KeyCorp

Fourth Quarter 2018 Earnings Review

January 17, 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, 2017 ("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, including merger-related charges. 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, Figure 2 of our Form 10-K dated December 31, 2017 or Form 10-Q dated September 30, 2018.

GAAP: Generally Accepted Accounting Principles

2018 – Delivering on Commitments

Driving Stronger Returns

- **6th consecutive year of positive operating leverage**
  - Record full-year revenue of $6.4 billion
  - All-time highs in several fee-based businesses, including investment banking and debt placement fees ($650 MM in FY2018)
  - Expenses remain well-managed; reflect focus on efficiency and investments for growth
- **Net interest income up 3% from prior year: balance sheet growth and benefit from higher rates**
  - Loan and deposit growth reflects execution of relationship-based business model within moderate risk profile
- **Significant progress on LT financial targets**
  - Cash efficiency ratio and return on tangible common equity improved by >300 bps
  - Increased ROTCE long-term target range to 16-19%
  - Progress on $200 MM cost savings initiative

Strong Risk Management

- **Maintained strong credit quality and disciplined underwriting standards**
  - Net charge-offs to average loans of .26%; portfolios continue to perform well
  - Nonperforming loans of $542 million at 12/31/18; down >$100 million from 3Q18

Disciplined Capital Management

- **Maintained strong capital position with CET1 ratio of 9.92%[a]**
- **Common share dividend increased 62% ($.105 to $.17 per common share) in 2018**
- **$1.1.B[b] of common share repurchases in 2018; $278MM[b] in 4Q18**

(a) 12/31/18 ratio is estimated
(b) Common share repurchase amount includes repurchases to offset issuances of common shares under our employee compensation plans

Strategic Acquisition: Laurel Road Finance

Acquisition of online lending platform focused on super prime professionals

Transaction Overview

- **Acquisition of leading national, digital-first consumer lending platform**
- Proven end-to-end digital lending platform targeting super-prime millennials with relationship expansion opportunity
- Business built inside an FDIC regulated bank resulting in sound risk and compliance culture
- Emphasis on strategic partnerships with a growing network ➔ pipeline of **>150** affinity groups
- Origination volume of **>$4 billion** since inception (2013)

Solution Set

Student Loan Refinance	Digital Mortgage Origination
Personal Unsecured Loans	Digital Banking Platform

The transaction is subject to customary closing conditions, including regulatory approvals, and expected to close mid-2019

Positioned to Outperform

Revisiting 2018 Investor Day Themes

Distinctive Model	• Leading digital originations capability and front-end customer experience • Alignment with Key's Financial Wellness focus and relationship strategy
Targeted Scale	• Proven model with targeted scale against defined client set ➔ student lending refinance for super-prime millennial medical professionals
Focused Execution	• Targeted investments in a streamlined suite of distinctive products
Disciplined Capital & Risk Management	• High quality consumer assets ➔ opportunity to balance Key's portfolio by adding proven consumer lending engine
Delivering Results	• **Sound, profitable growth driving shareholder returns over the long term**

Financial Review

Financial Highlights

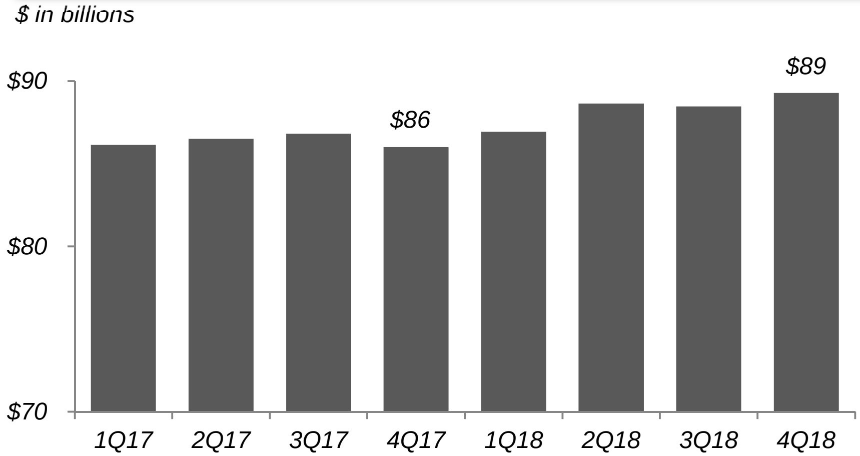
Continuing operations, unless otherwise noted

