#### FEDERAL DEPOSIT INSURANCE CORPORATION

Washington, D.C. 20429

#### FORM 8-K

## CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): October 15, 2019

### FIRST REPUBLIC BANK

(Exact name of registrant as specified in its charter)

California (State or other jurisdiction of incorporation) 80-0513856 (I.R.S. Employer Identification No.)

#### 111 Pine Street, 2nd Floor San Francisco, CA 94111 (Address, including zip code, of principal executive office)

	Check the appropriate box below	w if the Form 8-K fili	ng is intended to	simultaneously satisfy	the filing obli	gation of the	registrant u	nder
any of the	e following provisions:							

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

	Written communications pursuant to Rule 425 under the Securities Act (17 C	CFR 230.425)					
	Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)						
	Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))						
	Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))						
	Securities registered pursuant to S	ection 12(b) of the Act:					
	Title of each class	Trading Symbol(s)	Name of each exchange on which registered				
	Common Stock, \$0.01 par value	FRC	New York Stock Exchange				
	Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.50% Noncumulative Perpetual Series D Preferred Stock	FRC-PrD	New York Stock Exchange				
	Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.70% Noncumulative Perpetual Series F Preferred Stock	FRC-PrF	New York Stock Exchange				
	Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.50% Noncumulative Perpetual Series G Preferred Stock	FRC-PrG	New York Stock Exchange				
	Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.125% Noncumulative Perpetual Series H Preferred Stock	FRC-PrH	New York Stock Exchange				
	Depositary Shares, Each Representing a 1/40th Interest in a Share of 5.50% Noncumulative Perpetual Series I Preferred Stock	FRC-PrI	New York Stock Exchange				
(§2	Indicate by check mark whether the registrant is an emerging growth c 30.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934	1 2					
	Emerging growth company □						
wit	If an emerging growth company, indicate by check mark if the registra h any new or revised financial accounting standards provided pursuant to Sec						

#### Item 7.01 Regulation FD Disclosure

Pursuant to Regulation FD, First Republic Bank ("the Bank") hereby furnishes to the Federal Deposit Insurance Corporation slides that the Bank will present to analysts and investors on or after October 15, 2019. The slides are attached hereto as Exhibit 99.1. These slides will be available on the Bank's website at <a href="firstrepublic.com">firstrepublic.com</a>.

The information furnished by the Bank pursuant to this item, including Exhibit 99.1, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") or otherwise subject to the liability of that section, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act.

#### Item 9.01 Financial Statements and Exhibits

#### (d) Exhibits

99.1 Slides presented by First Republic Bank to analysts and investors on or after October 15, 2019.

#### **SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: October 15, 2019.

First Republic Bank

By: /s/ Michael J. Roffler

Name: Michael J. Roffler

Title: Executive Vice President and

Chief Financial Officer

#### **EXHIBIT INDEX**

**Exhibit** Number

**Description** 

Slides presented by First Republic Bank to analysts and investors on or after October 15, 2019. Exhibit 99.1

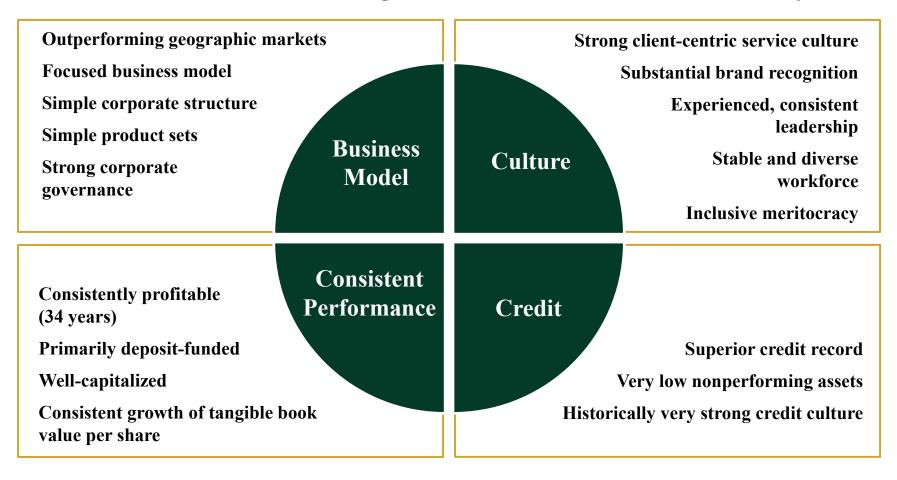


# FIRST REPUBLIC BANK (NYSE: FRC)

Investor Presentation Deck October 2019

## WHY FIRST REPUBLIC?

## Consistent focus on long-term, client service, and stability



First Republic is a constituent of the S&P 500 Index and KBW Nasdaq Bank Index

## CLIENT-FOCUSED CULTURE

- Single point-of-contact for clients
- Culture focused on extraordinary service proven client satisfaction (1)
- Strong credit driven incentive structure
- Over 50% of growth from existing clients (2)
- Another 25% of growth from satisfied clients' word-of-mouth referrals, thus 75% of growth is directly from existing clients (2)
- Employee stability + model stability = client stability

## Relationship-Based, Client-Focused Approach

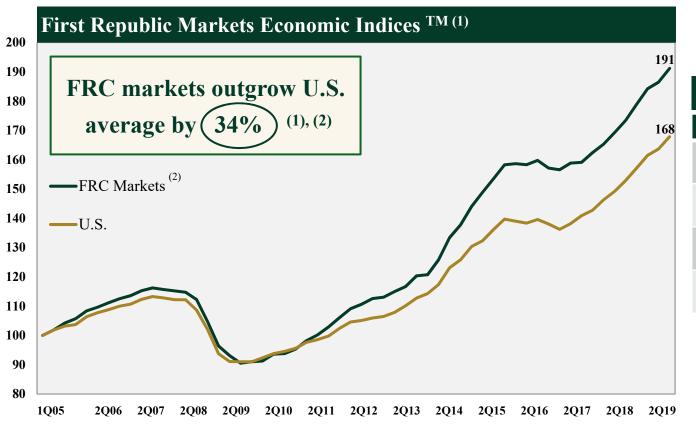


<sup>(2)</sup> See slide 6. Client referrals represented 28% of checking deposit growth for 12/31/2007 to 12/31/2018 and 26% of new loan originations for 1/1/2015 to 12/31/2018.



<sup>(1)</sup> See Net Promoter Score on slide 5.

## STRONG GEOGRAPHIC MARKETS



FRC's Primary Markets				
% Loan Portfolio (3)				
San Francisco / Silicon Valley	39%			
New York	22%			
Los Angeles	17%			
Boston	8%			

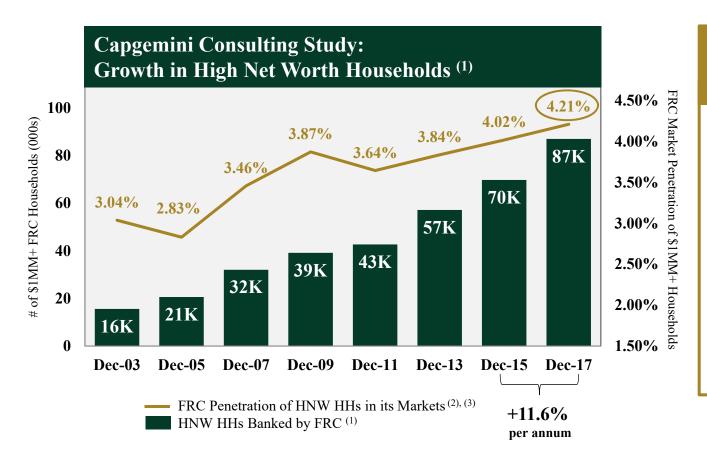
<sup>(1)</sup> The First Republic Markets Economic Index TM is a proprietary index, produced in conjunction with Rosen Consulting Group and designed to indicate aggregate economic performance of FRC's markets utilizing publicly available regional economic data.

<sup>(2)</sup> FRC markets (8 in total), in aggregate and weighted by loan balances outstanding as of June 30, 2019, have grown 91% since 1Q 2005 compared to 68% for the U.S. as a whole, or 34% higher growth comparatively. These 8 markets are: San Francisco, Los Angeles, San Diego, Portland, New York, Boston, Newport Beach and Palm Beach. Excludes Jackson, Wyoming, which was opened in December 2018.

<sup>(3)</sup> As of September 30, 2019. See slide 10.

## MARKET SHARE GROWTH

## Market share remains quite modest = substantial upside



Increased concentration of wealth in our markets offers a growing opportunity

First Republic's urban, coastal markets (2) contain 21% of all U.S. households (4) but fully

**59%** 

of all High Net Worth Households. (1), (4)

This has increased from only 46% in 2003. (5)

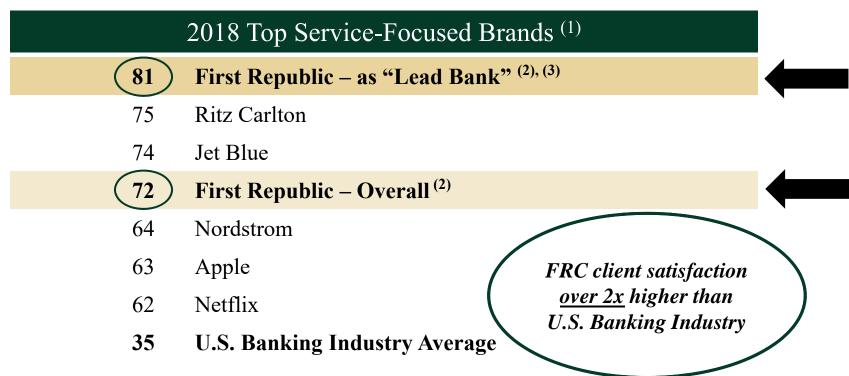
Source: FRC/Capgemini Consulting study (2018)

- (1) High net worth households ("HNW HHs") defined as households with at least \$1 million of investable assets. Represents less than 50% of First Republic's client households as of December 31, 2017.
- (2) As of December 31, 2017, FRC markets include San Francisco, Los Angeles, San Diego, Portland, New York, Boston, Newport Beach and Palm Beach.
- (3) Figures include Boston beginning in December 31, 2005; Portland in December 31, 2007 and Palm Beach in December 31, 2011.
- (4) As of December 31, 2017.
- (5) The growth in concentration of HNW HHs in FRC markets has been steady every measurement period increasing at an annual rate of approximately 1.8% since 2003.

