).

3.3 Rehires. An Eligible Employee who Separates from Service and who subsequently resumes performing services for the Employer in the same calendar year (regardless of eligibility) will have his or her Compensation Deferral Agreement for such year, if any, reinstated, but his or her eligibility to participate in the Plan in years subsequent to the year of rehire shall be governed by the provisions of Section 3.1.

ARTICLE IV
Deferrals

4.1 Deferral Elections, Generally.

(a) A Participant may make an initial election to defer Compensation by submitting a Compensation Deferral Agreement during the enrollment periods established by the Committee and in the manner specified by the Committee, but in any event, in accordance with Section 4.2. Unless an earlier date is specified in the Compensation Deferral Agreement, deferral elections with respect to a Compensation source (such as Base Compensation and/or a Bonus(es)) become irrevocable on the latest date applicable to such Compensation source under Section 4.2.

(b) A Compensation Deferral Agreement that is not timely filed with respect to a service period or component of Compensation, or that is submitted by a Participant who Separates from Service prior to the latest date such agreement would become irrevocable under Section 409A, shall be considered null and void and shall not take effect with respect to such item of Compensation. The Committee may modify or revoke any Compensation Deferral Agreement prior to the date the election becomes irrevocable under the rules of Section 4.2.

(c) The Committee may permit different deferral amounts for each component of Compensation and may establish a minimum or maximum deferral amount for each such component. Unless otherwise specified by the Committee in the Compensation Deferral Agreement, Participants may defer up to fifty percent (50%) of their Base Compensation and up to ninety percent (90%) any Bonus(es) earned during a Plan Year.

(d) Deferrals of Compensation shall be calculated with respect to the gross cash Compensation payable to the Participant prior to any deductions or withholdings, but shall be reduced by the Committee as necessary so as not to exceed 100% of the cash Compensation of the Participant remaining after deduction of all required income and employment taxes, required employee benefit deductions, deferrals to 401(k) plans and other deductions required by law. Changes to payroll withholdings that affect the amount of Compensation being deferred to the Plan shall be allowed only to the extent permissible under Code Section 409A.

(e) The Participant shall specify on his or her Compensation Deferral Agreement the amount of Deferrals and whether to allocate Deferrals to one or more Separation Accounts or to one or more Specified Date Accounts. If no election is made, Deferrals will be allocated to a Separation Account established by the Committee, paying in a single lump sum.

4.2 Timing Requirements for Compensation Deferral Agreements.

(a) *Initial Eligibility.* The Committee may permit an Eligible Employee to defer Compensation earned in the first year of eligibility. The Compensation Deferral Agreement must be filed within 30 days after attaining Eligible Employee status and becomes irrevocable not later than the 30th day.

A Compensation Deferral Agreement filed under this paragraph applies to Compensation earned after the date that the Compensation Deferral Agreement becomes irrevocable.

(b) *Prior Year Election.* Except as otherwise provided in this Section 4.2, the Committee may permit an Eligible Employee to defer Compensation by filing a Compensation Deferral Agreement no later than December 31 of the year prior to the year in which the Compensation to be deferred is earned. A Compensation

Deferral Agreement filed under this paragraph shall become irrevocable with respect to such Compensation not later than the December 31 filing deadline.

(c) *Performance-Based Compensation.* The Committee may permit an Eligible Employee to defer Compensation which qualifies as Performance-Based Compensation by filing a Compensation Deferral Agreement no later than the date that is six months before the end of the applicable performance period, provided that:

(i) the Participant performs services continuously from the later of the beginning of the performance period or the date the performance criteria are established through the date the Compensation Deferral Agreement is submitted; and

(ii) the Compensation is not readily ascertainable as of the date the Compensation Deferral Agreement is filed.

Any election to defer Performance-Based Compensation that is made in accordance with this paragraph and that becomes payable as a result of the Participant's death or disability (as defined in Treasury Regulations Section 1.409A-1(e)) or upon a change in control (as defined in Treasury Regulations Section 1.409A-3(i)(5)) prior to the satisfaction of the performance criteria, will be void unless it would be considered timely under another rule described in this Section.

4.3 Allocation of Deferrals. A Compensation Deferral Agreement may allocate Deferrals to one or more Specified Date Accounts. The Committee may, in its discretion, establish in a written communication during enrollment a minimum deferral period for the establishment of a Specified Date Account (for example, the second Plan Year following the year Compensation is first allocated to such Accounts). In the event a Participant's Compensation Deferral Agreement allocates Compensation to a Specified Date Account that is payable in the year of deferral or vesting, the Compensation Deferral Agreement shall be deemed to allocate the Deferral to the Participant's Specified Date Account with the next earliest payment year. If the Participant has no other Specified Date Accounts, the Committee will establish a Specified Date Account that pays in the second calendar year next following the year the Compensation was earned or, if subject to a vesting schedule, one calendar year after the calendar year in which the award becomes 100% vested.

4.4 Deductions from Pay. The Committee has the authority to determine the payroll practices under which any component of Compensation subject to a Compensation Deferral Agreement will be deducted from a Participant's Compensation.