		4Q18		3Q18		4Q17		LQ Δ		Y/Y Δ	
Profitability	EPS – assuming dilution	$ .45		$ .45		$ .17		-		N/M	
	EPS – excl. notable items[(a), (b)]	.48		.45		.36		7	%	33	%
	Cash efficiency ratio[(a)]	59.9	%	58.7	%	66.7	%	120	bps	(680)	bps
	Cash efficiency –excl. notable items[(a), (b)]	57.4		58.7		61.3		(130)		(390)	
	Return on average tangible common equity[(a)]	16.4		16.8		6.4		(41)		N/M	
	ROTCE – excl. notable items[(a), (b)]	17.5		16.8		13.6		69		388	
	Return on average total assets	1.37		1.40		.57		(3)		80	
	Net interest margin	3.16		3.18		3.09		(2)		7	
Capital[(c)]	Common Equity Tier 1[(d)]	9.92	%	9.95	%	10.16	%	(3)	bps	(24)	bps
	Tier 1 risk-based capital[(d)]	11.07		11.11		11.01		(4)		6	
	Tangible common equity to tangible assets[(a)]	8.30		8.05		8.23		25		7	
Asset Quality	NCOs to average loans	.27	%	.27	%	.24	%	-		3	bps
	NPLs to EOP portfolio loans[(e)]	.61		.72		.58		(11)	bps	3	
	Allowance for loan and lease losses to EOP loans	.99		.99		1.01		-		(2)	

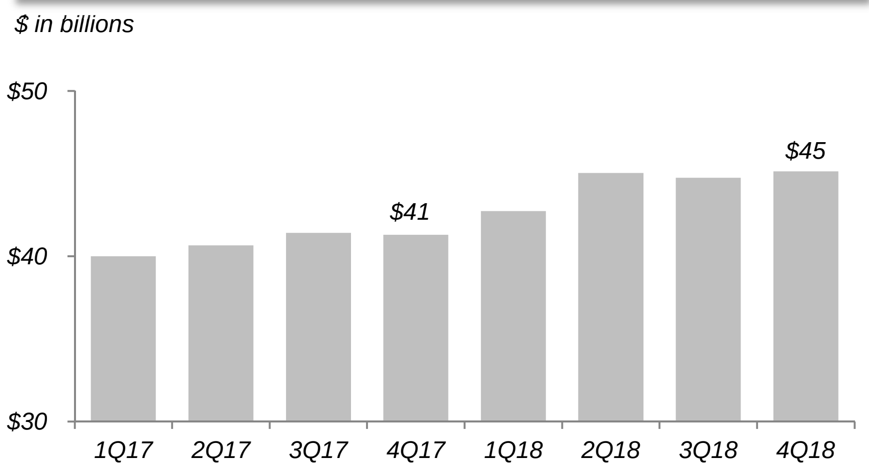
EOP = End of Period
(a) Non-GAAP measure: see Appendix for reconciliation
(b) Excludes notable items; see Appendix for detail and reconciliations
(c) From consolidated operations
(d) 12/31/18 ratios are estimated
(e) Nonperforming loan balances exclude $575 million, $606 million, and $738 million of purchased credit impaired loans at December 31, 2018, September 30, 2018, and December 31, 2017, respectively

Loans

Total Average Loans



Average C&I Loans



Highlights

vs. Prior Year

- **Average loans up 4% from 4Q17**
  - **C&I balances up 9% driven by broad-based growth with middle-market clients**
  - **Home equity loans continue to be impacted by market trends**

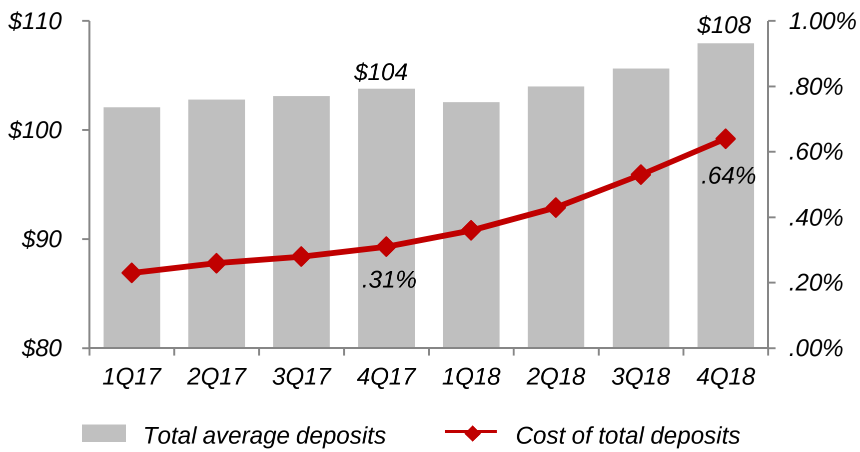
vs. Prior Quarter

- **Average loans up 1% from 3Q18**
  - **Strength in CRE and C&I driven by execution of relationship business model in targeted areas and industry verticals**