## 2018 NET PROMOTER SCORE ("NPS")

## First Republic Service Model – Disruptor in the Banking Sector

- Exceptional service is the key organic growth driver: word-of-mouth referrals from very satisfied clients
- NPS measures client loyalty and likelihood to actively "refer"
- Leads to strong growth and very low client attrition rates



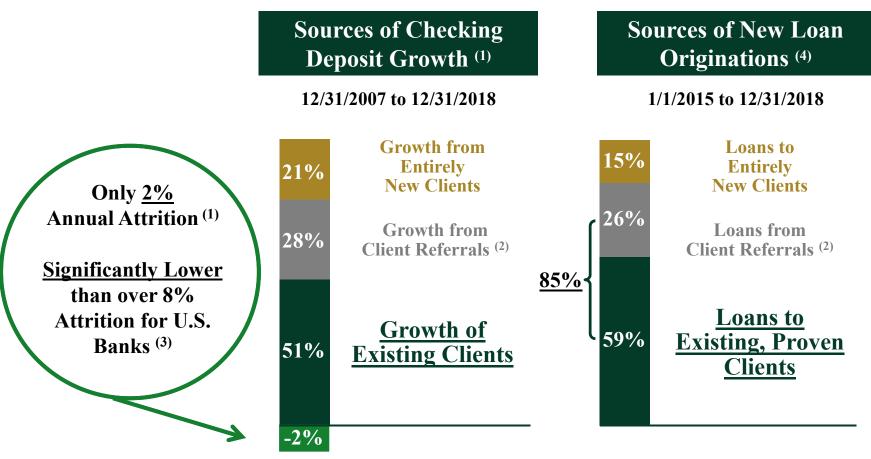
<sup>(1)</sup> Source: SATMETRIX NPS (2018) for brands listed and U.S. Banking Industry Average, excluding FRC. Please note: the brands listed under 'Top Service-Focused Brands' are brands selected for comparison purposes.

<sup>(2)</sup> Source: FRC/Greenwich Associates NPS Study (2018).

<sup>(3)</sup> Over 50% of First Republic clients self-designate First Republic as their "Lead Bank."

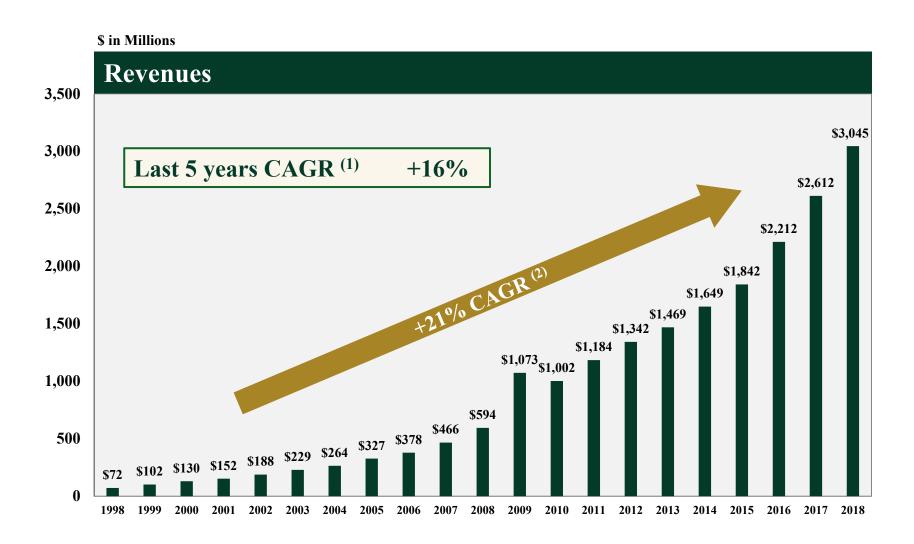
## SERVICE MODEL DRIVES ORGANIC GROWTH

Focus on Client Service = Satisfied Clients = Strong Referrals + Very Low Attrition Satisfied clients do more with First Republic and refer new clients



- (1) As measured by change in balances. Checking defined as all business and consumer checking, excluding money market checking.
- (2) Referrals as identified by KYC referral information for the first customer of new relationships in 2015-2018.
- (3) Source: Harland Clarke. Represents U.S. banking industry client attrition data from 2014-October 2017.
- (4) Based on principal balance at origination, for loans originated during 2015-2018, excluding overdraft lines of credit and refinanced FRC loans. Includes all loan originations whether on balance sheet, sold or currently held for sale.

## STRONG GROWTH IN REVENUES



- (1) 5-year CAGR from full year 2013 through full year 2018.
- (2) 20-year CAGR from full year 1998 through full year 2018.

## OUR CLIENTS SAY IT BEST



"Working with First Republic is just easy. Our friends are shocked that we can email, or actually call, someone at our bank."

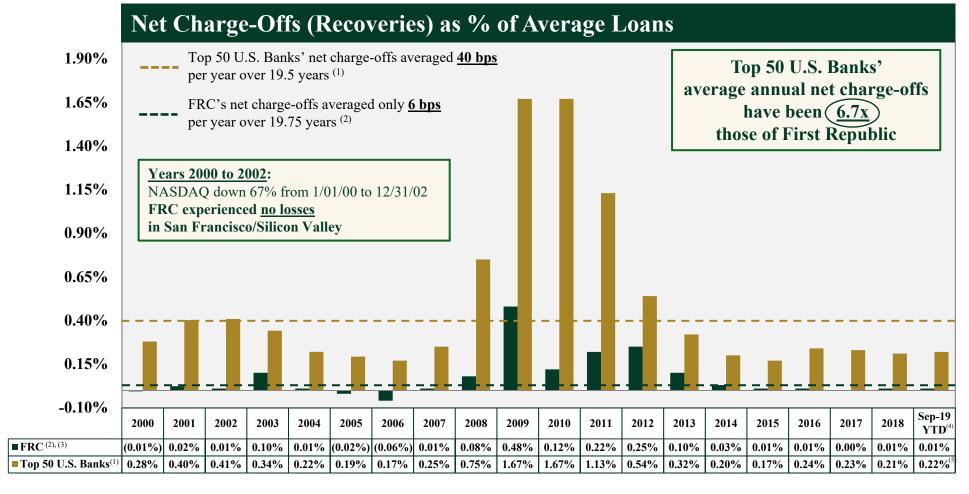
Kara and Theo Goldin I hint, Inc. Clients Since '99

"I came to First Republic for the low student loan refinancing rates and the Bank's reputation for exceptional service."

Morgan Bush I Attorney Client Since '17



## 2000-2019: Loss Experience - All Loans

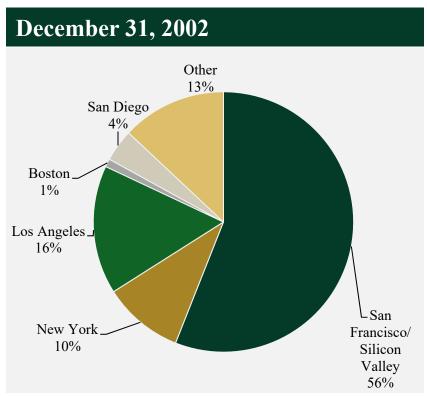


- (1) Source: SNL Financial. Comprised of the median for the top 50 U.S. Banks by asset size, including FRC, as of December 31 of each corresponding year, and June 30, 2019.
- (2) Includes estimated charge-offs on divested loans for period from July 1, 2010 to December 31, 2018.
- (3) Beginning in 2009, net charge-offs include charge-offs against unaccreted loan discounts, if any.
- Calculated on an annualized basis.
- (5) As of June 30, 2019. Industry data as of September 30, 2019 is not yet available.

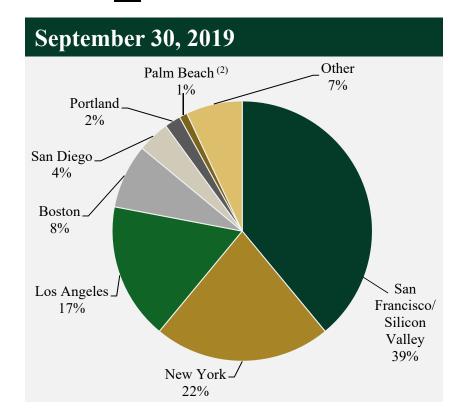
## 2002-2019: STABLE GEOGRAPHIC LOAN MIX

Same urban, coastal markets = local knowledge

#### 90% of all real estate loans are located within 20 miles of an FRC office (1)



$$SF + NYC + LA = 82\%$$



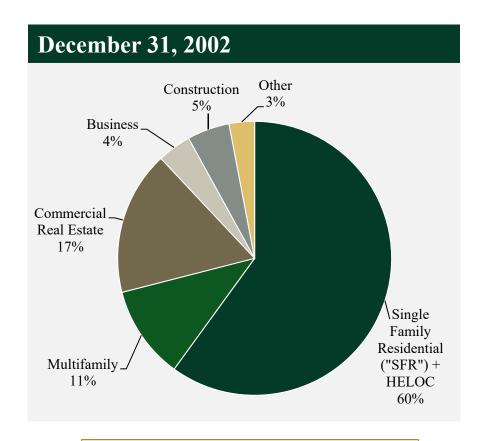
$$SF + NYC + LA = \underline{78\%}$$

<sup>(1)</sup> As of September 30, 2019.

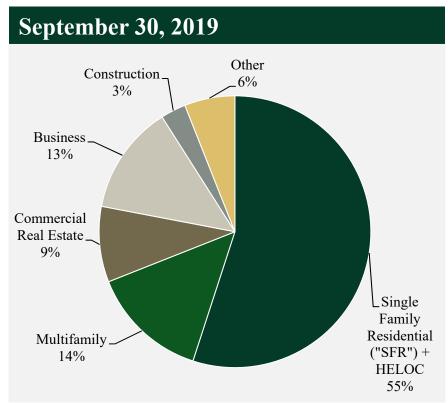
<sup>(2)</sup> Entered Palm Beach, FL, following New York and Boston clients, in 2013.

