

KeyCorp

First Quarter 2019 Earnings Review

April 18, 2019

Beth E. Mooney

Chairman and
Chief Executive Officer

Don Kimble

Vice Chairman and
Chief Financial Officer



FORWARD-LOOKING STATEMENTS AND ADDITIONAL INFORMATION

This communication contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 including, but not limited to, KeyCorp's expectations or predictions of future financial or business performance or conditions. Forward-looking statements are typically identified by words such as "believe," "seek," "expect," "anticipate," "intend," "target," "estimate," "continue," "positions," "plan," "predict," "project," "forecast," "guidance," "goal," "objective," "prospects," "possible," "potential," "strategy," "opportunities," or "trends," by future conditional verbs such as "assume," "will," "would," "should," "could" or "may", or by variations of such words or by similar expressions. These forward-looking statements are based on assumptions that involve risks and uncertainties, which are subject to change based on various important factors (some of which are beyond KeyCorp's control.) Actual results may differ materially from current projections.

Actual outcomes may differ materially from those expressed or implied as a result of the factors described under "Forward-looking Statements" and "Risk Factors" in KeyCorp's Annual Report on Form 10-K for the year ended December 31, 2018 ("Form 10-K") and in other filings of KeyCorp with the Securities and Exchange Commission (the "SEC"). Such forward-looking statements speak only as of the date they are made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after that date or to reflect the occurrence of unanticipated events. For additional information regarding KeyCorp, please refer to our SEC filings available at www.key.com/ir.

Annualized, pro forma, projected and estimated numbers are used for illustrative purpose only, are not forecasts and may not reflect actual results. This presentation also includes certain non-GAAP financial measures related to "tangible common equity," "cash efficiency ratio," and certain financial measures excluding notable items. Notable items include certain revenue or expense items that may occur in a reporting period in which management does not consider indicative of ongoing financial performance. Management believes it is useful for the investment community to consider financial metrics with and without notable items in order to enable a better understanding of company results, facilitate comparability of period-to-period financial results, and to evaluate and forecast those results. Although Key has procedures in place to ensure that these measures are calculated using the appropriate GAAP or regulatory components, they have limitations as analytical tools and should not be considered in isolation, or as a substitute for analysis of results under GAAP. For more information on these calculations and to view the reconciliations to the most comparable GAAP measures, please refer to the appendix of this presentation, or page 80 of our Form 10-K dated December 31, 2018.

GAAP: Generally Accepted Accounting Principles



1Q19 Investor Highlights

Driving Returns

- **Revenue reflects solid balance sheet growth**
 - Average loan growth of 3% vs. PY; driven by commercial relationships
 - Average deposit growth of 5% vs. PY; reflecting growth in core retail relationships
- **Fee income reflects expected seasonality and lower capital markets related income**
- **Strong expense management (↓7% vs. PY excl. notable items^(a)) reflects efficiency efforts across the franchise**
 - On track to reach targeted cash efficiency range of 54-56% in 2H19
- **Closed acquisition of Laurel Road Bank's digital business**
 - Adds attractive client segments and enhances digital capabilities

Strong Risk Management

- **Strong asset quality: maintaining credit discipline and underwriting standards**
 - Net charge-offs to average loans of .29%; portfolios continue to perform well
 - Nonperforming loans to period-end loans of .61%

Disciplined Capital Management

- **Strong capital position with CET1 ratio of 9.84%^(a)**
- **Completed \$199 MM^(b) of common share repurchases and declared quarterly dividend of \$.17 per common share in 1Q19**
- **Announced capital plans for 3Q19-2Q20**
 - Includes 9% common share dividend increase from \$.17 to \$.185 (subject to Board approval) and \$1 billion share repurchase program



(a) Non-GAAP measure

(b) 3/31/19 ratio is estimated

(c) Common share repurchase amount includes repurchases to offset issuances of common shares under our employee compensation plans

Financial Review



Financial Highlights

Continuing operations, unless otherwise noted

	1Q19	4Q18	1Q18	LQ Δ	Y/Y Δ	
Profitability	EPS – assuming dilution	\$.38	\$.45	\$.38	(16) %	-
	EPS – excl. notable items ^{(a), (b)}	.40	.48	.38	(17)	5 %
	Cash efficiency ratio ^(a)	61.9 %	59.9 %	62.9 %	200 bps	(100) bps
	Cash efficiency –excl. notable items ^{(a), (b)}	60.2	57.4	62.9	280	(270)
	Return on average tangible common equity ^(a)	13.7	16.4	14.9	(268)	(117)
	ROTCE – excl. notable items ^{(a), (b)}	14.4	17.5	14.9	(311)	(50)
	Return on average total assets	1.18	1.37	1.25	(19)	(7)
	Net interest margin	3.13	3.16	3.15	(3)	(2)
Capital^(c)	Common Equity Tier 1 ^(d)	9.84 %	9.93 %	9.99 %	(9) bps	(15) bps
	Tier 1 risk-based capital ^(d)	10.97	11.08	10.82	(11)	15
	Tangible common equity to tangible assets ^(a)	8.43	8.30	8.22	13	21
Asset Quality	NCOs to average loans	.29 %	.27 %	.25 %	2 bps	4 bps
	NPLs to EOP portfolio loans ^(e)	.61	.61	.61	-	-
	Allowance for loan and lease losses to EOP loans	.98	.99	1.00	(1)	(2)