Deposits

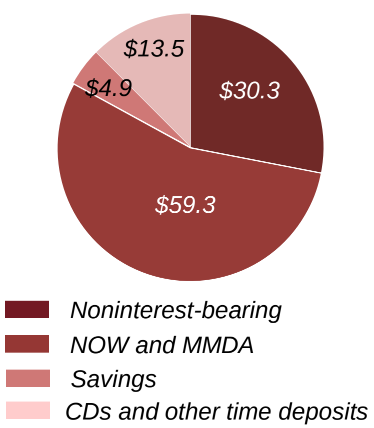
Average Deposits

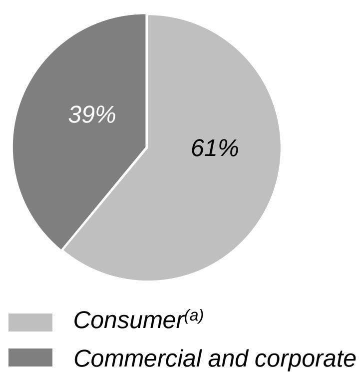
$ in billions



4Q18 Average Deposit Mix

$ in billions





Highlights

- **Deposit cost up 11 bps from 3Q18, reflecting:**
  - **Higher interest rates and beta**
  - **Continued migration of portfolio into higher-yielding products**
- **Strong and stable deposit base**
  - **28% noninterest-bearing**
  - **~65% stable retail and low-cost escrow**

vs. Prior Year

- **Average deposits up 4% from 4Q17**
- **Continued mix shift to higher-yielding deposit products**
- **Strength in retail banking franchise and growth from commercial relationships**

vs. Prior Quarter

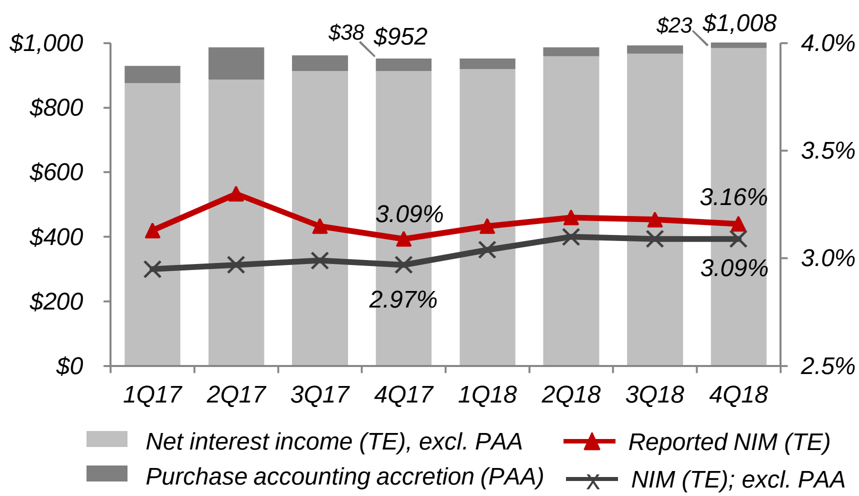
- **Average deposit balances up 2% from 3Q18**
- **Penetration of existing retail and commercial relationships**
- **Short-term and seasonal deposit inflows**

(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



	4Q17	1Q18	2Q18	3Q18	4Q18
NIM – reported	**3.09%**	**3.15%**	**3.19%**	**3.18%**	**3.16%**
PAA	.12	.11	.09	.09	.07
NIM – excl. PAA	**2.97%**	**3.04%**	**3.10%**	**3.09%**	**3.09%**
NII – reported ($MM)	**$ 952**	**$ 952**	**$ 987**	**$993**	**$1,008**
PAA	38	33	28	26	23[a]
NII – excl. PAA	**$914**	**$919**	**$959**	**$967**	**$985**

Highlights

- **Excluding PAA, 4Q18 net interest income was $985 MM and net interest margin was 3.09%**

vs. Prior Year

- **Net interest income up $71 MM, or 8%, from 4Q17, excl. PAA**
  - **Largely driven by higher interest rates and earning asset growth**

vs. Prior Quarter

- **Net interest income up $18 MM, or 2%, from 3Q18, excl. PAA**
  - **Reflects earning asset growth and higher loan fees**
  - **Partially offset by higher deposit betas**