4.5 Vesting. Participant Deferrals shall be 100% vested at all times. Deferrals of vesting awards of Compensation shall become vested in accordance with the provisions of the underlying award.

4.6 Cancellation of Deferrals. The Committee may cancel a Participant's Deferrals: (i) for the balance of the Plan Year in which an Unforeseeable Emergency occurs, (ii) if the Participant receives a hardship distribution under the Employer's qualified 401(k) plan, through the end of the Plan Year containing the last day on which deferrals must be suspended in accordance with regulations issued under Code Section 401(k), and (iii) during periods in which the Participant is unable to perform the duties of his or her position or any substantially similar position due to a mental or physical impairment that can be expected to result in death or last for a continuous period of at least six months, provided cancellation occurs by the later of the end of the taxable year of the Participant or the 15th day of the third month following the date the Participant incurs the disability (as defined in this paragraph (iii)).

ARTICLE V
Company Contributions

5.1 Discretionary Company Contributions. A Participating Employer may, from time to time in its sole and absolute discretion, credit discretionary Company Contributions in the form of matching, profit sharing or other contributions to any Participant in any amount determined by the Participating Employer. The Company will designate which of the Participant's Accounts will be credited with a Company Contribution.

Discretionary Company Contributions are credited at the sole discretion of the Participating Employer and the fact that a discretionary Company Contribution is credited in one year shall not obligate the Participating Employer to continue to make such Company Contributions in subsequent years.

5.4 Vesting. Company Contributions vest according the schedule specified by the Participating Employer on or before the time the contributions are made.

ARTICLE VI
Payments from Accounts

6.1 General Rules. A Participant's Accounts become payable on the applicable payment commencement dates following the first to occur of the payment events applicable to such Account under (i) Sections 6.2 or 6.3 (as elected, and subject to the change in control provision in Section 6.3) and (ii) Sections 6.4 through 6.6.

Payment events and Payment Schedules elected by the Participant shall be set forth in a valid Compensation Deferral Agreement that establishes the Account to which such elections apply in accordance with Article IV or in a valid modification election applicable to such Account as described in Section 6.9.

Payment amounts are based on Account Balances as of the first day of the month in which the actual payment is made.

6.2 Specified Date Accounts.

Commencement. Payment is made or begins in the calendar year designated by the Participant.

Form of Payment. Payment will be made in a lump sum, unless the Participant elected to receive annual installments up to 15 years.

6.3 Separation from Service. Upon a Participant's Separation from Service other than death, the Participant is entitled to receive his or her vested Separation Accounts.

Commencement. Payment from a Separation Account will commence in the month next following the date that is 6 months following the date the Separation from Service occurs, unless the Participant elected a later year for such Account.

Form of Payment. A Separation Account will be paid in a single lump sum unless the Participant elected to receive annual installments up to 15 years.

Change in Control. A Participant who has a Separation from Service within 24 months following a Change in Control will receive his or her Accounts (including any unpaid Specified Date Accounts) in a single lump sum commencing in the calendar year next following the year in which Separation from Service occurs, regardless of any other elections he or she may have made.

Notwithstanding any other provision of this Plan, payment to a Participant who is a "specified employee" as defined in Code Section 409A(a)(2)(B) will commence no earlier than six months following his or her Separation from Service.

6.4 Death. Notwithstanding anything to the contrary in this Article VI, upon the death of the Participant (regardless of whether such Participant is an Employee at the time of death), all remaining vested Account Balances shall be paid to his or her Beneficiary in a single lump sum no later than December 31 of the calendar year following the year of the Participant's death.

(a) *Designation of Beneficiary in General.* The Participant shall designate a Beneficiary in the manner and on such terms and conditions as the Committee may prescribe. No such designation shall become effective unless filed with the Committee during the Participant's lifetime. Any designation shall remain in effect until a new designation is filed with the Committee; provided, however, that in the event a Participant designates his or her spouse as a Beneficiary, such designation shall be automatically revoked upon the dissolution of the marriage unless, following such dissolution, the Participant submits a new designation naming the former spouse as a Beneficiary. A Participant may from time to time change his or her designated Beneficiary without the consent of a previously-designated Beneficiary by filing a new designation with the Committee.

(b) *No Beneficiary*. If a designated Beneficiary does not survive the Participant, or if there is no valid Beneficiary designation, amounts payable under the Plan upon the death of the Participant shall be paid to the duly appointed and currently acting personal representative of the Participant's estate.

6.5 Unforeseeable Emergency. A Participant who experiences an Unforeseeable Emergency may submit a written request to the Committee to receive payment of all or any portion of his or her vested Accounts. If the emergency need cannot be relieved by cessation of Deferrals to the Plan, the Committee may approve an emergency payment therefrom not to exceed the amount reasonably necessary to satisfy the need, taking into account the additional compensation that is available to the Participant as the result of cancellation of deferrals to the Plan, including amounts necessary to pay any taxes or penalties that the Participant reasonably anticipates will result from the payment. The amount of the emergency payment shall be subtracted pro rata from the Accounts. Emergency payments shall be paid in a single lump sum within the 90-day period following the date the payment is approved by the Committee. The Committee may specify that Deferrals will be distributed before any Company Contributions.