## 2002-2019: STABLE LOAN PORTFOLIO MIX

#### Simple and Consistent Lending / Essentially Same Loan Types and Mix



 $SFR + HELOC = \underline{60\%}$ 



 $SFR + HELOC = \underline{55\%}$ 

## CONSERVATIVE REAL ESTATE LOAN CHARACTERISTICS

#### **Originated Over Past 2 Years:** (1)

Single Family Residential ("SFR") Loan Characteristics		
	<b>Median</b>	
Loan Size	\$700,000	
LTV (2)	60%	

### Multifamily ("MF") Real Estate Loan Characteristics (3)

	<b>Median</b>
Loan Size	\$1.5M
LTV (2)	53%

#### Commercial Real Estate ("CRE") Loan Characteristics (3)

	,	
		<b>Median</b>
Loan Size		\$1.7M
LTV (2)		48%

- 81% of total loans are collateralized by real estate (4)
- All loans are fully underwritten and documented
- 16% of SFR loans have an LTV at origination greater than 70% <sup>(5)</sup>
- 52% of SFR loans have an LTV at origination less than or equal to 60% (5)
- Debt service coverage ratios for MF and CRE are very strong

<sup>(1)</sup> Originated 4Q 2017 through 3Q 2019.

<sup>(2)</sup> Loan-to-Value ("LTV") at origination.

<sup>(3)</sup> For term loans, balances are based on original loan amount. For lines of credit, amounts are based on total commitment.

<sup>(4)</sup> As of September 30, 2019, including loans held for sale. See slide 11.

<sup>(5)</sup> Includes loans held for sale, as of September 30, 2019.

## STRONG SFR BORROWER CHARACTERISTICS

Single Family Residential ("SFR") Borrower Credit Characteristics	Past 2 Years' <u>Median</u> <sup>(1)</sup>
Loan Size	\$700,000
Loan-to-Value ("LTV") (2)	60%
FICO	776
Liquidity	\$621,000

<sup>(1)</sup> Originated 4Q 2017 through 3Q 2019.

<sup>(2)</sup> LTV at origination.

## STABLE AND CONSERVATIVE LOAN UNDERWRITING STANDARDS

Average Loan-to- Value ("LTV") at Origination	Single Family Residential	HELOC (1)	Multifamily	CRE	Construction
Loans Originated in:					
2010	57%	57%	61%	51%	60%
3Q19	58%	52%	53%	45%	56%

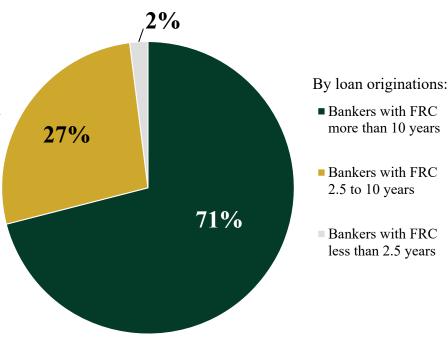
<sup>(1)</sup> Presented on a combined LTV basis, including the first residential mortgage and a second lien, where applicable.

## Banker Stability = Client Stability & Strong Credit

- Stability of people is integral to hightouch, consistent relationship banking model
- Culture results in higher workforce retention rate, key to client service excellence
- Credit quality is a cultural cornerstone, reinforced with a credit clawback provision and weekly, all-company loan meetings since 1986

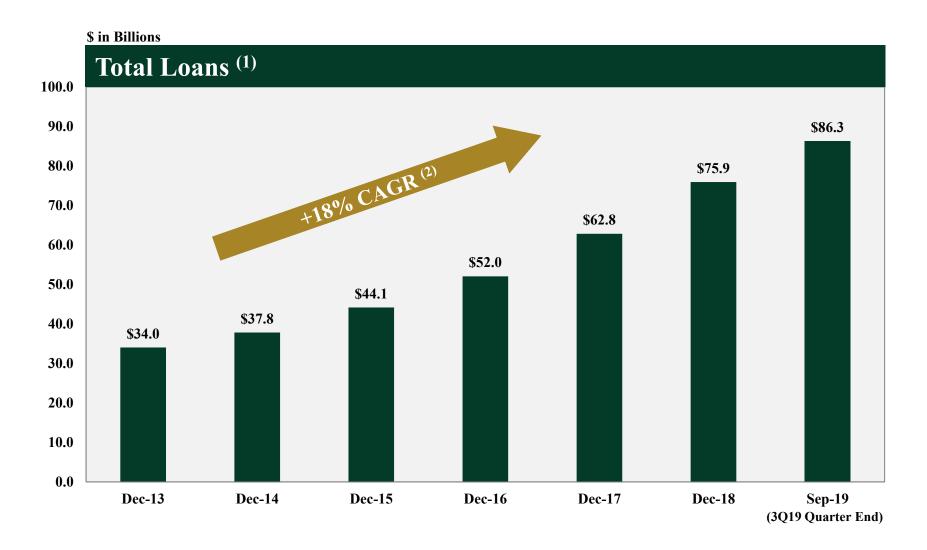
Since 1985, \$256 billion in loans originated, with only 13 bps <u>cumulative</u> total net losses (1)

90% of loans, since 1985, originated by bankers still with First Republic



(1) Includes loss experience on loans retained by Bank of America. From 1985 through September 30, 2019, the Single Family Residential loan portfolio has experienced net losses of only 0.2 bps per year. See page A2.

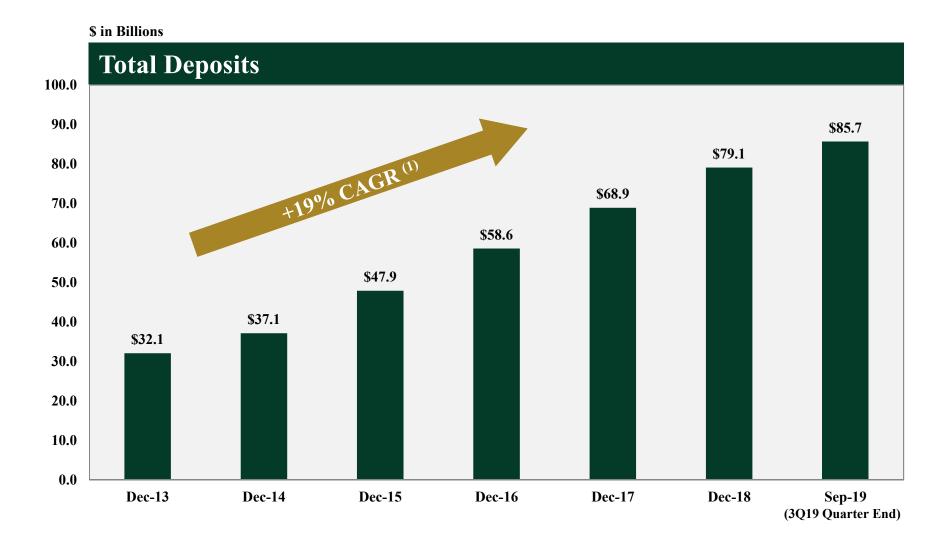
## ORGANIC GROWTH: LOANS

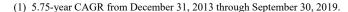


<sup>(1)</sup> Represents recorded investment, excluding loans held for sale.

<sup>(2) 5.75-</sup>year compounded annual growth rate ("CAGR") from December 31, 2013 through September 30, 2019.

## ORGANIC GROWTH: DEPOSITS

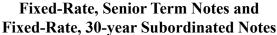


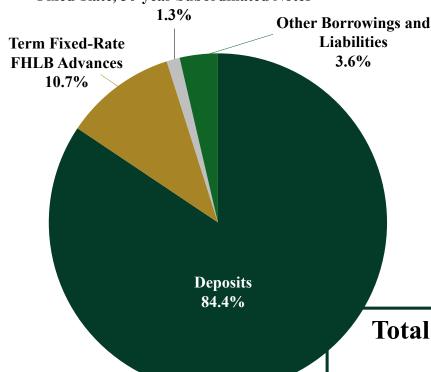




## STABLE DEPOSIT FUNDING

#### **By Source 9/30/19**





## **Deposit funding 84% of total liabilities**

- Debt funding (1) less than 13% of total liabilities
- Short-term borrowings (2) less than 1% of total liabilities

Total Deposits =  $\frac{$85.7 \text{ billion}}{\text{as of } 9/30/19}$ 

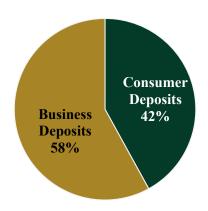
<sup>(1)</sup> Comprised of term fixed-rate Federal Home Loan Bank ("FHLB") advances (\$10.9 billion); fixed-rate, senior term notes (\$497 million) and fixed-rate 30-year subordinated notes (\$778 million), short-term FHLB borrowings (\$300 million) and federal funds purchased (\$475 million).

<sup>(2)</sup> Represents short-term FHLB borrowings (\$300 million) and federal funds purchased (\$475 million).