NIM Change vs. Prior Quarter	***3Q18:***	***3.18%***
PAA (4Q vs. 3Q)		(.02)
Earning asset growth		.01
Other		(.01)
Total change		**(.02)**
	4Q18:	***3.16%***

TE = Taxable equivalent PAA = Purchase accounting accretion

(a) 4Q18 purchase accounting accretion of $23 MM is made up of $16 MM related to contractual maturities and $7 MM related to prepayments

Noninterest Income

Noninterest Income

$ in millions *up / (down)*	4Q18	vs. 4Q17	vs. 3Q18
Trust and investment services income	$ 121	$ (10)	$ 4
Investment banking and debt placement fees	186	(14)	20
Service charges on deposit accounts	84	(5)	(1)
Operating lease income and other leasing gains	28	1	(7)
Corporate services income	58	2	6
Cards and payments income	68	(9)	(1)
Corporate-owned life insurance	39	2	5
Consumer mortgage income	7	--	(2)
Mortgage servicing fees	21	4	2
Other income	33	18	10
Total noninterest income	**$ 645**	**$ (11)**	**$ 36**

Highlights

vs. Prior Year

- **Noninterest income down $11 MM (-2%) from 4Q17**
- **Trust and investment services income lower, primarily related to the sale of Key's insurance business**
- **Deposit service charges and cards and payments income impacted by revenue recognition changes**
- **Lower investment banking and debt placement fees (record quarter in 4Q17)**

vs. Prior Quarter

- **Noninterest income up $36 MM (+6%) from 3Q18**
- **Investment banking and debt placement fees up $20 MM related to strength in commercial mortgage and advisory fees**
- **Growth in corporate services income from strong derivatives and trading**

Noninterest Expense

Noninterest Expense

$ in millions up / (down)	4Q18	vs. 4Q17	vs. 3Q18
Personnel	$ 576	$ (33)	$ 23
Net occupancy	75	(17)	(1)
Computer processing	55	1	3
Business services, professional fees	49	(3)	6
Equipment	26	(5)	(1)
Operating lease expense	32	4	1
Marketing	25	(10)	(1)
FDIC assessment	9	(11)	(12)
Intangible asset amortization	22	(4)	(1)
OREO expense, net	1	(2)	(2)
Other expense	142	(6)	33
Total noninterest expense	**$ 1,012**	**$ (86)**	**$ 48**

Notable items:

$ in millions	4Q18	4Q17	3Q18
Merger-related charges	-	$56	-
Impact of tax reform and related actions	-	29	-
Efficiency initiative expenses	$24	-	
Pension settlement charge	17	-	-
	$41	**$85**	-

Highlights

vs. Prior Year

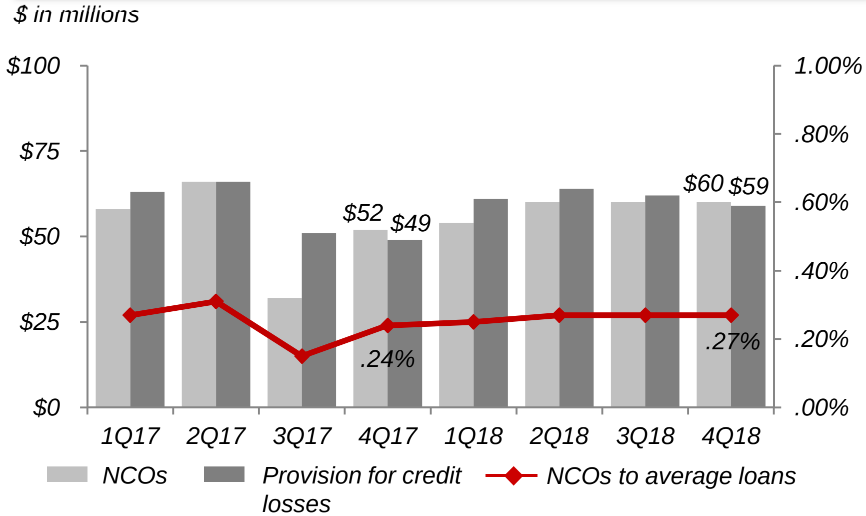
- **Noninterest expense down $86 MM, or 8% (down $42 MM excl. notable items)**
- **Personnel expense reflects:**
  - Lower incentive compensation (IBDP)
  - Lower employee benefits (tax reform in 4Q17)
  - Higher severance (efficiency initiative expenses)
- **Lower net occupancy & marketing expense (merger-related charges in 4Q17)**
- **Lower FDIC assessment reflecting elimination of quarterly surcharge**