EOP = End of Period

(a) Non-GAAP measure: see Appendix for reconciliation

(b) Excludes notable items; see Appendix for detail and reconciliations

(c) From consolidated operations

(d) 3/31/19 ratios are estimated

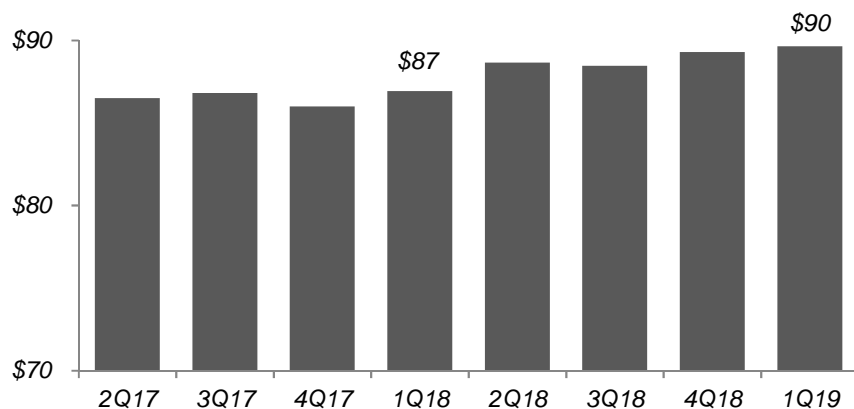
(e) Nonperforming loan balances exclude \$551 million, \$575 million, and \$690 million of purchased credit impaired loans at March 31, 2019, December 31, 2018, and March 31, 2018, respectively



Loans

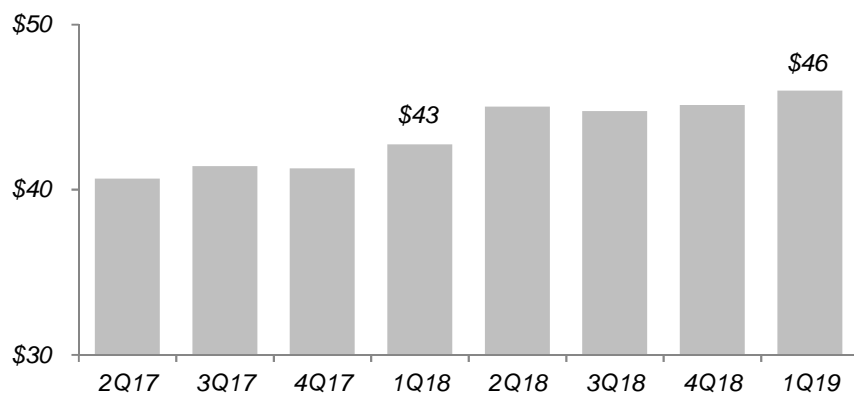
Total Average Loans

\$ in billions



Average C&I Loans

\$ in billions



Highlights

vs. Prior Year

- Average loans up 3% from 1Q18
 - C&I balances up 8% driven by broad-based growth with middle-market clients
 - Home equity continues to be impacted by market trends

vs. Prior Quarter

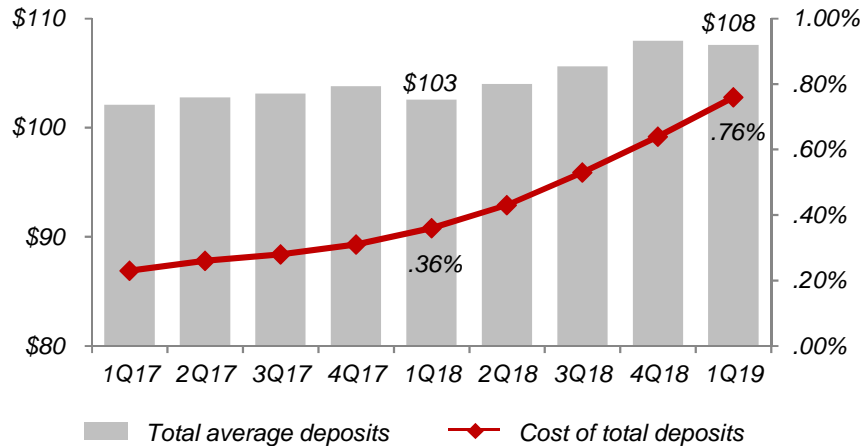
- Average loans up .4% from 4Q18
 - C&I balances up 2% driven by broad-based growth with middle-market clients
 - Consumer loans reflect growth in indirect auto, offset by decline in home equity



Deposits

Average Deposits

\$ in billions



Highlights

- Deposit cost up 12 bps from 4Q18, reflecting:
 - Higher interest rates
 - Continued migration of portfolio into higher-yielding products
- Strong and stable deposit base
 - 26% noninterest-bearing
 - ~65% stable retail and low-cost escrow

vs. Prior Year

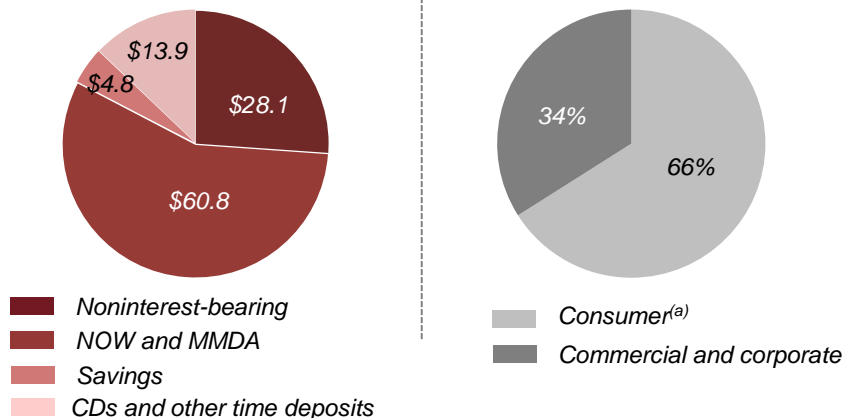
- Average deposits up 5% from 1Q18
- Strength in retail banking franchise and growth from commercial relationships
- Continued mix shift to higher-yielding deposit products

vs. Prior Quarter

- Average deposit balances relatively stable (down .3%) vs. 4Q18
- Reflects expected short-term and seasonal deposit outflows
- Penetration^(a) of existing retail and commercial relationships