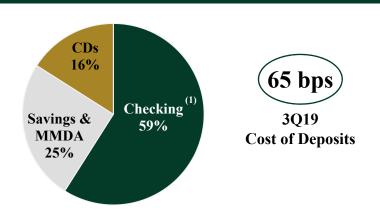
## DIVERSIFIED DEPOSITS

#### Reflects long-term, stable and deep relationships

#### **By Source 9/30/19**



#### By Type 9/30/19



#### **Average Deposit Account Size 9/30/19**

**Consumer** \$93,000

**Business** \$384,000

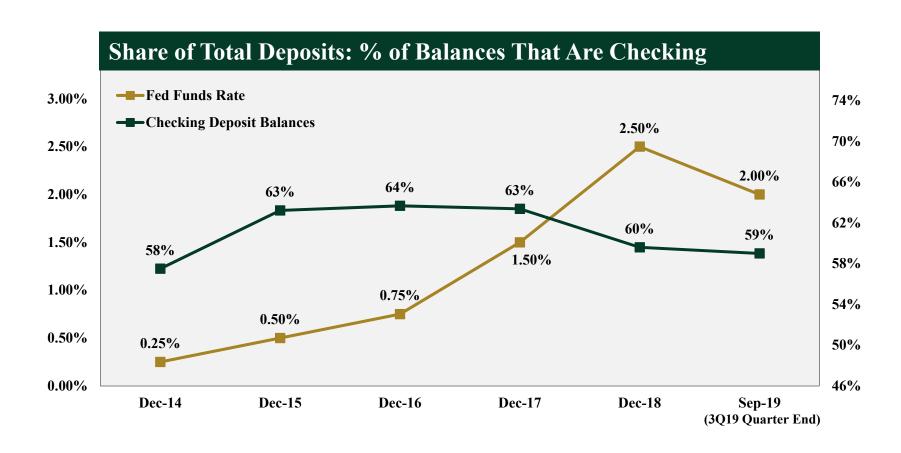
#### **Perspective on Operational Size**

First Republic has only approximately  $(\frac{1}{3})$  the number of deposit accounts compared to the average \$50-125 billion U.S. bank (2), (3)

- Greater ability for oversight per relationship
- Greater ability to provide extraordinary service per relationship
- (1) As of September 30, 2019, the average size of bank-wide checking accounts was \$142,000.
- (2) Source: SNL Financial and Company Analysis, data as of June 30, 2019, most recent available. \$50-125 billion U.S. bank peer group excludes FRC.
- (3) As of September 30, 2019, the average size of FRC deposit offices was over \$425 million.

## STABLE DEPOSIT MIX

## Despite Fed Funds Rate changes, the proportion of checking deposits has remained relatively steady



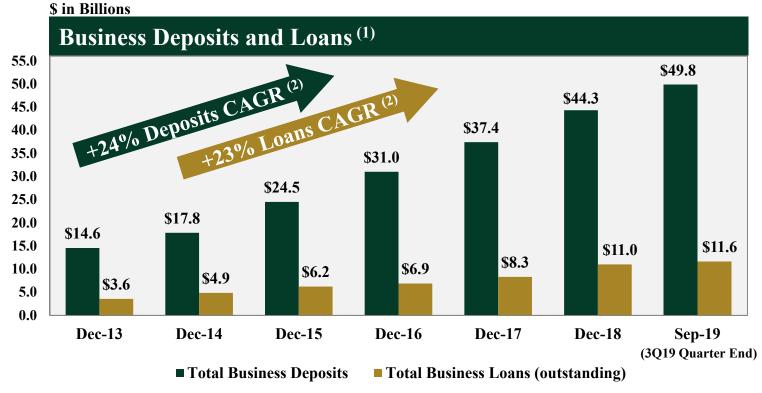
## BUSINESS BANKING

## Largely a direct result of personal banking clients recommending us for their businesses and non-profit organizations

#### As of 9/30/19:

- Average business loan = \$4.5 million
- Average business deposit = \$384,000

- 4.3 to 1) business deposits/loans outstanding
- Rate paid on business deposits 3Q19 = 41 bps



<sup>(1)</sup> Loan amounts represent recorded investment.

<sup>(2) 5.75-</sup>year CAGR from December 31, 2013 through September 30, 2019.



## BUSINESS BANKING: LOAN PORTFOLIO

Percentage of Business Banking Portfolio by Loan Type (1)	%
Private Equity / Venture Capital Funds	50%
Non-Profit Organizations / Schools	30%
Real Estate Related Entities	4%
Aviation / Marine	3%
Investment Firms	2%
Vineyards / Wine	2%
Entertainment Industry	2%
Professional Service Firms	1%
Clubs and Membership Organizations	1%
Other	5%
<b>Total Business Banking Loan Portfolio</b>	100%

- Business loans outstanding represent 13% of total loan portfolio (1)
- Focused on targeted verticals with substantial lending expertise and experience

<sup>(1)</sup> Represents percentage of loans based on recorded investment as of September 30, 2019.

## ATTRACTING THE NEXT GENERATION: PROGRAMS

#### **Lending Programs for Young Professionals**

The SLR & PLP portfolios are 42% self-funded (1)

Student Loan Refinance ("SLR") (2)	Professional Loan Program ("PLP") (2), (3)		
Refinance education debt	A loan program that gives employees a way to invest in their firms		
Cumulative Number of Households (4) 23	.5K	Cumulative Number of Households (4)	4.5K
Average Age of Borrower (5)	32	Average Age of Borrower (5)	39
Average FICO	770	Average FICO	768

Year-over-year, student loan refinance and professional loan program's borrower relationships accounted for <u>57%</u> of all growth in number of consumer borrowing households.

**Total Loans Outstanding** 

\$2.5B

**Total Loans Outstanding** 

<sup>(5)</sup> Average age of borrower at the time of origination. Other than being 18 years old or legally able to enter into a contract, there are no age requirements or age restrictions for loan eligibility.



\$1.2B

<sup>(1)</sup> Represents total SLR and PLP household deposits over total SLR and PLP loan balances as of September 30, 2019.

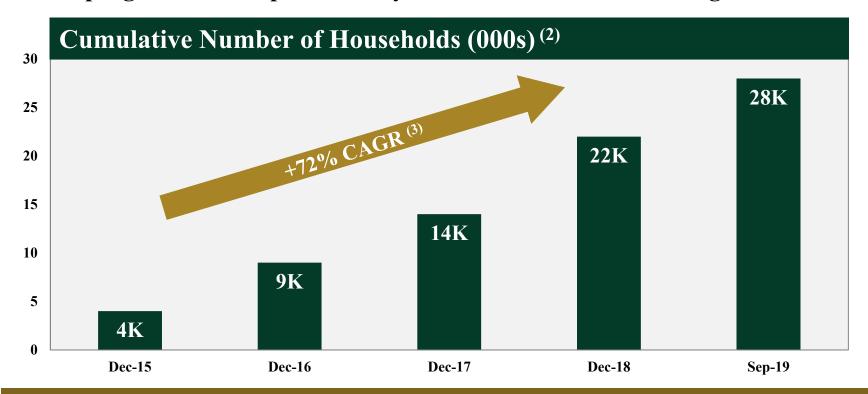
<sup>(2)</sup> Loan amounts are based on unpaid principal balance as of September 30, 2019. At September 30, 2019, the SLR portfolio had no delinquencies over 30 days and 10 charge-offs and the PLP portfolio had 2 delinquencies and no charge-offs.

<sup>(3)</sup> Typically collateralized, and in many cases guaranteed by firms.

<sup>(4)</sup> Represents the total number of households acquired since inception, as of September 30, 2019. Includes households with outstanding loans as well as paid off loans.

## ATTRACTING THE NEXT GENERATION: GROWTH

Relationships acquired through our student loan refinance and professional loan programs now represent fully 34% of consumer borrowing households (1)



High client satisfaction level for these households creates a significant growth opportunity as these young professionals develop. (4)

<sup>(1)</sup> As of September 30, 2019.

<sup>(2)</sup> Represents the total number of households acquired through student loan refinance and professional loan programs since inception at December 31 of each corresponding year and September 30, 2019. Includes households with outstanding loans as well as paid off loans. Based on household's initial SLR/PLP origination date.

<sup>(3) 3.75-</sup>year CAGR from December 31, 2015 through September 30, 2019.

<sup>(4)</sup> Source: FRC/Greenwich Associates NPS Study (2018).

## FIRST REPUBLIC AND GRADIFI



## Gradifi's technology platform offers several solutions to address the \$1.6 trillion U.S. student loan challenge (1)

Allows companies to easily administer employee benefits to help attract and retain talent

#### Student Loan PayDown ("SLP")

Employers help employees repay student debt

#### College SaveUp

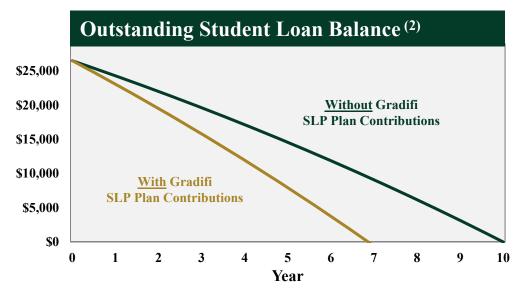
Employers help employees save for their children's education

#### Gradifi Refi

Employers help employees find attractive refinance opportunities

#### **Meaningful Impact:**

A \$100/month SLP plan saves employees over \$10,000 and accelerates the repayment of debt by over 30% earlier (2)



Note: Gradifi, Inc. is a wholly-owned subsidiary of First Republic Bank.

(1) Source: Federal Reserve, Consumer Credit – G.19 Release, April 2019; figure as of December 30, 2018.

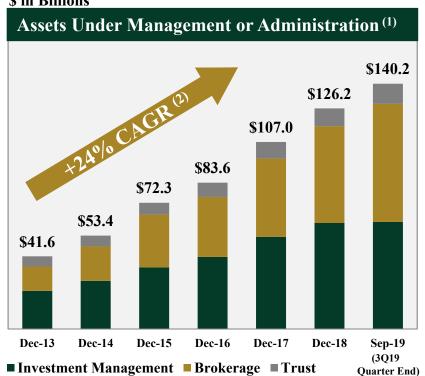
(2) Estimated savings based on \$26,500 loan balance, 4.00% interest rate and 10-year repayment term and include total SLP contributions plus estimated interest savings. Assumes extra payments are applied throughout repayment term of the loan and that borrower continues to make regular monthly payments. Individual savings will vary.