vs. Prior Quarter

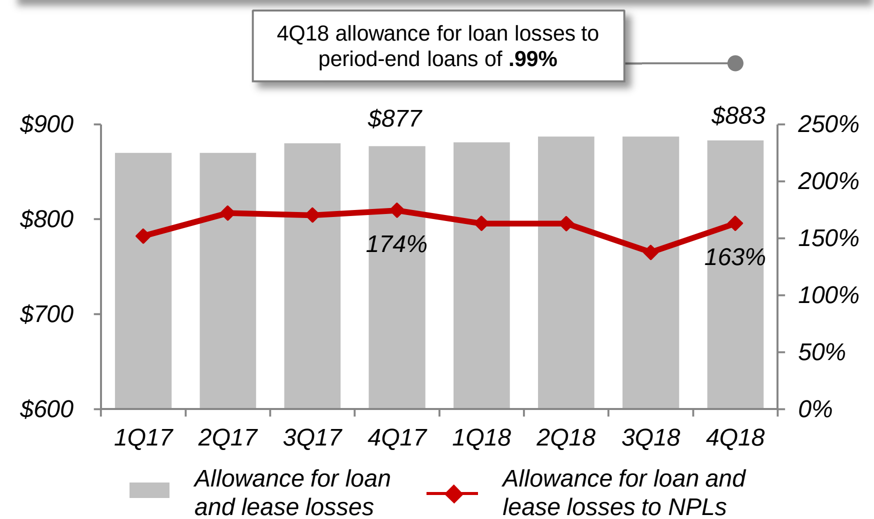
- **Noninterest expense up $48 MM, or 5% (up $7 MM excl. notable items)**
- **Personnel expense up $23 MM, largely related to efficiency initiative expenses**
- **Increase in other expense includes pension settlement charge**
- **FDIC assessment decline of $12 MM from elimination of quarterly surcharge**

Credit Quality

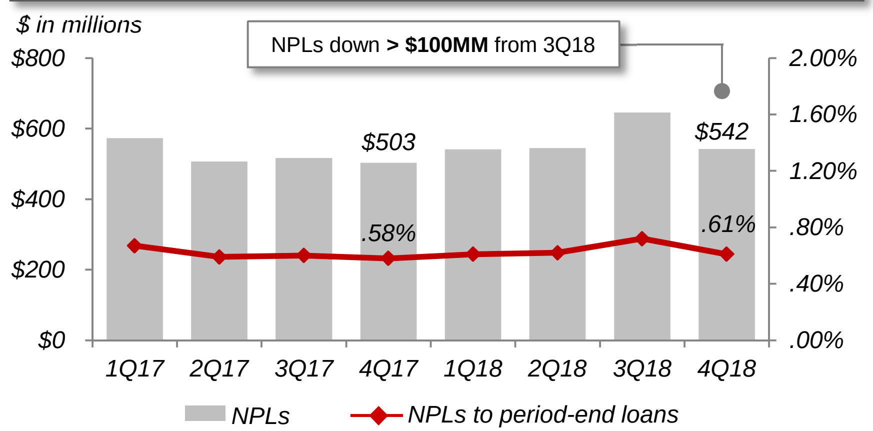
Net Charge-offs & Provision for Credit Losses



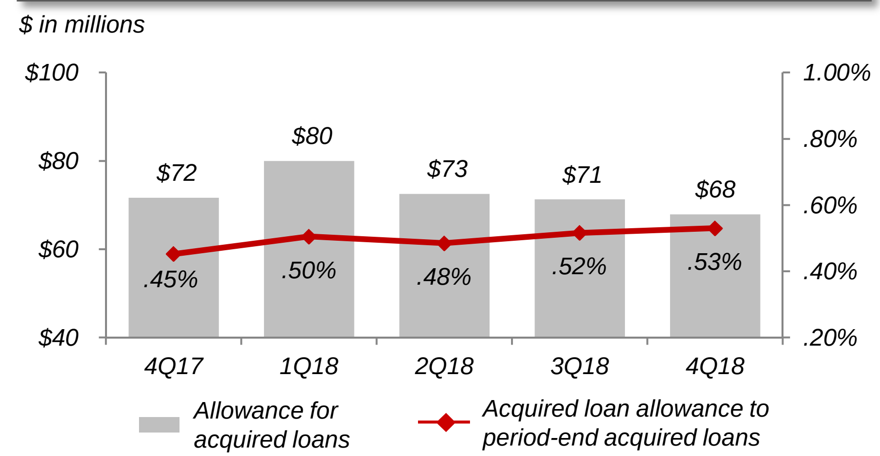
Allowance for Loan and Lease Losses



Nonperforming Loans[a]