6.6 Administrative Cash-Out of Small Balances. Notwithstanding anything to the contrary in this Article VI, the Committee may at any time and without regard to whether a payment event has occurred, direct in writing an immediate lump sum payment of the Participant's Accounts if the balance of such Accounts, combined with any other amounts required to be treated as deferred under a single plan pursuant to Code Section 409A, does not exceed the applicable dollar amount under Code Section 402(g)(1)(B), provided any other such aggregated amounts are also distributed in a lump sum at the same time.

6.7 Acceleration of or Delay in Payments. Notwithstanding anything to the contrary in this Article VI, the Committee, in its sole and absolute discretion, may elect to accelerate the time or form of payment of an Account, provided such acceleration is permitted under Treasury Regulations Section 1.409A-3(j)(4). The Committee may also, in its sole and absolute discretion, delay the time for payment of an Account, to the extent permitted under Treasury Regulations Section 1.409A-2(b)(7).

6.8 Rules Applicable to Installment Payments. If a Payment Schedule specifies installment payments, payments will be made beginning as of the payment commencement date for such installments and shall continue to be made in each subsequent calendar year until the number of installment payments specified in the Payment Schedule has been paid. The amount of each installment payment shall be determined by dividing (a) by (b), where (a) equals the Account Balance as of the last Valuation Date in the month preceding the month of payment and (b) equals the remaining number of installment payments. For purposes of Section 6.9, installment payments will be treated as a single form of payment. If an Account is payable in installments, the Account will continue to be credited with Earnings in accordance with Article VII hereof until the Account is completely distributed.

6.9 Modifications to Payment Schedules. Prior to incurring a Seperation from Service, a Participant may modify the Payment Schedule elected by him or her with respect to an Account, consistent with the permissible Payment Schedules available under the Plan for the applicable payment event, provided such modification complies with the requirements of this Section 6.9.

(a) *Time of Election*. The modification election must be submitted to the Committee prior to the date the Participant incurrs a Seperation from Service and not less than 12 months prior to the date payments would have commenced under the Payment Schedule in effect prior to modification (the "Prior Election").

(b) *Date of Payment under Modified Payment Schedule*. The date payments are to commence under the modified Payment Schedule must be no earlier than five years after the date payment would have commenced under the Prior Election. Under no circumstances may a modification election result in an acceleration of payments in violation of Code Section 409A. If the Participant modifies only the form, and not the commencement date for payment, payments shall commence on the fifth anniversary of the date payment would have commenced under the Prior Election.

(c) *Irrevocability; Effective Date*. A modification election is irrevocable when filed and becomes effective 12 months after the filing date.

(d) *Effect on Accounts*. An election to modify a Payment Schedule is specific to the Account or payment event to which it applies, and shall not be construed to affect the Payment Schedules or payment events of any other Accounts.

ARTICLE VII
Valuation of Account Balances; Investments

7.1 Valuation. Deferrals shall be credited to appropriate Accounts on the date such Compensation would have been paid to the Participant absent the Compensation Deferral Agreement. Valuation of Accounts shall be performed under procedures approved by the Committee.

7.2 Earnings Credit. Each Account will be credited with Earnings on each Business Day, based upon the Participant's investment allocation among a menu of investment options selected in advance by the Committee, in accordance with the provisions of this Article VII ("investment allocation").

7.3 Investment Options. Investment options will be determined by the Committee. The Committee, in its sole discretion, shall be permitted to add or remove investment options from the Plan menu from time to time, provided that any such additions or removals of investment options shall not be effective with respect to any period prior to the effective date of such change.

7.4 Investment Allocations. A Participant's investment allocation constitutes a deemed, not actual, investment among the investment options comprising the investment menu. At no time shall a Participant have any real or beneficial ownership in any investment option included in the investment menu, nor shall the Participating Employer or any trustee acting on its behalf have any obligation to purchase actual securities as a result of a Participant's investment allocation. A Participant's investment allocation shall be used solely for purposes of adjusting the value of a Participant's Account Balances.

A Participant shall specify an investment allocation for each of his Accounts in accordance with procedures established by the Committee. Allocation among the investment options must be designated in increments of 1%. The Participant's investment allocation will become effective on the same Business Day or, in the case of investment allocations received after a time specified by the Committee, the next Business Day.

A Participant may change an investment allocation on any Business Day, both with respect to future credits to the Plan and with respect to existing Account Balances, in accordance with procedures adopted by the Committee. Changes shall become effective on the same Business Day or, in the case of investment allocations received after a time specified by the Committee, the next Business Day, and shall be applied prospectively.

7.5 Unallocated Deferrals and Accounts. If the Participant fails to make an investment allocation with respect to an Account, such Account shall be invested in an investment option, the primary objective of which is the preservation of capital, as determined by the Committee.

7.6 Valuations Final After 180 Days. The Participant shall have 180 days following the Valuation Date on which the Participant failed to receive the full amount of Earnings and to file a claim under Article XI for the correction of such error.