## PRIVATE WEALTH MANAGEMENT

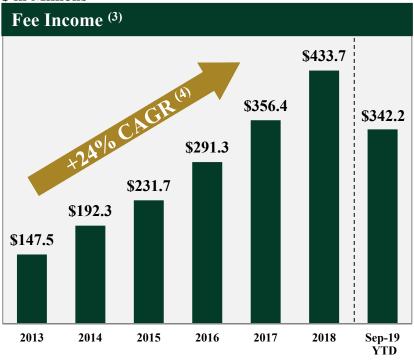
## A Strong and Growing Franchise

- Open architecture platform provides unbiased perspective
- Strong referrals between bank and wealth management
- Ability to attract exceptional wealth management teams
- Stable source of deposits through sweep accounts

#### \$ in Billions





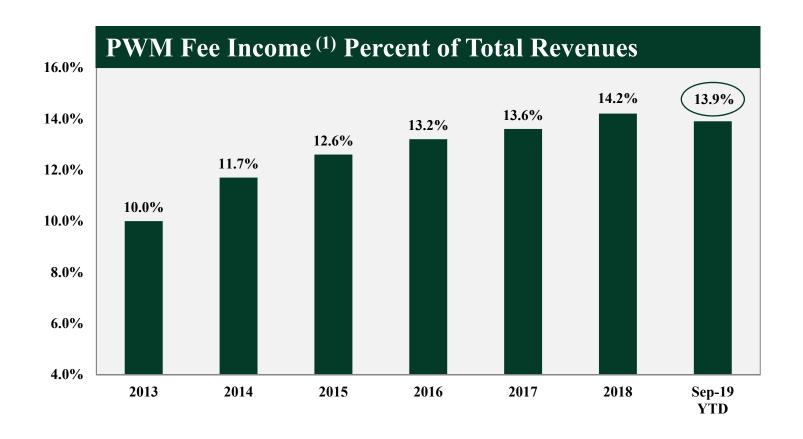


- (1) Excluding account balances that are swept into Bank deposits and safekeeping assets from the Bank's private equity and venture capital clients.
- (2) 5.75-year CAGR from December 31, 2013 through September 30, 2019.
- (3) Private Wealth Management fee income includes investment management, brokerage and investment, insurance, trust and foreign exchange fees.
- (4) 5-year CAGR from full year 2013 through full year 2018.

## PRIVATE WEALTH MANAGEMENT: REVENUES

#### **Contribution to Total Revenues**

Private Wealth Management Fee Income (1)

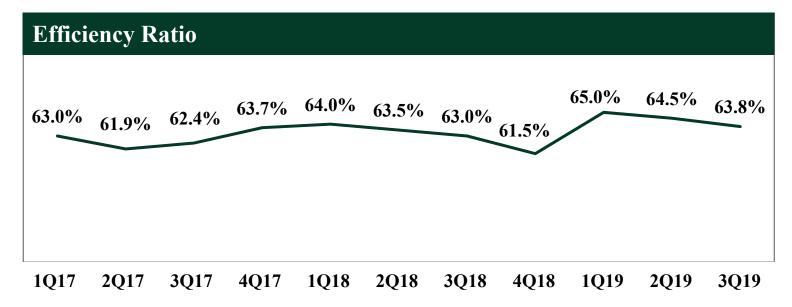


(1) Private Wealth Management ("PWM") fee income includes investment management, brokerage and investment, insurance, trust and foreign exchange fees.

## STABLE EFFICIENCY RATIO

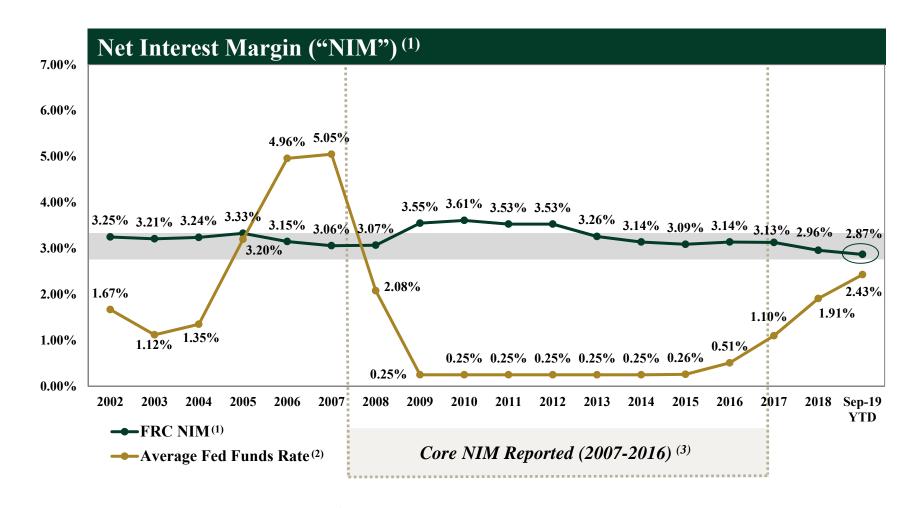
#### Efficiency ratio encompasses significant investments in:

- Our differentiated, high-touch service model
- Technology and operations to enhance client service and provide a strong foundation for future growth
- A growing overall franchise and wealth management business
- Acquiring the next generation of clients to power long-term growth



Note: Efficiency ratio is calculated by dividing noninterest expense by the sum of net interest income and noninterest income.

## STABLE NET INTEREST MARGIN

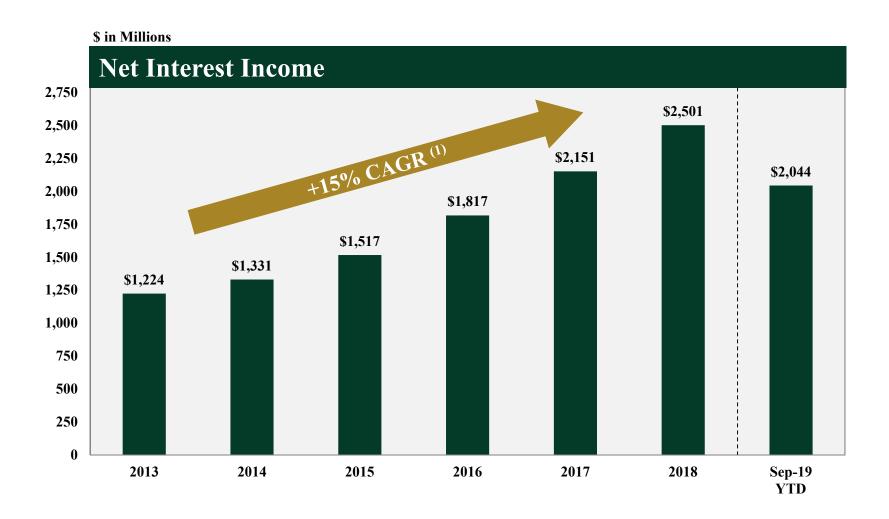


<sup>(1)</sup> Beginning in 2018, reflects the new reduced federal tax rate of 21% following the enactment of tax reform legislation in December 2017. Net interest margin for September 2019 YTD is annualized.

<sup>(2)</sup> Represents full-year average, except Sep-19 YTD, which represents year-to-date average.

<sup>(3)</sup> For 2007 through 2016, the net interest margin is presented on a non-GAAP basis ("core net interest margin"). For a reconciliation of the core net interest margin to its equivalent ratio under GAAP, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Financial Measures" in the Bank's Annual Reports on Form 10-K.

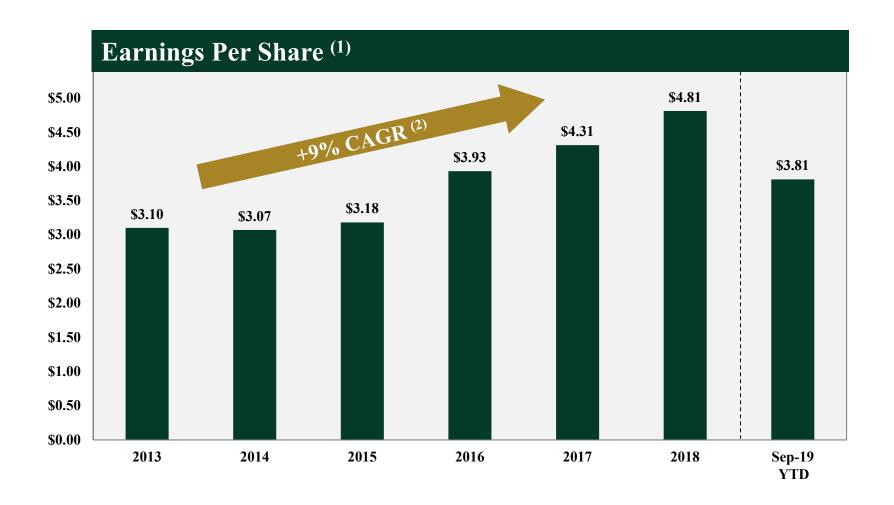
## STRONG GROWTH IN NET INTEREST INCOME



<sup>(1) 5-</sup>year CAGR from full year 2013 through full year 2018.



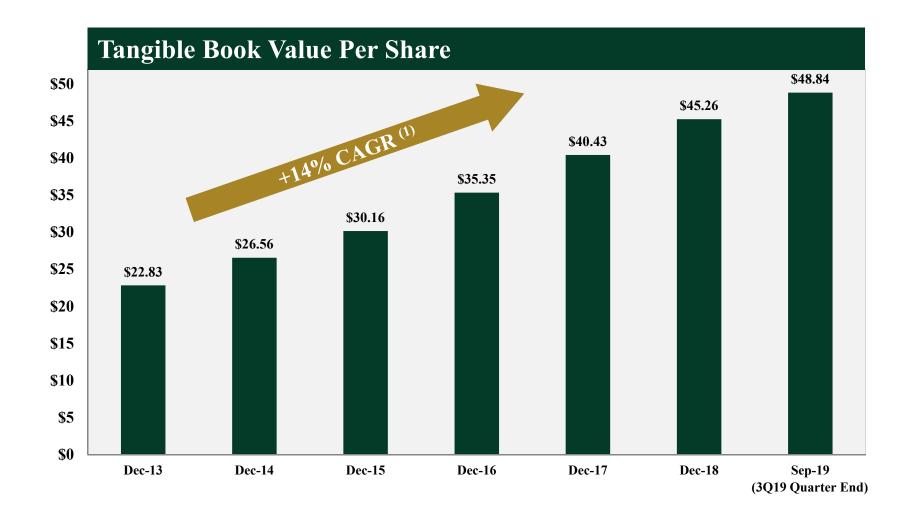
## EPS GROWTH



<sup>(1)</sup> Diluted Earnings Per Share.

<sup>(2) 5-</sup>year CAGR from full year 2013 through full year 2018.

## CONSISTENT GROWTH IN TANGIBLE BOOK VALUE PER SHARE



(1) 5.75-year CAGR from December 31, 2013 through September 30, 2019.