1Q19 Average Deposit Mix

\$ in billions

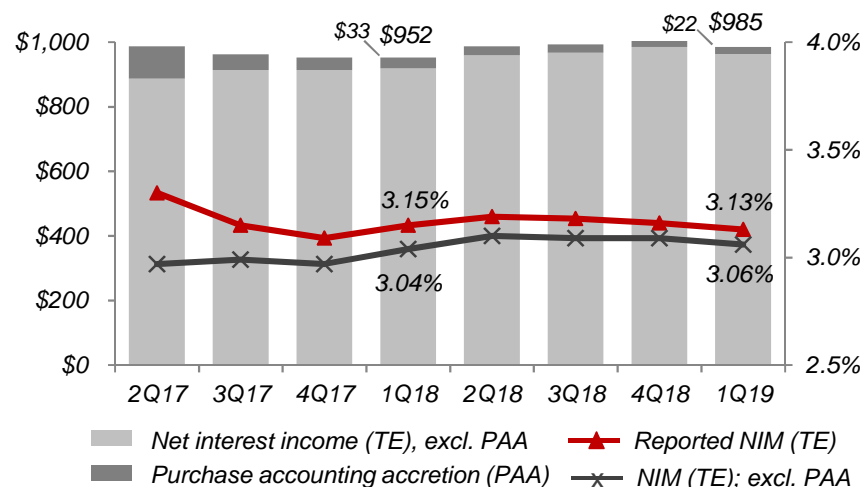


(a) Consumer includes retail banking, small business, and private banking

Net Interest Income and Margin

Net Interest Income & Net Interest Margin Trend (TE)

\$ in millions; continuing operations



	1Q18	2Q18	3Q18	4Q18	1Q19
NIM – reported	3.15%	3.19%	3.18%	3.16%	3.13%
PAA	.11	.09	.09	.07	.07
NIM – excl. PAA	3.04%	3.10%	3.09%	3.09%	3.06%

	1Q18	2Q18	3Q18	4Q18	1Q19
NII – reported (\$MM)	\$ 952	\$ 987	\$993	\$1,008	\$985
PAA	33	28	26	23	22
NII – excl. PAA	\$919	\$959	\$967	\$985	\$963^(a)

Highlights

- Excluding PAA, 1Q19 net interest income was \$963 MM and net interest margin was 3.06%

vs. Prior Year

- Net interest income up \$44 MM, or 5%, from 1Q18, excl. PAA
 - Largely driven by higher interest rates and earning asset growth

vs. Prior Quarter

- Net interest income down \$22 MM, or 2%, from 4Q18, excl. PAA
 - Reflects lower day count, change in balance sheet mix and lower loan fees

NIM Change vs. Prior Quarter	4Q18:	3.16%
Balance sheet mix		(.02)
Lower loan fees		(.02)
Higher interest rates		.01
Total change		(.03)
	1Q19:	3.13%



TE = Taxable equivalent

PAA = Purchase accounting accretion

(a) 1Q19 purchase accounting accretion of \$22 MM is made up of \$16 MM related to contractual maturities and \$6 MM related to prepayments

Noninterest Income

Noninterest Income

<i>\$ in millions</i>	<i>up / (down)</i>	1Q19	vs. 1Q18	vs. 4Q18
Trust and investment services income		\$ 115	\$ (18)	\$ (6)
Investment banking and debt placement fees		110	(33)	(76)
Service charges on deposit accounts		82	(7)	(2)
Operating lease income and other leasing gains		37	5	9
Corporate services income		55	(7)	(3)
Cards and payments income		66	4	(2)
Corporate-owned life insurance		32	0	(7)
Consumer mortgage income		8	1	1
Mortgage servicing fees		21	1	0
Other income		10	(11)	(23)
Total noninterest income		\$ 536	(65)	(109)

Highlights

vs. Prior Year

- **Noninterest income down \$65 MM (-11%) from 1Q18**
- **Lower investment banking and debt placement fees impacted by timing and market disruption**
- **Trust and investment services income lower, primarily related to the sale of Key's insurance business in 2018 (fees of \$15 MM in 1Q18)**
- **Continued growth in cards and payments income**
- **Other income reflected current quarter losses in principal investing**

vs. Prior Quarter

- **Noninterest income down \$109 MM (-17%) from 4Q18**
- **Seasonal impacts in:**
 - Investment banking and debt placement fees
 - Cards and payments income
 - COLI income
- **Investment banking and debt placement fees additionally impacted by market disruption and timing of certain transactions**
- **Other income reflected current quarter losses in principal investing**



Noninterest Expense

Noninterest Expense				
<i>\$ in millions</i>	<i>up / (down)</i>	1Q19	vs. 1Q18	vs. 4Q18
Personnel		\$ 563	\$ (31)	\$ (13)
Net occupancy		72	(6)	(3)
Computer processing		54	2	(1)
Business services, professional fees		44	3	(5)
Equipment		24	(2)	(2)
Operating lease expense		26	(1)	(6)
Marketing		19	(6)	(6)
FDIC assessment		7	(14)	(2)
Intangible asset amortization		22	(7)	0
OREO expense, net		3	1	2
Other expense		129	18	(13)
Total noninterest expense		\$ 963	\$ (43)	\$ (49)
<i>Notable Items:</i>				
Efficiency initiative expenses		\$ 26	-	(2)
Pension settlement charge		-	-	17
Total noninterest expense, excl. notable items^(a)		\$ 937	\$ (69)	\$ (34)

Highlights

vs. Prior Year

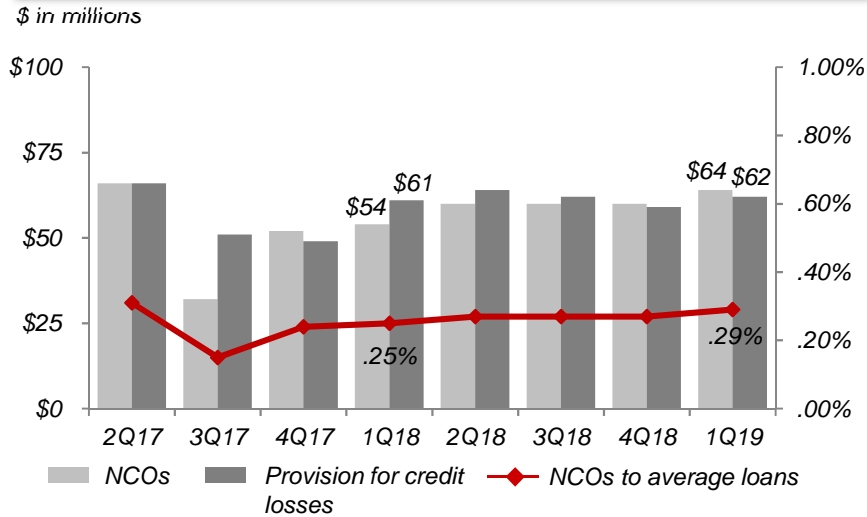
- **Noninterest expense excl. notable items down \$69 MM, or 7%^(a)**
- **Decline in overall expenses reflects Key's efficiency initiative efforts across the franchise**
- **Personnel expense reflects:**
 - Lower salaries
 - Lower performance-based compensation
 - Lower employee benefits
 - Higher severance (efficiency initiative expenses)
- **Lower FDIC assessment reflecting elimination of quarterly surcharge**