Acquired Loans

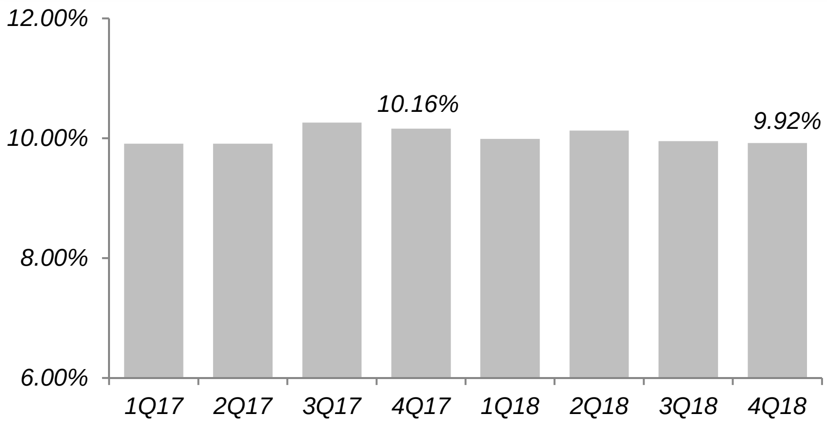


NCO = Net charge-off

(a) Nonperforming loan balances exclude $575 million and $738 million of purchased credit impaired loans at December 31, 2018, and December 31, 2017, respectively

Capital

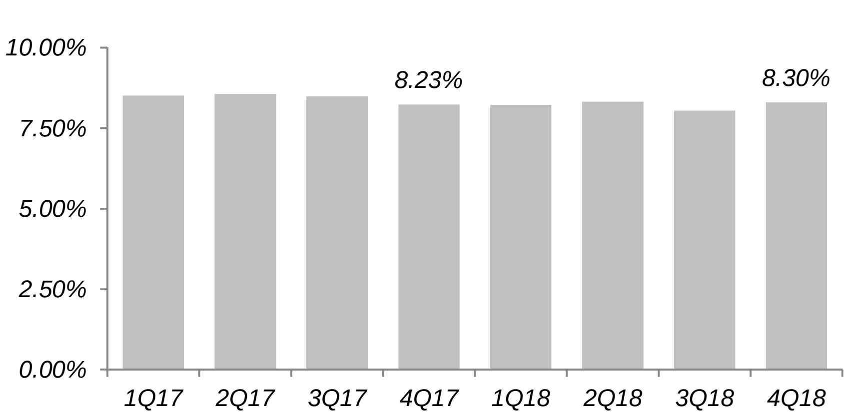
Common Equity Tier 1[a]



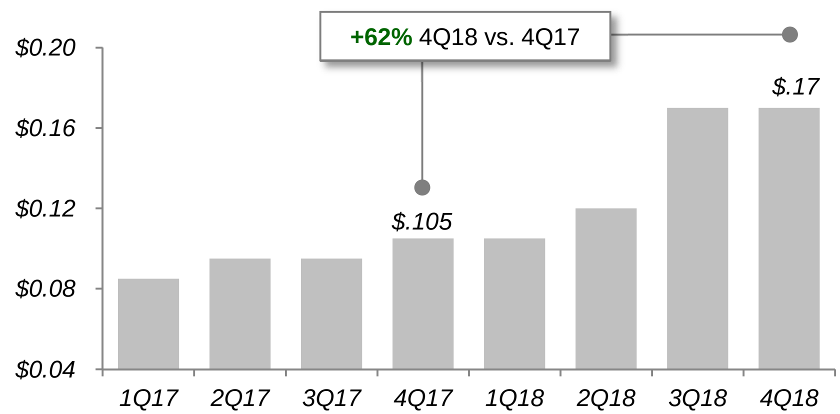
Highlights

- Strong capital position with Common Equity Tier 1 ratio of 9.92%[a] at 12/31/2018
- Increased common share dividend by 62% (from $0.105 to $0.17 per quarter) from 4Q17
- Repurchased $278 MM[c] in common shares during 4Q18

Tangible Common Equity to Tangible Assets[b]