## NET INTEREST INCOME SIMULATION

## **Interest Rate Scenarios: Estimated Change in Net Interest Income**

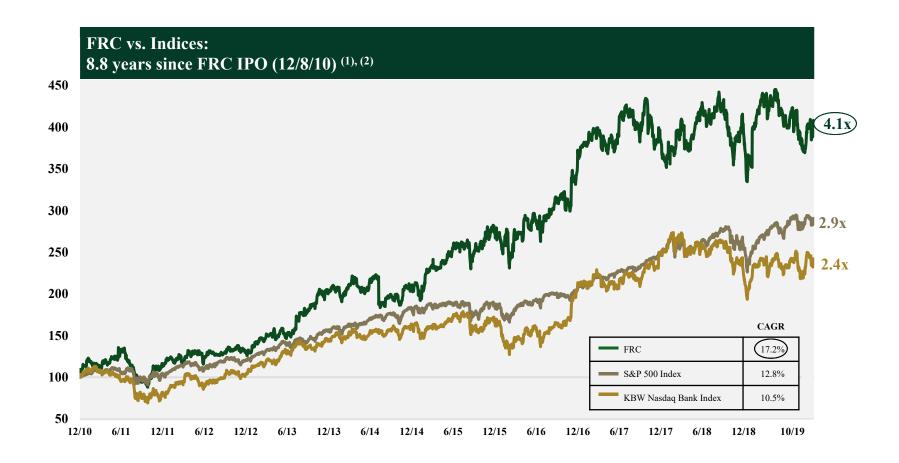
	First 12 Months (1)	Next 12 Months (2)
Ramp +100 basis points over next 12 months	-0.3%	1.3%
Ramp -100 basis points over next 12 months	-1.6%	-4.6%

Note: The projections assume 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"). See page 90 of the Bank's 2Q 2019 Form 10-Q, available on its website, which also includes additional scenarios.

<sup>(1)</sup> For the twelve months ending June 30, 2020.

<sup>(2)</sup> For the twelve months ending June 30, 2021.

## FRC PERFORMANCE VERSUS INDICES



Source: Bloomberg

(1) All calculations include reinvestment of dividends into the same stock (FRC) or index (S&P 500, and after IPO, also includes KBW Bank Index).

(2) From IPO date of December 8, 2010 through October 11, 2019.

## NOTICE

This presentation may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Statements in this presentation 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. 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 and include statements about economic performance in our markets and growth in our loan originations and wealth management assets. Accordingly, these statements are only predictions and involve estimates, known and unknown risks, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them.

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.

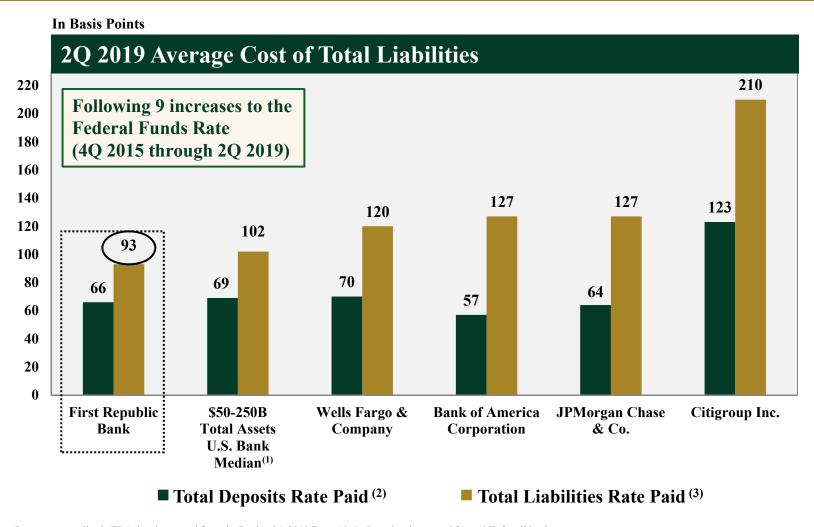
Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to: significant competition to attract and retain banking and wealth management customers, from both traditional and non-traditional financial services and technology 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 and the 11th District Monthly Weighted Average Cost of Funds Index; the regulatory environment in which we operate, our regulatory compliance and future regulatory 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; 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 priv

For a discussion of these and other risks and uncertainties, see First Republic's FDIC filings, including, but not limited to, the risk factors in First Republic's Annual Report on Form 10-K and any subsequent reports filed by First Republic with the FDIC. These filings are available in the Investor Relations section of our website. 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 our 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.

This presentation includes certain non-GAAP financial measures historically used by the Bank (specifically, core net interest margin, a non-GAAP measure, was used in 2007 through 2016, as referenced herein). For a reconciliation of the core net interest margin to its equivalent ratio under GAAP, see the Bank's Annual Reports on Form 10-K.

For Additional Information:
Visit the Investor Relations section at <u>firstrepublic.com</u>
or email investorrelations@firstrepublic.com

## APPENDIX: COST OF TOTAL LIABILITIES COMPARISON



Note: Rates are annualized. FRC data is sourced from the Bank's 2Q 2019 Form 10-Q. Peer data is sourced from SNL for all banks.

<sup>(1) \$50-250</sup>B Total Assets U.S. Bank group is based on top tier bank holding companies, commercial and savings banks, ranked by total assets as of June 30, 2019. FRC and U.S. subsidiaries of foreign banks are excluded. Broker-dealers, regulated depositories and specialty lenders are also excluded based on differences in their business models.

<sup>(2)</sup> Total deposits rate paid represents the weighted average interest paid on interest-bearing and noninterest-bearing deposits.

<sup>(3)</sup> Total liabilities rate paid represents the weighted average interest paid on interest-bearing deposits, noninterest-bearing deposits, senior debt, subordinated debt, and other interest-bearing liabilities.

## APPENDIX: EXCEPTIONAL CREDIT QUALITY

### Historical Losses by Loan Type – All Originated Loans Since Founding (1985)

Total net losses since 1985, cumulatively only 13 bps on \$256 billion of originated loans

#### \$ in Millions

	Years of Origination	Total Originations	Cumulative Net Losses (1)	
	0 1 2 <b>9</b>	(\$)	(\$)	(%)
Single Family Residential (2)	1985 – 3Q19	\$139,216	\$78.0	0.06% ←
Construction	1990 – 3Q19	11,350	29.9	0.26
Commercial Real Estate	1989 – 3Q19	15,689	63.7	0.41
Multi-Family Residential	1989 – 3Q19	21,409	64.4	0.30
Commercial Business Loans (3)	2000 – 3Q19	49,967	92.3	0.18
Unsecured Loans	2000 – 3Q19	8,273	10.5	0.13
Other Secured Loans	2000 – 3Q19	10,581	2.2	0.02
Cumulative	1985 – 3Q19	\$256,485	\$341.0	0.13% ←

<sup>(1)</sup> Includes estimated charge-offs on divested loans retained by Bank of America for period from July 1, 2010 to December 31, 2018. First Republic Bank was sold to Merrill Lynch in September 2007; through the acquisition of Merrill Lynch it became part of Bank of America in January 2009; then it became independent again through a management led buyback in July 2010.

<sup>(2)</sup> Originations and losses include Single Family Residential ("SFR") Loans, Home Equity Lines of Credit, Single Family Owner Occupied Construction Loans, as well as all SFR Loans sold in Secondary Market. Includes a \$7.4 million loss in 2006/07 related to a business loan fraud in New York.

<sup>(3)</sup> Includes a business loan loss of \$40 million involving fraud.

## APPENDIX: STRONG CAPITAL RATIOS

	First Republic 9/30/19 (1), (2)	Regulatory Requirements	
	Actual	Well-Capitalized Ratio	Minimum Capital Ratio Plus Capital Conservation Buffer <sup>(3)</sup>
Tier 1 Leverage Ratio	8.50%	5.00%	4.00%
Common Equity Tier 1 Ratio	9.91%	6.50%	7.00%
Tier 1 Risk-Based Capital Ratio	11.05%	8.00%	8.50%
Total Risk-Based Capital Ratio	12.61%	10.00%	10.50%

<sup>(1)</sup> Ratios as of September 30, 2019 are preliminary.

<sup>(2)</sup> Ratios do not reflect the impact of the upcoming redemption of the \$190.0 million of 5.50% Noncumulative Perpetual Series D Preferred Stock on October 18, 2019.

<sup>(3)</sup> As of September 30, 2019, our capital conservation buffer was 4.61%, which exceeded the minimum requirement of 2.5% required to be held by banking institutions.

## APPENDIX: FIRST REPUBLIC CREDIT RATINGS

### Credit ratings reflect consistently strong capital levels, asset quality and liquidity

#### Moody's

10100dy 5		
Long-Term Parent Company Ratings		
First Republic (FRC)	(A1)	
US Bancorp (USB)	A1	
Wells Fargo (WFC)	A2	
JP Morgan (JPM)	A2	
Bank of America (BAC)	A2	
Citigroup (C)	A3	
Goldman Sachs (GS)	A3	
Morgan Stanley (MS)	A3	
SVB Financial (SIVB)	A3	
Boston Private (BPFH)	Not Rated	
Signature Bank (SBNY)	Not Rated	

#### Standard & Poor's

Long-Term Parent Company Ratings		
US Bancorp (USB)	<b>A</b> +	
First Republic (FRC)	A-	
Wells Fargo (WFC)	<b>A</b> -	
JP Morgan (JPM)	<b>A</b> -	
Bank of America (BAC)	<b>A</b> -	
Citigroup (C)	BBB+	
Goldman Sachs (GS)	BBB+	
Morgan Stanley (MS)	BBB+	
SVB Financial (SIVB)	BBB	
Boston Private (BPFH)	Not Rated	
Signature Bank (SBNY)	Not Rated	

#### First Republic Credit Ratings

	Long-Term Deposits (1)	Corporate Long-Term	Short-Term Credit	Senior Unsecured Notes (2)
Moody's	A1	A1	P-1	Baal
Standard & Poor's	A-	A-	A-2	A-

Source: SNL Financial. As of September 30, 2019.

Please note, a credit rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time by the assigning rating organization.

- (1) Standard & Poor's does not provide a long-term deposits rating. The corporate long-term rating is shown.
- (2) 2.50% Senior Notes due 2022.