vs. Prior Quarter

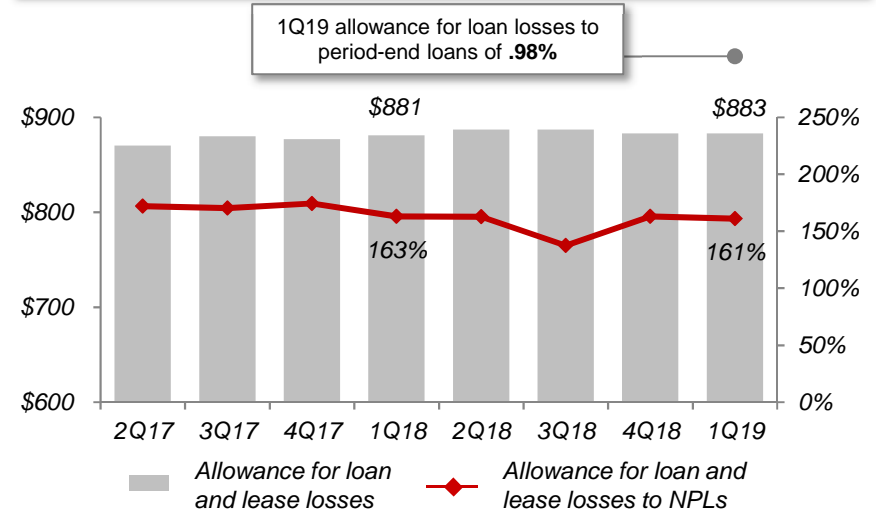
- **Noninterest expense excl. notable items down \$34 MM, or 4%^(a)**
- **Decline in overall expenses reflects Key's efficiency initiative efforts across the franchise**
- **Personnel expense reflects lower salaries and performance-based compensation, partially offset by seasonal increase in employee benefits costs**
- **Seasonally lower marketing expense**
- **Lower operating lease and other expenses**

Credit Quality

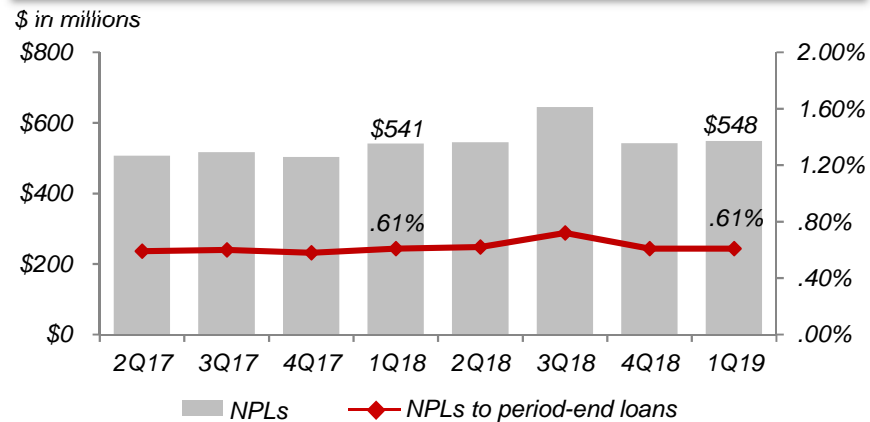
Net Charge-offs & Provision for Credit Losses



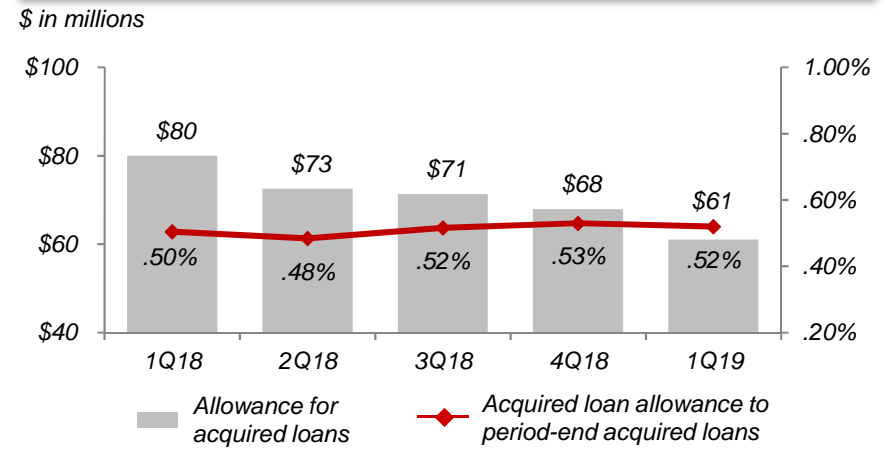
Allowance for Loan and Lease Losses



Nonperforming Loans^(a)