7.7 Investment of Amounts Deferred Prior to the Effective Date. Account Balances attributable to Compensation deferred under deferral elections made prior to the Effective Date, shall accrue earnings at the earnings rate specified by the Committee in advance of the effective time of the applicability of such rate. The earnings rate will be reset on January 1 and July 1 of each year. A Participant with an Account Balance, or component Account Balances, attributable to Compensation deferred under Compensation deferral elections made prior to the Effective Date may instead elect to allocate all or a portion of the Account Balance to the investment options made available under the Plan pursuant to the terms of this Article VII. If a Participant elects to allocate all or portion of the Participant's Account Balance to such investment options, the Participant may not elect to have that portion of the Account Balance accrue earnings at the earnings rate at a later date.

ARTICLE VIII
Administration

8.1 Plan Administration. This Plan shall be administered by the Committee which shall have discretionary authority to make, amend, interpret and enforce all appropriate rules and regulations for the administration of this Plan and to utilize its discretion to decide or resolve any and all questions, including but not limited to eligibility for benefits and interpretations of this Plan and its terms, as may arise in connection with the Plan. Claims for benefits shall be filed with the Committee and resolved in accordance with the claims procedures in Article XI.

8.2 Administration Upon Change in Control. Upon a Change in Control, the Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Committee. The Committee, by a vote of a majority of its members, shall have the authority (but shall not be obligated) to appoint an independent third party to act as the Committee.

Upon such Change in Control, the Company may not remove the Committee or its members, unless a majority of Participants and Beneficiaries with Account Balances consent to the removal and replacement of the Committee. Notwithstanding the foregoing, the Committee shall not have authority to direct investment of trust assets under any rabbi trust described in Section 10.2.

The Participating Employers shall, with respect to the Committee identified under this Section: (i) pay all reasonable expenses and fees of the Committee, (ii) indemnify the Committee (including individuals serving as Committee members) against any costs, expenses and liabilities including, without limitation, attorneys' fees and expenses arising in connection with the performance of the Committee's duties hereunder, except with respect to matters resulting from the Committee's gross negligence or willful misconduct, and (iii) supply full and timely information to the Committee on all matters related to the Plan, any rabbi trust, Participants, Beneficiaries and Accounts as the Committee may reasonably require.

8.3 Withholding. The Participating Employer shall have the right to withhold from any payment due under the Plan (or with respect to any amounts credited to the Plan) any taxes required by law to be withheld in respect of such payment (or credit). Withholdings with respect to amounts credited to the Plan shall be deducted from Compensation that has not been deferred to the Plan.

8.4 Indemnification. The Participating Employers shall indemnify and hold harmless each employee, officer, director, agent or organization, to whom or to which are delegated duties, responsibilities, and authority under the Plan or otherwise with respect to administration of the Plan, including, without limitation, the Committee, its delegees and its agents, against all claims, liabilities, fines and penalties, and all expenses reasonably incurred by or imposed upon him or it (including but not limited to reasonable attorney fees) which arise as a result of his or its actions or failure to act in connection with the operation and administration of the Plan to the extent lawfully allowable and to the extent that such claim, liability, fine, penalty, or expense is not paid for by liability insurance purchased or paid for by the Participating Employer. Notwithstanding the foregoing, the

Participating Employer shall not indemnify any person or organization if his or its actions or failure to act are due to gross negligence or willful misconduct or for any such amount incurred through any settlement or compromise of any action unless the Participating Employer consents in writing to such settlement or compromise.

8.5 Delegation of Authority. In the administration of this Plan, the Committee may, from time to time, employ agents and delegate to them such administrative duties as it sees fit, and may from time to time consult with legal counsel who shall be legal counsel to the Company.

8.6 Binding Decisions or Actions. The decision or action of the Committee in respect of any question arising out of or in connection with the administration, interpretation and application of the Plan and the rules and regulations thereunder shall be final and conclusive and binding upon all persons having any interest in the Plan.

ARTICLE IX

Amendment and Termination

9.1 Amendment and Termination. The Company may at any time and from time to time amend the Plan or may terminate the Plan as provided in this Article IX. Each Participating Employer may also terminate its participation in the Plan.

9.2 Amendments. The Company, by action taken by its Board of Directors, may amend the Plan at any time and for any reason, provided that any such amendment shall not reduce the vested Account Balances of any Participant accrued as of the date of any such amendment or restatement (as if the Participant had incurred a voluntary Separation from Service on such date). The Board of Directors of the Company may delegate to the Committee the authority to amend the Plan without the consent of the Board of Directors for the purpose of: (i) conforming the Plan to the requirements of law; (ii) facilitating the administration of the Plan; (iii) clarifying provisions based on the Committee's interpretation of the Plan documents; and (iv) making such other amendments as the Board of Directors may authorize. No amendment is needed to revise the list of Participating Employers set forth on Schedule A attached hereto.

9.3 Termination. The Company, by action taken by its Board of Directors, may terminate the Plan and pay Participants and Beneficiaries their Account Balances in a single lump sum at any time, to the extent and in accordance with Treasury Regulations Section 1.409A-3(j)(4)(ix).