## APPENDIX: BUSINESS ACTIVITIES NOT UNDERTAKEN

This list includes the activities in which we do not currently intend to engage. As the Bank evolves, we will maintain and reevaluate this list periodically to ensure it continues to reflect our strategy and capabilities.

- No proprietary trading
- No proprietary structured products
- No market making in equities
- No proprietary open-end mutual funds, unit investment trusts or closed-end funds
- No trading assets or liabilities
- No cross-currency swaps
- No clearing services
- No underwriting transactions in debt and equity markets
- Not a commercial paper issuer, backstop provider or guarantor
- No underwriting of IPOs
- No credit derivatives
- No junk bond investments (1)
- No foreign sovereign debt investments
- No wholesale lending or borrowing of securities to or from financial institutions

- No depository institution, foreign bank or credit union debt positions
- No loans to foreign governments
- No credit card issuance, or auto loan originations
- No low-doc or no-doc, sub-prime lending
- No negative amortization loans (minimal amount in run-off)
- No reverse mortgages
- No foreign offices
- No factoring
- No sale of loan servicing on originated loans (2)
- No commercial letters of credit (i.e. trade finance)
- No conduit securities lending transactions
- No domestic or foreign holding company and no holding company subsidiaries

<sup>(1)</sup> Does not include unrated securities.

<sup>(2)</sup> Except for Bank of America retained loans.



# CORPORATE CITIZENSHIP AT FIRST REPUBLIC BANK

Our success is predicated upon inclusion, diversity and a culture of caring: for each other, our clients and our communities.

## ENVIRONMENTAL RESPONSIBILITY

A robust recycling program in all offices that includes paper, plastic and composting

Over 500 tons of paper recycled and over 9,000 trees saved through our Shred It program in 2018

New loan origination system launched in 2017 to support paperless loan files

Reduced paper usage by <u>approximately 25 tons</u> (<u>equivalent to 23 tons of carbon dioxide</u>) in 2018

Implementation of solar energy panels in offices in the San Francisco Bay Area



The First Republic Green Discount
We provide discounted loan pricing for all of our residential, commercial and construction lending projects that are LEED-certified.

## SOCIAL RESPONSIBILITY: SERVICE AND PHILANTHROPY



Established October 2016, this is an independent and diverse group of community leaders who offer strategic guidance on the bank's affordable housing, small business and economic development and financial empowerment initiatives.

Supported over 870 non-profit institutions with charitable contributions and grant awards in 2018

Employee Volunteer Program provides every employee with 2 paid work days for volunteerism, with over 14,600 service hours given in 2018

## SOCIAL RESPONSIBILITY: DIVERSITY & INCLUSION

## We value diversity of perspective, expertise, background and tenure, as well as cultural, sexual orientation, ethnic and gender diversity.

## Select Programs to Promote Advancement, in Keeping with Our Culture and Values

**Executive Education** at Harvard, Stanford, Tuck and Wharton to further strengthen leadership and encourage openness to ideas.

Over 100 leadership participants (1)

Culture Carrier Roundtable to reinforce our culture, which is built on diverse perspectives and empowerment of the individual.

Over 1,000 participants (1)

**Leadership Training** to improve manager skills in empathy, communication, motivation and coaching.

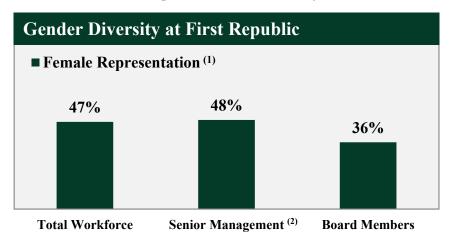
Over 650 participants (1)

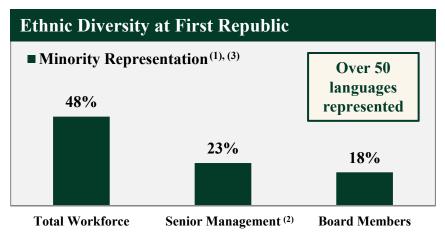
**Mentor Program** to provide coaching, facilitate career growth and expand professional relationships.

Over 350 participants (1)

#### **Recognition for Our Commitment to Diversity**

Women's Forum of New York (2017 & 2019) 2020 Women on Boards Bay Area (2018) San Francisco Business Times (2018) 2020 Women on Boards (2014 & 2017)





- (1) Total workforce and senior management team are as of December 31, 2018. Board members consist of the 11 directors approved at the 2019 Annual Shareholders' Meeting.
- (2) Senior management (66 employees) is defined as those people with a bank title of Regional Managing Director, Executive Managing Director or Senior Vice President and above, as well as subsidiary titles Executive Vice President and above.
- (3) "Minority" as defined by the Equal Employment Opportunity Commission ("EEOC").

## SOCIAL RESPONSIBILITY: EMPLOYEE BENEFITS

#### **Financial Advantages**

- \$25 Per Hour Minimum Wage
- 401(k) Employer Match; 98% participation
- Employee Stock Purchase Plan; 50% participation
- Mortgage Discount and Student Loan Refinance Discount Programs
- Employer-Paid Student Loan Repayment and College Savings Benefit Programs (Gradifi);
   nearly 2,000 employees enrolled collectively
- Tuition Reimbursement
- Colleague Referral Bonus
- Commuter Benefits and Technology, Travel and Entertainment Discounts

#### **Care of Our Employees and Their Families**

- Minimum 3 Weeks of Vacation Time
- 16 Weeks Paid Maternity Leave (1)
- 10 Weeks Paid Parental Leave
- Parent Support and Lactation Services
- 6 Weeks Paid Disability Leave
- 6 Weeks Paid Family Care Leave
- Extra Day Off for Birthday and Morning Off for Child's First Day of School
- 2 Paid Days per Year to Volunteer with a Nonprofit Organization of Choice

#### **Well-Being**

- Wellness: Monthly Stipend and Gym Discounts
- Meals: Subsidized Cafés and Employee Group Lunch
- Insurance: Medical (including Dental and Vision), Life, Business Travel and Pets
- Wellness Program: Flu Shots, Ergonomics, Biometric Screening and Health Coaching
- Employee Assistance Program
- Employer Health Savings Account Contribution
- Health Advocate Program
- Financial Wellness Seminars

#### **Professional Development and Continuing Education**

- First Republic Mentor Program
- Leadership Development Program
- Relationship Manager Development Program
- Robust Internal Training, Continuing Education and Development Programs



"We have a great team, and that's what makes a difference."

JOHANNA HAMEL, BUSINESS BANKING

"I love working at First Republic because we are given the privilege to do everything in our power to help our clients."



TONY NGUYEN, EAGLE LENDING



"It's the colleagues and clients that I get to work with on a dayto-day basis that make this a genuinely good place to be."

DANET TITTLE, RELATIONSHIP MANAGEMENT TEAM SUPPORT

"At First Republic, I don't have to compromise between caring for my family and growing my career."



LANG MILLER, PREFERRED BANKING OFFICES

For a more comprehensive overview of employee benefits, visit <u>firstrepublic.com/careers</u>. (1) Inclusive of 10 weeks parental leave.

## GOVERNANCE RESPONSIBILITY

## We believe strong corporate governance includes accountability to and engagement with our shareholders.

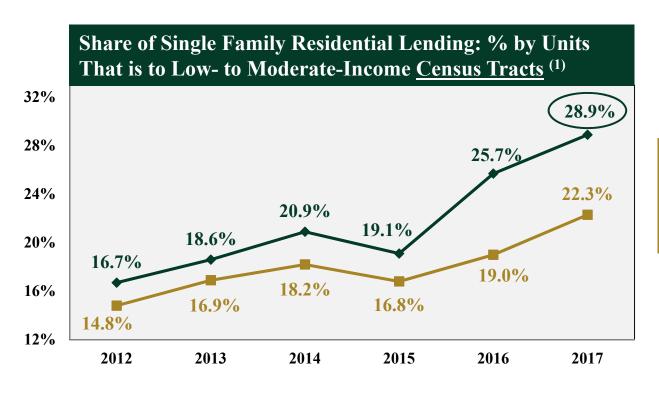
#### With board oversight and shareholder feedback, the following corporate governance enhancements have been made:

- Formed Information Security and Technology Committee under Board oversight in 2016, in keeping with our commitment to addressing cybersecurity
- Incorporated a Net Promoter Score (client loyalty) and an efficiency ratio metric in our compensation program for all Named Executive Officers
- Expanded proxy disclosure in several areas including shareholder engagement, diversity metrics, succession planning, compensation philosophy and board composition
- Significant community engagement and corporate citizenship activities
- A broad Equal Employment Opportunity policy statement that expressly includes gender identity
- Majority voting required for director elections
- One-year term for board members
- Annual compensation limits for non-employee directors
- Equity awards granted to Named Executive Officers subject to doubletrigger vesting in the event of a change-in-control

- No single-trigger cash severance arrangements
- Up to 50% of executive incentive plan participants' annual incentive award paid in the form of a grant of restricted stock units, which vest over 3 years in equal annual installments
- Minimum vesting requirement of at least twelve months following the date of grant of any equity award
- No repricing of stock options or stock appreciation rights to provide for a lower strike price, and no repurchase of awards measured by the full value of a share for cash or other consideration
- No re-granting of shares used to pay option exercise prices or withheld to pay taxes on stock awards
- Dividends on performance-vesting restricted shares/units issued since June 2013 are not paid until shares/units are earned/vested
- Limited perquisites, including no financial and tax advisory perquisites

## COMMUNITY RESPONSIBILITY: LENDING

## Consistent Satisfactory Community Reinvestment Act rating for 26 years



30% of Business Banking portfolio consists of loans to non-profit organizations (3)

**Single Family Residential Lending to Low- to Moderate-Income Census Tracts:** 

- First Republic Bank
- All lending institutions within FRC's geographic markets (2)

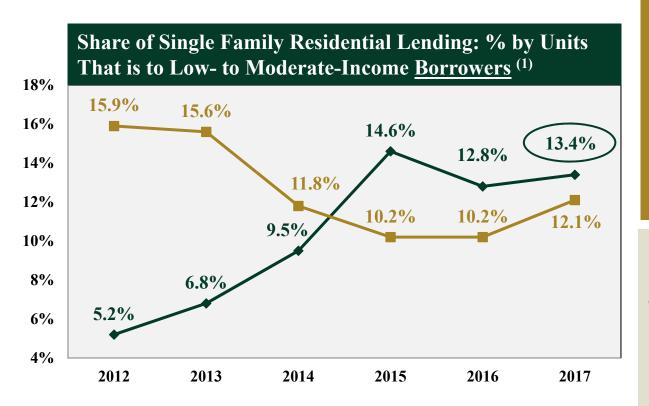
<sup>(1)</sup> Percentage of single family residential loans funded by unit in low- to moderate-income census tracts, as determined by Home Mortgage Disclosure Act data ("HMDA").