Quarterly Common Share Dividend



(a) 12/31/18 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	• 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)	• Net interest income expected to be in the range of \$4.0 B - \$4.1 B • Outlook assumes no interest rate increases in 2019
Noninterest Income	• Expected to be in the range of \$2.5 B - \$2.6 B
Noninterest Expense	• Expected to be in the range of \$3.85 B - \$3.95 B – Includes realization of \$200 MM run-rate cost savings in 2H19 – Achieve cash efficiency ratio target of 54 - 56% by 2H19
Credit Quality	• Net charge-offs to average loans below targeted range of 40 - 60 bps • Provision expected to slightly exceed net charge-offs
Taxes	• GAAP tax rate in the range of 18% - 19%

Note: 2019 Outlook includes the impact of the mid-year acquisition of Laurel Road

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 12/31/18

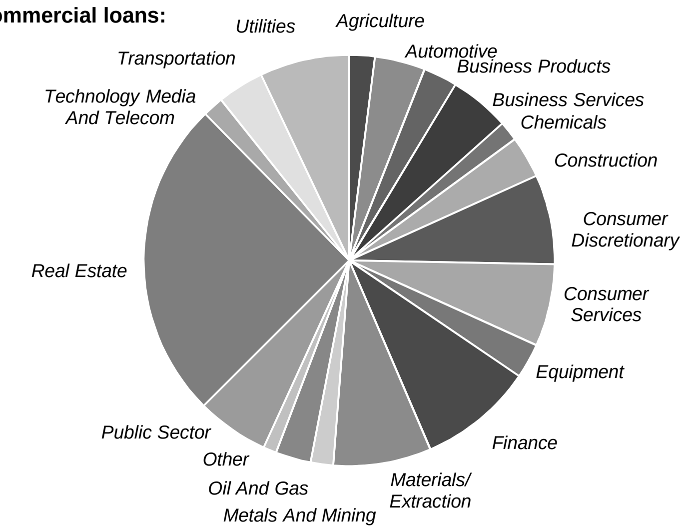
Total Loans

$ in billions	12/31/18	% of total loans
Commercial and industrial	$ 45.8	51
Commercial real estate	16.0	18
Commercial lease financing	4.6	5
Total Commercial	**$ 66.3**	**74**
Residential mortgage	5.5	6
Home equity	11.1	12
Consumer direct	1.8	2
Credit card	1.1	1
Consumer indirect	3.6	4
Total Consumer	**$ 23.2**	**26**

Commercial Loans

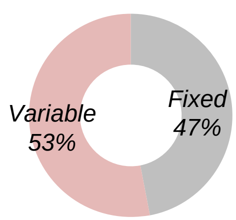
Diversified Portfolio by Industry

Total commercial loans:



Home Equity

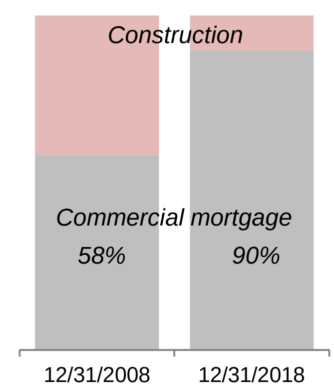
		Outstanding Balances			Average Loan Size	Average FICO	2008/ prior vintage
First lien	$	6,606	59 %	$	71,202	773	16 %
Second lien		4,536	41		46,479	772	29
Total home equity	**$**	**11,142**					



- Combined weighted-average LTV at origination: 70%
- $563 million in lines outstanding (7.7% of the home equity lines) come to end of draw period by 4Q20

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)]