Acquired Loans

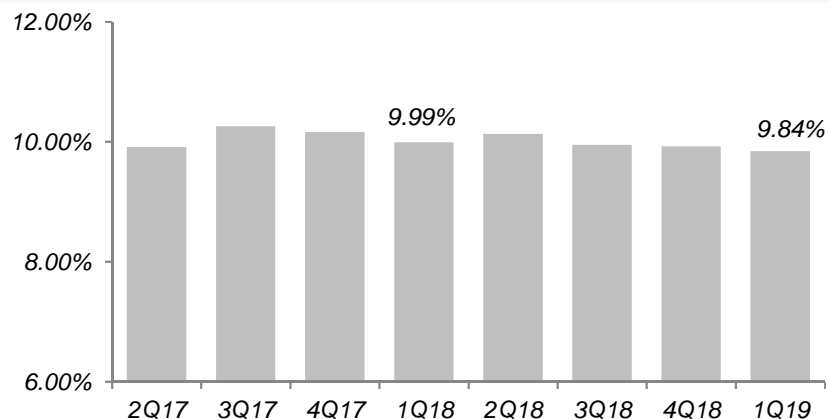


NCO = Net charge-off

(a) Nonperforming loan balances exclude \$551 million and \$690 million of purchased credit impaired loans at March 31, 2019, and March 31, 2018, respectively

Capital

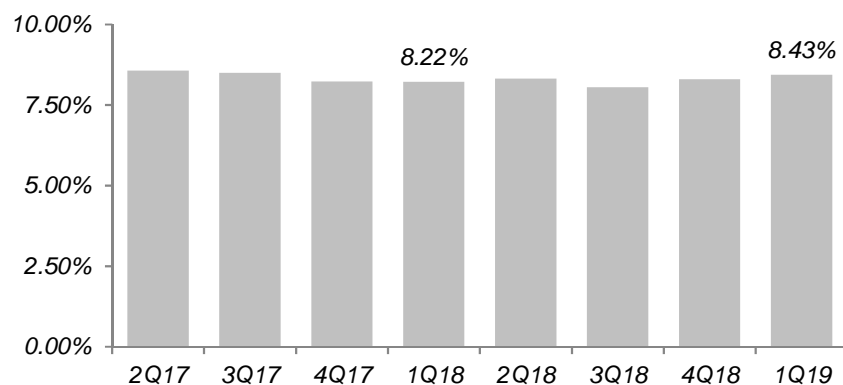
Common Equity Tier 1^(a)



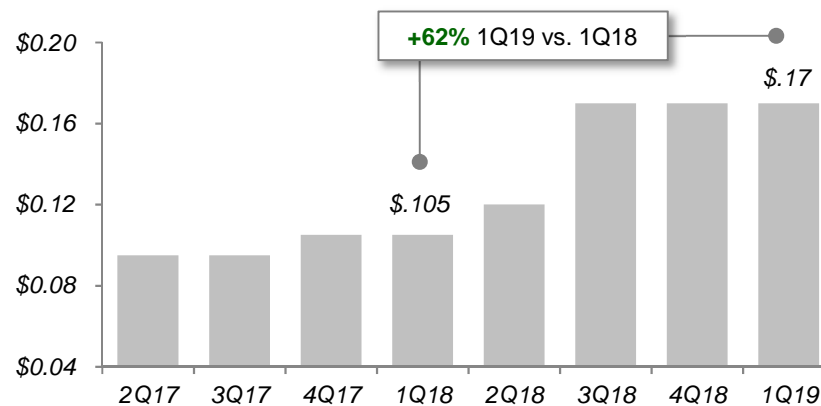
Highlights

- **Strong capital position: CET1 ratio of 9.84%^(a) at 3/31/2019**
- **Declared dividend of \$0.17 per common share and repurchased \$199 MM^(c) in common shares in 1Q19**
- **Announced planned capital actions for 3Q19-2Q20**
 - 9% common share dividend increase, from \$.17 to \$.185 in 3Q19, subject to Board approval
 - A common share repurchase program of up to \$1B

Tangible Common Equity to Tangible Assets^(b)



Quarterly Common Share Dividend



(a) 3/31/19 ratios are estimated

(b) Non-GAAP measure: see Appendix for reconciliation

(c) Common share repurchase amount includes repurchases to offset issuances of common shares under our employee compensation plans

FY2019 Outlook & Long-term Targets

	FY 2019
Average Balance Sheet	<ul style="list-style-type: none"> Loans: average balances in the range of \$90 B - \$91 B Deposits: average balances in the range of \$108 B - \$109 B
Net Interest Income (TE)	<ul style="list-style-type: none"> Net interest income expected to be in the range of \$4.0 B - \$4.1 B Outlook assumes interest rates remain unchanged
Noninterest Income	<ul style="list-style-type: none"> Expected to be in the range of \$2.5 B - \$2.6 B
Noninterest Expense	<ul style="list-style-type: none"> Expected to be in the range of \$3.85 B - \$3.95 B <ul style="list-style-type: none"> Includes realization of \$200 MM run-rate cost savings in 2H19 Achieve cash efficiency ratio target of 54 - 56% by 2H19 Includes impact of Laurel Road acquisition
Credit Quality	<ul style="list-style-type: none"> Net charge-offs to average loans below targeted range of 40 - 60 bps Provision expected to slightly exceed net charge-offs
Taxes	<ul style="list-style-type: none"> GAAP tax rate in the range of 18% - 19%

Long-term Targets

Positive operating leverage

Cash efficiency ratio:
54% - 56%

Moderate risk profile:
Net charge-offs to avg. loans targeted range of 40-60 bps

ROTCE:
16 - 19%



Appendix



Loan Portfolio Detail, at 3/31/19

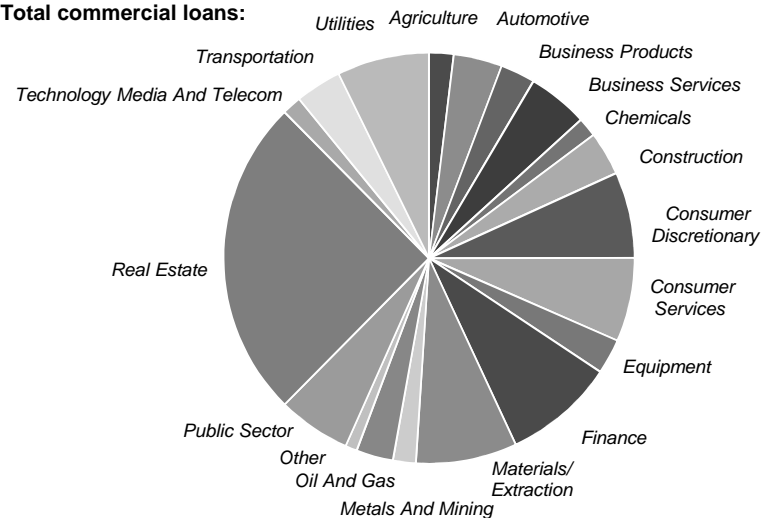
Total Loans

\$ in billions	3/31/19	% of total loans
Commercial and industrial	\$ 46.5	52
Commercial real estate	15.8	17
Commercial lease financing	4.5	5
Total Commercial	\$ 66.7	74
Residential mortgage	5.6	6
Home equity	10.8	12
Consumer direct	2.2	2
Credit card	1.1	1
Consumer indirect	3.7	4
Total Consumer	\$ 23.4	26