9.4 Accounts Taxable Under Code Section 409A. The Plan is intended to constitute a plan of deferred compensation that meets the requirements for deferral of income taxation under Code Section 409A. The Committee, pursuant to its authority to interpret the Plan, may sever from the Plan or any Compensation Deferral Agreement any provision or exercise of a right that otherwise would result in a violation of Code Section 409A.

ARTICLE X

Informal Funding

10.1 General Assets. Obligations established under the terms of the Plan may be satisfied from the general funds of the Participating Employers, or a trust described in this Article X. No Participant, spouse or Beneficiary shall have any right, title or interest whatever in assets of the Participating Employers. Nothing contained in this Plan, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind, or a fiduciary relationship, between the Participating Employers and any Employee, spouse, or Beneficiary. To the extent that any person acquires a right to receive payments hereunder, such rights are no greater than the right of an unsecured general creditor of the Participating Employer.

10.2 Rabbi Trust. A Participating Employer may, in its sole discretion, establish a grantor trust, commonly known as a rabbi trust, as a vehicle for accumulating assets to pay benefits under the Plan. Payments under the Plan may be paid from the general assets of the Participating Employer or from the assets of any such rabbi trust. Payment from any such source shall reduce the obligation owed to the Participant or Beneficiary under the Plan.

If a rabbi trust is in existence upon the occurrence of a "change in control", as defined in such trust, the Participating Employer shall, upon such change in control, and on each anniversary of the change in control, contribute in cash or liquid securities such amounts as are necessary so that the value of assets after making the contributions exceed 125% of the total value of all Account Balances.

ARTICLE XI
Claims

11.1 Filing a Claim. Any controversy or claim arising out of or relating to the Plan shall be filed in writing with the Committee which shall make all determinations concerning such claim. Any claim filed with the Committee and any decision by the Committee denying such claim shall be in writing and shall be delivered to the Participant or Beneficiary filing the claim (the "Claimant"). Notice of a claim for payments shall be delivered to the Committee within 90 days of the latest date upon which the payment could have been timely made in accordance with the terms of the Plan and Code Section 409A, and if not paid, the Participant or Beneficiary must file a claim under this Article XI not later than 180 days after such latest date. If the Participant or Beneficiary fails to file a timely claim, the Participant forfeits any amounts to which he or she may have been entitled to receive under the claim.

(a) *In General.* Notice of a denial of benefits will be provided within 90 days of the Committee's receipt of the Claimant's claim for benefits. If the Committee determines that it needs additional time to review the claim, the Committee will provide the Claimant with a notice of the extension before the end of the initial 90-day period. The extension will not be more than 90 days from the end of the initial 90-day period and the notice of extension will explain the special

circumstances that require the extension and the date by which the Committee expects to make a decision.

(b) *Contents of Notice.* If a claim for benefits is completely or partially denied, notice of such denial shall be in writing. Any electronic notification shall comply with the standards imposed by Department of Labor Regulations29 CFR 2520.104b-1(c)(1)(i), (iii), and (iv). The notice of denial shall set forth the specific reasons for denial in plain language. The notice shall: (i) cite the pertinent provisions of the Plan document, and (ii) explain, where appropriate, how the Claimant can perfect the claim, including a description of any additional material or information necessary to complete the claim and why such material or information is necessary. The claim denial also shall include an explanation of the claims review procedures and the time limits applicable to such procedures, including the right to appeal the decision, the deadline by which such appeal must be filed and a statement of the Claimant's right to bring a civil action under Section 502(a) of ERISA following an adverse decision on appeal and the specific date by which such a civil action must commence under Section 11.4.

11.2 Appeal of Denied Claims. A Claimant whose claim has been completely or partially denied shall be entitled to appeal the claim denial by filing a written appeal with a committee designated to hear such appeals (the "Appeals Committee"). A Claimant who timely requests a review of the denied claim (or his or her authorized representative) may review, upon request and free of charge, copies of all documents, records and other information relevant to the denial and may submit written comments, documents, records and other information relating to the claim to the Appeals Committee. All written comments, documents, records, and other information shall be considered "relevant" if the information: (i) was relied upon in making a benefits determination, (ii) was submitted, considered or generated in the course of making a benefits decision regardless of whether it was relied upon to make the decision, or (iii) demonstrates compliance with administrative processes and safeguards established for making benefit decisions. The review shall take into account all comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination. The Appeals Committee may, in its sole discretion and if it deems appropriate or necessary, decide to hold a hearing with respect to the claim appeal.

(a) *In General.* Appeal of a denied benefits claim must be filed in writing with the Appeals Committee no later than 60 days after receipt of the written notification of such claim denial. The Appeals Committee shall make its decision regarding the merits of the denied claim within 60 days following receipt of the appeal (or within 120 days after such receipt, in a case where there are special circumstances requiring extension of time for reviewing the appealed claim). If an extension of time for reviewing the appeal is required because of special circumstances, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension. The notice will indicate the special circumstances requiring the extension of time and the date by which the Appeals

Committee expects to render the determination on review. The review will take into account comments, documents, records and other information submitted by the Claimant relating to the claim without regard to whether such information was submitted or considered in the initial benefit determination.