<sup>(2)</sup> Aggregate market is single family residential lending activity for all lending institutions within FRC's community reinvestment assessment areas, as determined by submitted data required under HMDA.

<sup>(3)</sup> As of September 30, 2019.

## COMMUNITY RESPONSIBILITY: LENDING

### Consistent Satisfactory Community Reinvestment Act rating for 26 years



Strong, continued momentum with Eagle Community Home Loan program

This program offers special fixed rates, plus dedicated bankers and customized service, to borrowers in underserved minority areas

First Republic has been recognized in 2019 for its commitment to the community by

The Oral Lee Brown
Foundation
and
Huckleberry Youth Programs

**Single Family Residential Lending to Low- to Moderate-Income Borrowers:** 

First Republic Bank

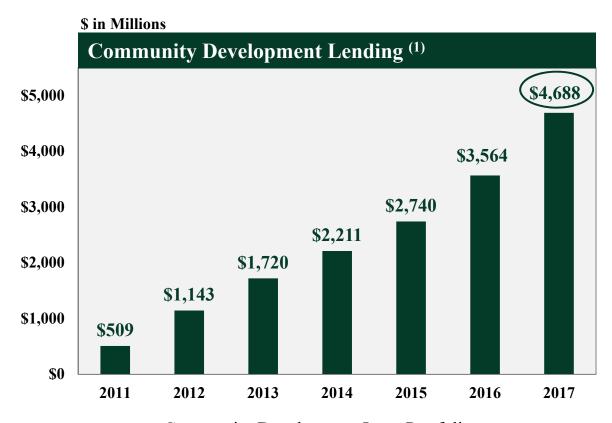
All lending institutions within FRC's geographic markets (2)

<sup>(1)</sup> Percentage of single family residential loans funded by unit to low- to moderate-income borrowers, as determined by Home Mortgage Disclosure Act data ("HMDA").

<sup>(2)</sup> Aggregate market is single family residential lending activity for all lending institutions within FRC's community reinvestment assessment areas, as determined by submitted data required under HMDA.

## COMMUNITY RESPONSIBILITY: LENDING

## Engagement with the community an extension of our service-oriented culture



FRC has originated over 1,900 low- to moderate-income community development loans, totaling \$4.7 billion, which have helped to revitalize underserved minority areas throughout the Bank's footprint (2)

Over <u>80%</u> of such loans are located in predominantly minority neighborhoods

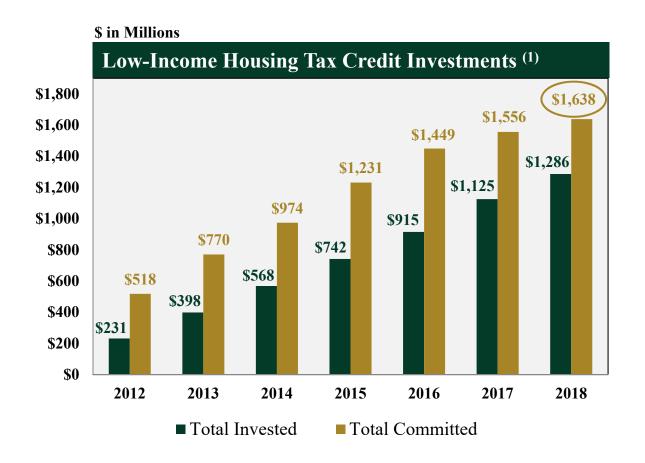
<sup>■</sup> Community Development Loan Portfolio

<sup>(1)</sup> Community Development Lending ("CDL") includes multifamily and commercial real estate loans, along with lending to nonprofit organizations and other commercial entities, that meet the Community Reinvestment Act ("CRA") standards for "community development." Balances are cumulative through period-end.

<sup>(2)</sup> Loans originated from 2011 through 2017, the most recent reportable time period.

## COMMUNITY RESPONSIBILITY: INVESTMENTS

#### Engagement with the community an extension of our service-oriented culture



FRC has committed approximately \$1.6 billion to low-income housing tax credit investments (1)

Current investments help to finance the development of over <u>93,000</u> affordable, low-income rental units (2)

<sup>(1)</sup> Includes all low-income housing tax credit investments. Balances are at period-end.

<sup>(2)</sup> As of December 31, 2018.

## PROTECTING OUR CLIENTS: DATA AND CYBERSECURITY

#### A holistic approach to effective data, cybersecurity and risk management

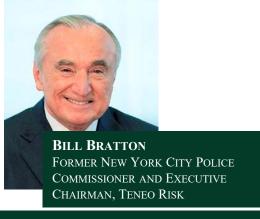
#### PREVIOUSLY FEATURED GUEST

#### **SPEAKERS**

General Hayden and Bill Bratton have headlined data and cybersecurity awareness events in our markets, offering insights and best practices to our employees and client base.



GENERAL MICHAEL HAYDEN
FORMER DIRECTOR OF THE CENTRAL
INTELLIGENCE AGENCY AND THE
NATIONAL SECURITY AGENCY



#### **Client Education & Awareness**

- Internet Security Health Checks for individual and corporate clients
- Client education events featuring data and cybersecurity experts

#### **Board Accountability**

• Directors' Information Security and Technology Committee formed in 2016 to ensure that information security, technology and cybersecurity issues and risks have a very high, board-level priority, and that appropriate risk management strategies are in place

#### **Employee Accountability**

• Required quarterly security and fraud awareness training modules, reinforced throughout the year with "Clean Desk" walkthroughs and "Hackers Exposed" training series

#### **Vendor Due Diligence**

 Regular vendor security due diligence to ensure that our vendors protect customer information in accordance with our security policies and standards

#### **Ongoing Program Evaluation & Enhancement**

- Third party firms perform periodic security testing of our online and internal systems
- Third party audit and attestation to the Bank's security controls in SSAE-18 SOC1 report
- Annual Information Security Enterprise Risk Assessment to identify, measure and manage risks to the Bank's information assets
- Financial transaction monitoring to identify and prevent fraud
- Regular disaster recovery and crisis management exercises to ensure continued banking operations
- Ongoing monitoring of social media and the dark web for intelligence to protect the Bank, clients and key vendors from compromise

## Maintaining Our Culture: Core Values



#### Do the Right Thing

We strive to do things right at First Republic. We also recognize that we're a business of humans; mistakes will happen. Therefore, our mandate is to do the right thing: act with integrity, own your actions, correct mistakes, learn from experience.



#### **Provide Extraordinary Service**

We always aim to exceed expectations and serve our clients in unexpected ways. We'll take on only what we can do right. Our business may be about wealth management and banking, but our success is all about service—exceptional customer service.



#### Respect the Team

Everyone at First Republic makes a difference and everyone at First Republic deserves to feel that his or her contribution is valued. We place high value on collaboration because we know that the power of many is greater than the power of one.



#### Move Forward, Move Fast

There are two types of organizations—organizations that spend time checking and organizations that spend time doing. We're doers. We value action and decisiveness and recognize that the best opportunities come to those that act quickly.



#### **Think Positively**

We operate in an environment of trust and encourage openness and flexibility. We hire positive people who act positively. Our goal is to "manage toward yes."



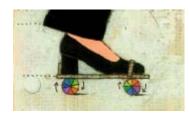
#### Take Responsibility

At First Republic, it's not enough to do our own jobs well. Making sure our clients are satisfied is everyone's job. So if something needs fixing, we step up to the plate, "own" the problem and make things right.



#### Grow

We've evolved greatly since our inception, expanding ourselves and our business purpose. At First Republic, we embrace change and every person has the opportunity to grow and contribute. We want our people to soar.



#### **Have Fun**

We know that if everyone enjoys their work they'll do a better job—and our clients will feel the difference. It's really that simple.

## EXECUTIVE TEAM

## Experienced executive management team, with an average age of 49 years and an average tenure with First Republic of 15 years (1)



James H. Herbert, II Chairman, CEO & Founder (75)



Hafize Gaye Erkan President & Board Member (40)



Michael D. Selfridge Senior Executive Vice President Chief Banking Officer (52)



Michael J. Roffler Executive Vice President Chief Financial Officer (48)



Jason C. Bender Executive Vice President Chief Operating Officer (49)



Mollie M. Richardson Executive Vice President Chief Administrative Officer and Chief People Officer (40)



David B. Lichtman Executive Vice President Chief Credit Officer (56)



Robert L. Thornton Executive Vice President President of Private Wealth Management (61)

Note: 48% of FRC's full senior management team is female. Senior management (66 employees) includes the above individuals and is defined as those people with a bank title of Regional Managing Director, Executive Managing Director or Senior Vice President and above, as well as subsidiary titles of Executive Vice President and above. See page B3.

(1) Excluding James H. Herbert, II, Chairman, CEO & Founder (tenure 34 years).

## 3<sup>RD</sup> QUARTER HIGHLIGHTS

#### **Growth Year-Over-Year:**

- Deposits +14.7%
- Loans +19.3% (1)
- Revenues +8.9%
- Net income +10.0%
- Earnings per share +10.1%
- Tangible book value per share +11.0%

#### For Q3'19, or as of September 30, 2019:

- Loan originations of **§11.1** billion
- Total wealth management assets = \$140.2 billion
- Total bank assets = **\$111.0** billion
- Nonperforming assets only **12 bps** of total assets
- Common Equity Tier 1 Ratio = 9.91% (2)

#### **Recent Developments:**

- The Bank will redeem its \$190.0 million of 5.50% Noncumulative Perpetual Series D Preferred Stock on October 18, 2019
- (1) Excluding loans held for sale.
- (2) Ratios as of September 30, 2019 are preliminary. See page A3 in Appendix.