Commercial Loans

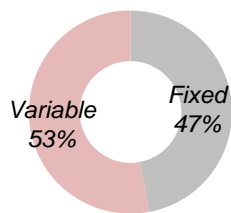
Diversified Portfolio by Industry

Total commercial loans:



Home Equity

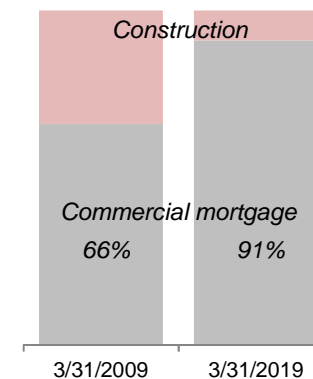
	Outstanding Balances	Average Loan Size	Average FICO	2008/prior vintage
First lien	\$ 6,419 59%	\$ 70,787	773	16%
Second lien	4,426 41	46,368	773	28
Total home equity	\$ 10,846			



- Combined weighted-average LTV at origination: 70%
- \$555 million in lines outstanding (7.8% of the home equity lines) come to end of draw period by 1Q21

Commercial Real Estate

- Focused on relationships with CRE owners
- Aligned with targeted industry verticals
- Primarily commercial mortgage; selective approach to construction
- Criticized non-accruals: 0.6% of period-end balances^(a)

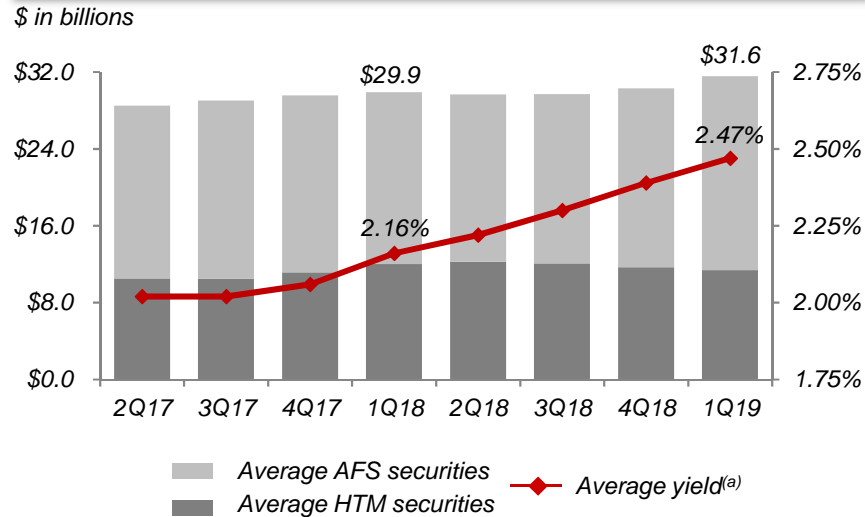


Tables may not foot due to rounding

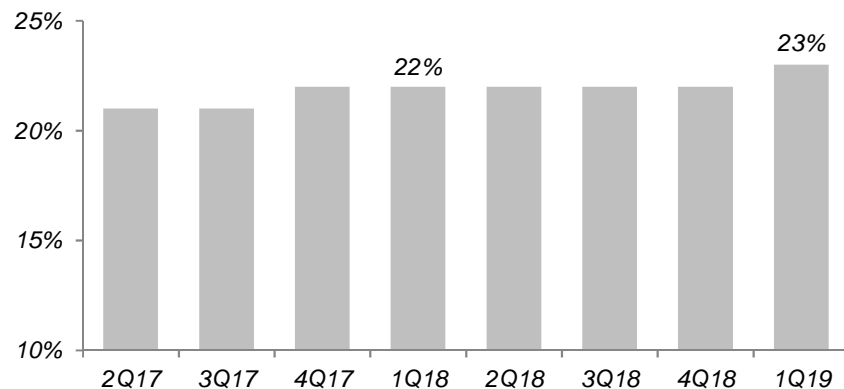
(a) Loan and lease outstandings; excludes purchase credit impaired loans from the First Niagara acquisition

Investment Portfolio

Average Total Investment Securities



Securities to Total Assets^(b)



Highlights

- Portfolio composed primarily of GNMA and GSE-backed MBS and CMOs
 - Primarily fixed rate
 - GNMA 45% of 1Q19 average balances
- Portfolio used for funding and liquidity management:
 - Securities cash flows of \$930 MM in 1Q19
 - Reinvesting cash flows into High Quality Liquid Assets
- Replaced cash flows at higher yields during 1Q19
 - Yield on new investments ~105 bps higher than maturities
 - Portfolio yield has increased 31 bps from prior year
- Portfolio average life of 4.5 years and duration of 3.8 years at 3/31/2019



(a) Yield is calculated on the basis of amortized cost

(b) Includes end-of-period held-to-maturity securities at amortized cost and available-for-sale securities at fair value