(b) *Contents of Notice.* If a benefits claim is completely or partially denied on review, notice of such denial shall be in writing. Any electronic notification shall comply with the standards imposed by Department of Labor Regulations29 CFR 2520.104b-1(c)(1)(i), (iii), and (iv). Such notice shall set forth the reasons for denial in plain language.

The decision on review shall set forth: (i) the specific reason or reasons for the denial, (ii) specific references to the pertinent Plan provisions on which the denial is based, (iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to and copies of all documents, records, or other information relevant (as defined above) to the Claimant's claim, and (iv) a statement of the Claimant's right to bring an action under Section 502(a) of ERISA, following an adverse decision on review and the specific date by which such a civil action must commence under Section 11.4.

11.3 Claims Appeals Upon Change in Control. Upon a Change in Control, the Appeals Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Appeals Committee. The Company may not remove any member of the Appeals Committee, but may replace resigning members if 2/3rds of the members of the Board of Directors of the Company and a majority of Participants and Beneficiaries with Account Balances consent to the replacement.

The Appeals Committee shall have the exclusive authority at the appeals stage to interpret the terms of the Plan and resolve appeals under the Claims Procedure.

Each Participating Employer shall, with respect to the Committee identified under this Section: (i) pay its proportionate share of all reasonable expenses and fees of the Appeals Committee, (ii) indemnify the Appeals Committee (including individual committee members) against any costs, expenses and liabilities including, without limitation, attorneys' fees and expenses arising in connection with the performance of the Appeals Committee hereunder, except with respect to matters resulting from the Appeals Committee's gross negligence or willful misconduct, and (iii) supply full and timely information to the Appeals Committee on all matters related to the Plan, any rabbi trust, Participants, Beneficiaries and Accounts as the Appeals Committee may reasonably require.

11.4 Legal Action. A Claimant may not bring any legal action, including commencement of any arbitration, relating to a claim for benefits under the Plan unless and until the Claimant has followed the claims procedures under the Plan and exhausted his or administrative remedies under Sections 11.1 and 11.2. No such legal action may be brought more than twelve (12) months following the notice of denial of benefits under

Section 11.2, or if no appeal is filed by the applicable appeals deadline, twelve (12) months following the appeals deadline.

If a Participant or Beneficiary prevails in a legal proceeding brought under the Plan to enforce the rights of such Participant or any other similarly situated Participant or Beneficiary, in whole or in part, the Participating Employer shall reimburse such Participant or Beneficiary for all legal costs, expenses, attorneys' fees and such other liabilities incurred as a result of such proceedings. If the legal proceeding is brought in connection with a change in control (including a "change in control" as defined in a rabbi trust described in Section 10.2) the Participant or Beneficiary may file a claim directly with the trustee for reimbursement of such costs, expenses and fees. For purposes of the preceding sentence, the amount of the claim shall be treated as if it were an addition to the Participant's or Beneficiary's Account Balance and will be included in determining the Participating Employer's trust funding obligation under Section 10.2.

11.5 Discretion of Appeals Committee. All interpretations, determinations and decisions of the Appeals Committee with respect to any claim shall be made in its sole discretion, and shall be final and conclusive.

11.6 Arbitration.

(a) *Prior to Change in Control.* If, prior to a Change in Control, any claim or controversy between a Participating Employer and a Participant or Beneficiary is not resolved through the claims procedure set forth in Article XI, such claim shall be submitted to and resolved exclusively by expedited binding arbitration by a single arbitrator. Arbitration shall be conducted in accordance with the following procedures:

The complaining party shall promptly send written notice to the other party identifying the matter in dispute and the proposed remedy. Following the giving of such notice, the parties shall meet and attempt in good faith to resolve the matter. In the event the parties are unable to resolve the matter within 21 days, the parties shall meet and attempt in good faith to select a single arbitrator acceptable to both parties. If a single arbitrator is not selected by mutual consent within ten Business Days following the giving of the written notice of dispute, an arbitrator shall be selected from a list of nine persons each of whom shall be an attorney who is either engaged in the active practice of law or recognized arbitrator and who, in either event, is experienced in serving as an arbitrator in disputes between employers and employees, which list shall be provided by the main office of either JAMS, the American Arbitration Association ("AAA") or the Federal Mediation and Conciliation Service. If, within three Business Days of the parties' receipt of such list, the parties are unable to agree on an arbitrator from the list, then the parties shall each strike names alternatively from the list, with the first to strike being determined by the flip of a coin. After each party has had four strikes, the remaining name on the list shall be the arbitrator. If such person is unable to

serve for any reason, the parties shall repeat this process until an arbitrator is selected.

Unless the parties agree otherwise, within 60 days of the selection of the arbitrator, a hearing shall be conducted before such arbitrator at a time and a place agreed upon by the parties. In the event the parties are unable to agree upon the time or place of the arbitration, the time and place shall be designated by the arbitrator after consultation with the parties. Within 30 days of the conclusion of the arbitration hearing, the arbitrator shall issue an award, accompanied by a written decision explaining the basis for the arbitrator's award.

In any arbitration hereunder, the Participating Employer shall pay all administrative fees of the arbitration and all fees of the arbitrator, except that the Participant or Beneficiary may, if he/she/it wishes, pay up to one-half of those amounts. Each party shall pay its own attorneys' fees, costs, and expenses, unless the arbitrator orders otherwise. The prevailing party in such arbitration, as determined by the arbitrator, and in any enforcement or other court proceedings, shall be entitled, to the extent permitted by law, to reimbursement from the other party for all of the prevailing party's costs (including but not limited to the arbitrator's compensation), expenses, and attorneys' fees. The arbitrator shall have no authority to add to or to modify this Plan, shall apply all applicable law, and shall have no lesser and no greater remedial authority than would a court of law resolving the same claim or controversy. The arbitrator shall have no authority to add to or to modify this Plan, shall apply all applicable law, and shall have no lesser and no greater remedial authority than would a court of law resolving the same claim or controversy. The arbitrator shall, upon an appropriate motion, dismiss any claim without an evidentiary hearing if the party bringing the motion establishes that it would be entitled to summary judgment if the matter had been pursued in court litigation.

The parties shall be entitled to discovery as follows: Each party may take no more than three depositions. The Participating Employer may depose the Participant or Beneficiary plus two other witnesses, and the Participant or Beneficiary may depose the Participating Employer, pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure, plus two other witnesses. Each party may make such reasonable document discovery requests as are allowed in the discretion of the arbitrator.

The decision of the arbitrator shall be final, binding, and non-appealable, and may be enforced as a final judgment in any court of competent jurisdiction.

This arbitration provision of the Plan shall extend to claims against any parent, subsidiary, or affiliate of each party, and, when acting within such capacity, any officer, director, shareholder, Participant, Beneficiary, or agent of any party, or of any of the above, and shall apply as well to claims arising out of state and federal

statutes and local ordinances as well as to claims arising under the common law or under this Plan.

Notwithstanding the foregoing, and unless otherwise agreed between the parties, either party may apply to a court for provisional relief, including a temporary restraining order or preliminary injunction, on the ground that the arbitration award to which the applicant may be entitled may be rendered ineffectual without provisional relief.

Any arbitration hereunder shall be conducted in accordance with the Federal Arbitration Act: provided, however, that, in the event of any inconsistency between the rules and procedures of the Act and the terms of this Plan, the terms of this Plan shall prevail.

If any of the provisions of this Section 11.6(a) are determined to be unlawful or otherwise unenforceable, in the whole part, such determination shall not affect the validity of the remainder of this section and this section shall be reformed to the extent necessary to carry out its provisions to the greatest extent possible and to insure that the resolution of all conflicts between the parties, including those arising out of statutory claims, shall be resolved by neutral, binding arbitration. If a court should find that the provisions of this Section 11.6(a) are not absolutely binding, then the parties intend any arbitration decision and award to be fully admissible in evidence in any subsequent action, given great weight by any finder of fact and treated as determinative to the maximum extent permitted by law.

The parties do not agree to arbitrate any putative class action or any other representative action. The parties agree to arbitrate only the claims(s) of a single Participant or Beneficiary.

(b) *Upon Change in Control.* Upon a Change in Control, Section 11.6(a) shall not apply and any legal action initiated by a Participant or Beneficiary to enforce his or her rights under the Plan may be brought in any court of competent jurisdiction. Notwithstanding the Appeals Committee's discretion under Sections 11.3 and 11.5, the court shall apply a de novo standard of review to any prior claims decision under Sections 11.1 through 11.3 or any other determination made by the Company, its Board of Directors, a Participating Employer, the Committee, or the Appeals Committee.

ARTICLE XII
General Provisions

12.1 Assignment. No interest of any Participant, spouse or Beneficiary under this Plan and no benefit payable hereunder shall be assigned as security for a loan, and any such purported assignment shall be null, void and of no effect, nor shall any such interest or any such benefit be subject in any manner, either voluntarily or involuntarily, to anticipation, sale, transfer, assignment or encumbrance by or through any Participant, spouse or

Beneficiary. Notwithstanding anything to the contrary herein, however, the Committee has the discretion to make payments to an alternate payee in accordance with the terms of a domestic relations order (as defined in Code Section 414(p)(1)(B)).

The Company may assign any or all of its liabilities under this Plan in connection with any restructuring, recapitalization, sale of assets or other similar transactions affecting a Participating Employer without the consent of the Participant.

12.2 No Legal or Equitable Rights or Interest. No Participant or other person shall have any legal or equitable rights or interest in this Plan that are not expressly granted in this Plan. Participation in this Plan does not give any person any right to be retained in the service of the Participating Employer. The right and power of a Participating Employer to dismiss or discharge an Employee is expressly reserved. The Participating Employers make no representations or warranties as to the tax consequences to a Participant or a Participant's beneficiaries resulting from a deferral of income pursuant to the Plan.

12.3 No Employment Contract. Nothing contained herein shall be construed to constitute a contract of employment between an Employee and a Participating Employer.