Asset & Liability Management Positioning

Balanced positioning supports strong, stable net interest margin

Business and Balance Sheet Highlights

- **Strong, low-cost deposit base**
 - \$79 B interest-bearing deposits at 103 bps
 - \$28 B noninterest-bearing deposits
 - Cumulative interest-bearing deposit beta of 35%
 - ~65% stable retail and low-cost escrow
 - >85% from markets where Key maintains Top 5 deposit or branch share
- **Relationship-oriented lending franchise**
 - Distinctive commercial capabilities drive C&I loan growth and ~70% floating-rate loan mix
 - Addition of Laurel Road enhances fixed rate loan volumes with an attractive profile
- **Disciplined balance sheet management with recurring re-investment opportunities**
 - \$32 B securities portfolio is >99% government-guaranteed and generates ~\$400 MM cash flows per month
 - Discretionary hedge activities help moderate interest rate risk exposure and lock in spreads on new business

Positioning

- **Actively hedging to reduce current and future exposure to declining rates**
 - Executed ~\$4 B in interest rate swaps and floors in 1Q19
 - ~\$12 B in hedge executions since 3Q18 significantly reduce declining rate exposure
- **Reducing asset sensitivity as the curve flattens and economic growth slows**
 - Lower level of exposure due to a more balanced rate outlook
 - Shorter duration loan and investment portfolios provide opportunity for continued benefit to higher rates
 - Higher deposit betas have reduced the benefit to rising short term interest rates

Balanced interest rate risk position:

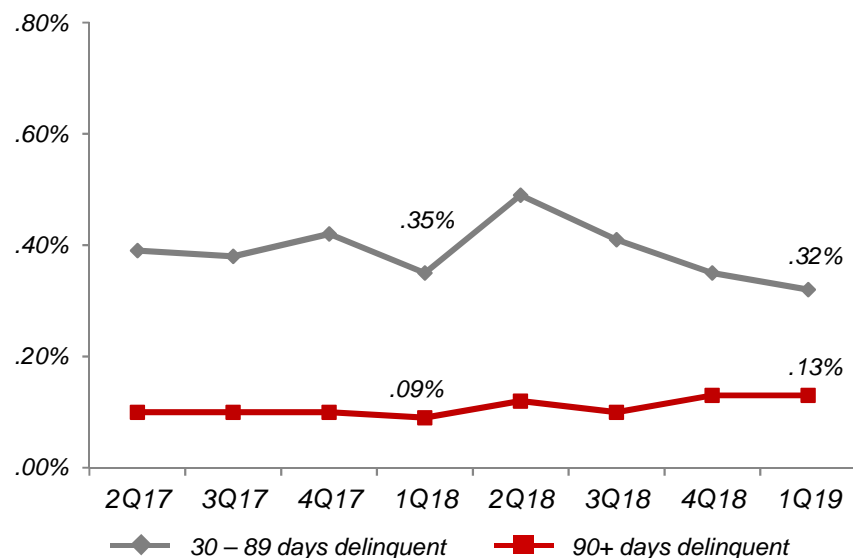
*Neutral for a 200 bps increase over 12 months
Nil impact of -.7% for a 100 bps decrease over 12 months*



Credit Quality Trends

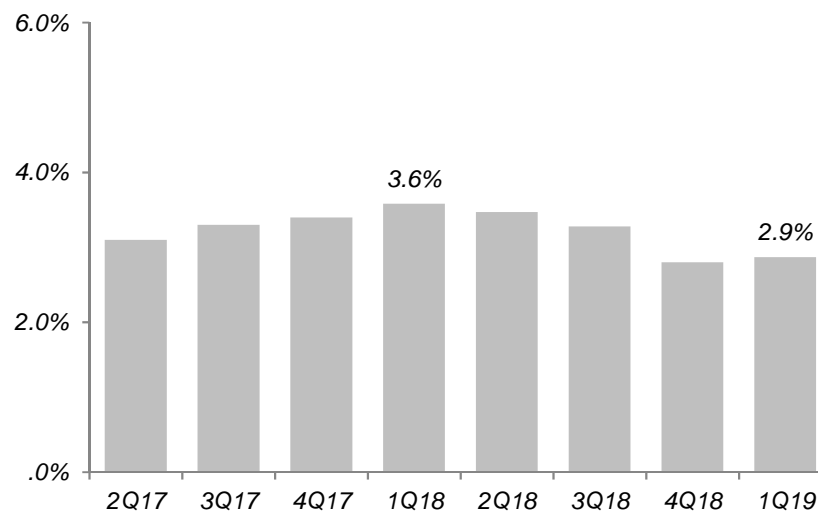
Delinquencies to Period-end Total Loans

Continuing operations



Criticized Outstandings^(a) to Period-end Total Loans

Continuing operations



Metric ^(b)	1Q19	4Q18	3Q18	2Q18	1Q18
Delinquencies to EOP total loans: 30-89 days	.32 %	.35 %	.41 %	.49 %	.35 %
Delinquencies to EOP total loans: 90+ days	.13	.13	.10	.12	.09
NPLs to EOP portfolio loans ^(c)	.61	.61	.72	.62	.61
NPAs to EOP portfolio loans + OREO + Other NPAs ^(c)	.66	.64	.75	.65	.65
Allowance for loan losses to period-end loans	.98	.99	.99	1.01	1.00
Allowance for loan losses to NPLs	161.1	162.9	137.5	162.8	162.8

(a) Loan and lease outstandings; excludes purchase credit impaired loans from the First Niagara acquisition

(b) From continuing operations

(c) Nonperforming loan balances exclude \$551 million, \$575 million, \$606 million, \$629 million, and \$690 million of purchased credit impaired loans at March 31, 2019, December 31, 2018, September 30, 2018, June 30, 2018, and March 31, 2018, respectively



Credit Quality

Credit Quality by Portfolio

\$ in millions	Period-end loans	Average loans	Net loan charge-offs	Net loan charge-offs ^(b) / average loans (%)	Nonperforming loans ^(c)	Ending allowance ^(d)	Allowance / period-end loans ^(d) (%)	Allowance / NPLs (%)
	3/31/19	1Q19	1Q19	1Q19	3/31/19	3/31/19	3/31/19	3/31/19
Commercial and industrial ^(a)	\$ 46,474	\$ 45,998	\$ 26	0.23%	\$ 170	\$ 530	1.14%	311.76%
Commercial real estate:								
Commercial Mortgage	14,344	14,325	4	.11	82	144	1.00	175.61
Construction	1,420	1,561	4	1.04	2	28	1.97	N/M
Commercial lease financing ^(e)	4,507	4,497	7	.63	9	35	.78	388.89
Real estate – residential mortgage	5,615	5,543	-	-	64	8	.14	12.50
Home equity	10,846	10,995	2	.07	195	36	.33	18.46
Consumer direct loans	2,165	1,862	9	1.96	3	33	1.52	N/M
Credit cards	1,086	1,105	9	3.30	3	47	4.33	N/M
Consumer indirect loans	3,721	3,763	3	.32	20	22	.59	110.00
Continuing total	\$ 90,178	\$ 89,649	\$ 64	.29%	\$ 548	\$ 883	.98%	161.13%
Discontinued operations	1,019	1,041	3	1.17	7	13	1.28	185.71
Consolidated total	\$ 91,197	\$ 90,690	\$ 67	.30%	\$ 555	\$ 896	.98%	161.44%

N/M = Not meaningful

(a) 3/31/19 ending loan balance includes \$135 million of commercial credit card balances; average loan balance includes \$133 million of assets from commercial credit cards

(b) Net loan charge-off amounts are annualized in calculation

(c) 3/31/19 NPL amount excludes \$551 million of purchased credit impaired loans

(d) 3/31/19 allowance by portfolio is estimated

(e) Commercial lease financing includes receivables held as collateral for a secured borrowing of \$12 million at March 31, 2019. Principal reductions are based on the cash payments received from these related receivables



GAAP to Non-GAAP Reconciliation

\$ in millions

Notable Items

Efficiency initiative expenses

Pension settlement charge

Total notable items

Income taxes

Total notable items after tax

Earnings per common share (EPS) excluding notable items

EPS from continuing operations attributable to Key common shareholders

— assuming dilution

Add: EPS impact of notable items

EPS from continuing operations attributable to Key common shareholders
excluding notable items (non-GAAP)

Tangible common equity to tangible assets at period end

Key shareholders' equity (GAAP)

Less: Intangible assets ^(a)

Preferred Stock ^(b)

Tangible common equity (non-GAAP)

Total assets (GAAP)

Less: Intangible assets ^(a)

Tangible common equity to tangible assets ratio (non-GAAP)

Tangible common equity to tangible assets ratio (non-GAAP)

	Three months ended		
	3/31/2019	12/31/2018	3/31/2018
	\$ 26	\$ 24	-
	-	17	-
	<u>\$ 26</u>	<u>\$ 41</u>	<u>-</u>
	6	10	-
	<u>\$ 20</u>	<u>\$ 31</u>	<u>-</u>
	\$.38	\$.45	\$.38
	.02	.03	-
	<u>\$.40</u>	<u>\$.48</u>	<u>\$.38</u>
	\$ 15,924	\$ 15,595	\$ 14,944
	2,804	2,818	2,902
	1,421	1,421	1,009
	<u>\$ 11,699</u>	<u>\$ 11,356</u>	<u>\$ 11,033</u>
	\$ 141,515	\$ 139,613	\$ 137,049
	2,804	2,818	2,902
	<u>\$ 138,711</u>	<u>\$ 136,795</u>	<u>\$ 134,147</u>
	8.43%	8.30%	8.22%



(a) For the three months ended March 31, 2019, December 31, 2018, and March 31, 2018, intangible assets exclude \$12 million, \$14 million, and \$23 million, respectively, of period-end purchased credit card receivables

(b) Net of capital surplus

GAAP to Non-GAAP Reconciliation

\$ in millions

	Three months ended		
	<u>3/31/2019</u>	<u>12/31/2018</u>	<u>3/31/2018</u>
Average tangible common equity			
Average Key shareholders' equity (GAAP)	\$ 15,702	\$ 15,384	\$ 14,889
Less: Intangible assets (average) ^(a)	2,813	2,828	2,916
Preferred Stock (average)	1,450	1,450	1,025
Average tangible common equity (non-GAAP)	<u>\$ 11,439</u>	<u>\$ 11,106</u>	<u>\$ 10,948</u>
Return on average tangible common equity from continuing operations			
Net income (loss) from continuing operations attributable to Key common shareholders (GAAP)	\$ 386	\$ 459	\$ 402
Plus: Notable items, after tax	20	31	-
Net income (loss) from continuing operations attributable to Key common shareholders excl. notable items	<u>\$ 406</u>	<u>\$ 490</u>	<u>\$ 402</u>
Average tangible common equity (non-GAAP)	11,439	11,106	10,948
Return on average tangible common equity from continuing operations (non-GAAP)	13.69%	16.40%	14.89%
Return on average tangible common equity from continuing operations excl. notable items (non-GAAP)	14.39%	17.50%	14.89%
Cash efficiency ratio			
Noninterest expense (GAAP)	\$ 963	\$ 1,012	\$ 1,006
Less: Intangible asset amortization	22	22	29
Adjusted noninterest expense (non-GAAP)	<u>\$ 941</u>	<u>\$ 990</u>	<u>\$ 977</u>
Less: Notable items	26	41	-
Adjusted noninterest expense (non-GAAP)	<u>\$ 915</u>	<u>\$ 949</u>	<u>\$ 977</u>
Net interest income (GAAP)	\$ 977	\$ 1,000	\$ 944
Plus: Taxable-equivalent adjustment	8	8	8
Noninterest income	536	645	601
Total taxable-equivalent revenue (non-GAAP)	<u>\$ 1,521</u>	<u>\$ 1,653</u>	<u>\$ 1,553</u>
Plus: Notable items	-	-	-
Adjusted total taxable-equivalent revenue (non-GAAP)	<u>\$ 1,521</u>	<u>\$ 1,653</u>	<u>\$ 1,553</u>
Cash efficiency ratio (non-GAAP)	61.9%	59.9%	62.9%
Cash efficiency ratio excluding notable items (non-GAAP)	60.2%	57.4%	62.9%



(a) For the three months ended March 31, 2019, December 31, 2018, and March 31, 2018, average intangible assets exclude \$13 million, \$15 million, and \$24 million, respectively, of average purchased credit card receivables