12.4 Notice. Any notice or filing required or permitted to be delivered to the Committee under this Plan shall be delivered in writing, in person, or through such electronic means as is established by the Committee. Notice shall be deemed given as of the date of delivery or, if delivery is made by mail, as of the date shown on the postmark on the receipt for registration or certification. Written transmission shall be sent by certified mail to:

FIRST REPUBLIC BANK
COMPENSATION COMMITTEE OF THE BOARD OF DIRECTORS
111 PINE STREET SAN FRANCISCO, CA 94111

Any notice or filing required or permitted to be given to a Participant under this Plan shall be sufficient if in writing or hand-delivered, or sent by mail to the last known address of the Participant.

12.5 Headings. The headings of Sections are included solely for convenience of reference, and if there is any conflict between such headings and the text of this Plan, the text shall control.

12.6 Invalid or Unenforceable Provisions. If any provision of this Plan shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof and the Committee may elect in its sole discretion to construe such invalid or unenforceable provisions in a manner that conforms to applicable law or as if such provisions, to the extent invalid or unenforceable, had not been included.

12.7 Lost Participants or Beneficiaries. Any Participant or Beneficiary who is entitled to a benefit from the Plan has the duty to keep the Committee advised of his or her current mailing address. If benefit payments are returned to the Plan or are not presented for

payment after a reasonable amount of time, the Committee shall presume that the payee is missing. The Committee, after making such efforts as in its discretion it deems reasonable and appropriate to locate the payee, shall stop payment on any uncashed checks and may discontinue making future payments until contact with the payee is restored. If the Committee is unable to locate the Participant or Beneficiary after five years of the date payment is scheduled to be made, provided that a Participant's Account shall not be credited with Earnings following the first anniversary of such date on which payment is to be made and further provided, however, that such benefit shall be reinstated, without further adjustment for interest, if a valid claim is made by or on behalf of the Participant or Beneficiary for all or part of the forfeited benefit.

12.8 Facility of Payment to a Minor. If a distribution is to be made to a minor, or to a person who is otherwise incompetent, then the Committee may, in its discretion, make such distribution: (i) to the legal guardian, or if none, to a parent of a minor payee with whom the payee maintains his or her residence, or (ii) to the conservator or committee or, if none, to the person having custody of an incompetent payee. Any such distribution shall fully discharge the Committee, the Company, and the Plan from further liability on account thereof.

12.9 Governing Law. To the extent not preempted by ERISA, the laws of the State of California shall govern the construction and administration of the Plan.

12.10 Compliance With Code Section 409A; No Guarantee. This Plan is intended to be administered in compliance with Code Section 409A and each provision of the Plan shall be interpreted consistent with Code Section 409A. Although intended to comply with Code Section 409A, this Plan shall not constitute a guarantee to any Participant or Beneficiary that the Plan in form or in operation will result in the deferral of federal or state income tax liabilities or that the Participant or Beneficiary will not be subject to the additional taxes imposed under Section 409A. No Employer shall have any legal obligation to a Participant with respect to taxes imposed under Code Section 409A.

IN WITNESS WHEREOF, the undersigned executed this Plan as of the 31 day of August, 2018, to be effective as of the Effective Date.

FIRST REPUBLIC BANK

By: /s/ Michael J. Roffler

Schedule A

Participating Employers

First Republic Bank

EXHIBIT 21

FIRST REPUBLIC BANK

SUBSIDIARIES

The following is a list of the subsidiaries of First Republic Bank as of December 31, 2018:

Subsidiary	State of Incorporation or Organization
First Republic Lending Corporation	Nevada
First Republic Investment Management, Inc.	New York
First Republic Securities Company, LLC	Nevada
First Republic Trust Company of Delaware LLC	Delaware
Gradifi, Inc.	Delaware

EXHIBIT 31.1

CERTIFICATION

I, James H. Herbert, II, certify that:

1. I have reviewed this annual report on Form 10-K of First Republic Bank;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant, and we have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   (d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of the annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2019

/s/ James H. Herbert, II

Name: James H. Herbert, II
Title: Chairman and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Michael J. Roffler, certify that:

1. I have reviewed this annual report on Form 10-K of First Republic Bank;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant, and we have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   (d) Disclosed in this annual report any change in the registrant's internal controls over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of the annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2019

/s/ Michael J. Roffler

Name: Michael J. Roffler

Title: Executive Vice President and Chief Financial Officer

EXHIBIT 32.1

Certification of Chief Executive Officer
Pursuant to §906 of The Sarbanes-Oxley Act of 2002

The undersigned, the Chairman and Chief Executive Officer of First Republic Bank (the "Company"), hereby certifies on the date hereof, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K for the year ended December 31, 2018 (the "Form 10-K"), filed concurrently herewith by the Company, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2019

/s/ James H. Herbert, II

Name: James H. Herbert, II
Title: Chairman and Chief Executive Officer

EXHIBIT 32.2

Certification of Chief Financial Officer
Pursuant to §906 of The Sarbanes-Oxley Act of 2002

The undersigned, the Executive Vice President and Chief Financial Officer of First Republic Bank (the "Company"), hereby certifies on the date hereof, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K for the year ended December 31, 2018 (the "Form 10-K"), filed concurrently herewith by the Company, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2019

/s/ Michael J. Roffler

Name: Michael J. Roffler
Title: Executive Vice President and Chief Financial Officer