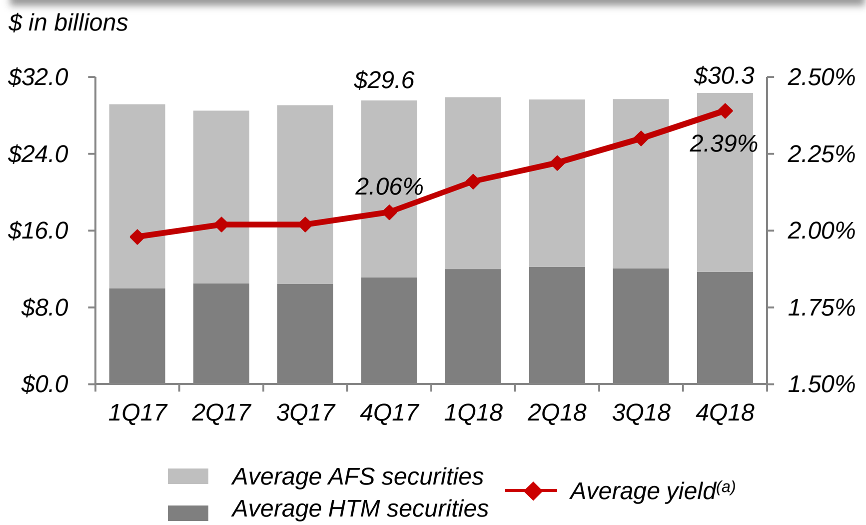


Tables may not foot due to rounding

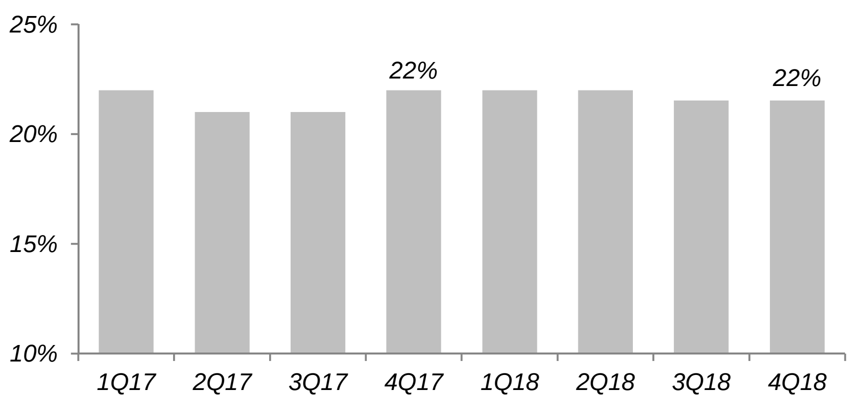
(a) Loan and lease outstandings; excludes purchase credit impaired loans from the First Niagara acquisition

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 4Q18 average balances**
- **Portfolio used for funding and liquidity management:**
  - **Securities cash flows of $1.1 billion in 4Q18**
  - **Reinvesting cash flows into High Quality Liquid Assets**
- **Replaced cash flows at higher yields during 4Q18**
  - **Yield on new investments ~135 bps higher than maturities (In 1Q19 continue to replace maturing investments with new investments at ~100 bps yield increase)**
  - **Portfolio yield has increased 33 bps from prior year**
- **Portfolio average life of 4.9 years and duration of 4.1 years at 12/31/2018**

(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

Moderate asset sensitivity supports strong, stable net interest margin

Business and Balance Sheet Highlights

- **Strong, low-cost deposit base**
  - $78 B interest-bearing deposits at 89 bps
  - $30 B noninterest-bearing deposits
  - Cumulative interest-bearing deposit beta of 33%
  - ~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
- **Disciplined balance sheet management with recurring re-investment opportunities**
  - $31 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**
  - $4.75 B in interest rate floors purchased in 3Q18 offer immediate protection
  - Executed ~$3 B in forward starting interest rate swaps in 4Q18 to manage down exposure to interest rates
- **Shifting asset sensitivity as the pace of rate increases 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

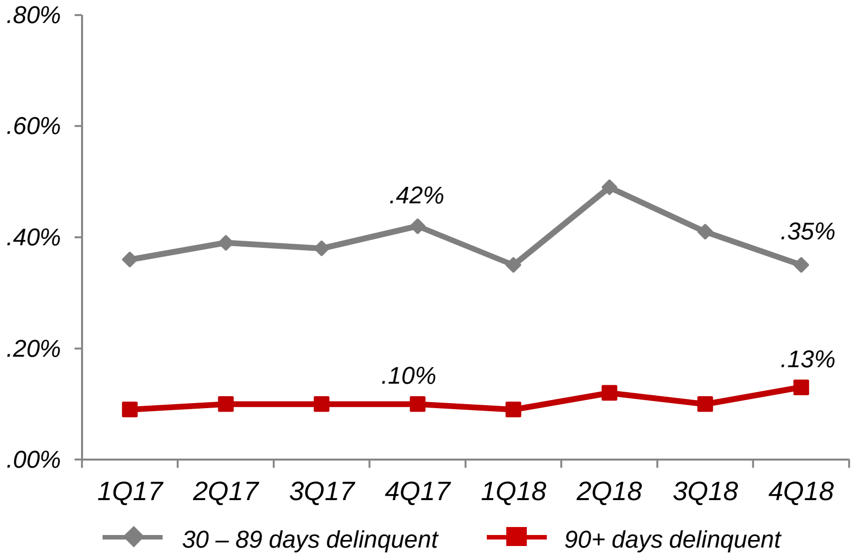
Modest asset sensitive position:
NII impact of +2.8% for a 200 bps increase over 12 months
NII impact of -2.3% for a 100 bps decrease over 12 months

Each 25 bps increase in interest rates results in NII benefit of ~$4-8 MM per quarter

Credit Quality Trends

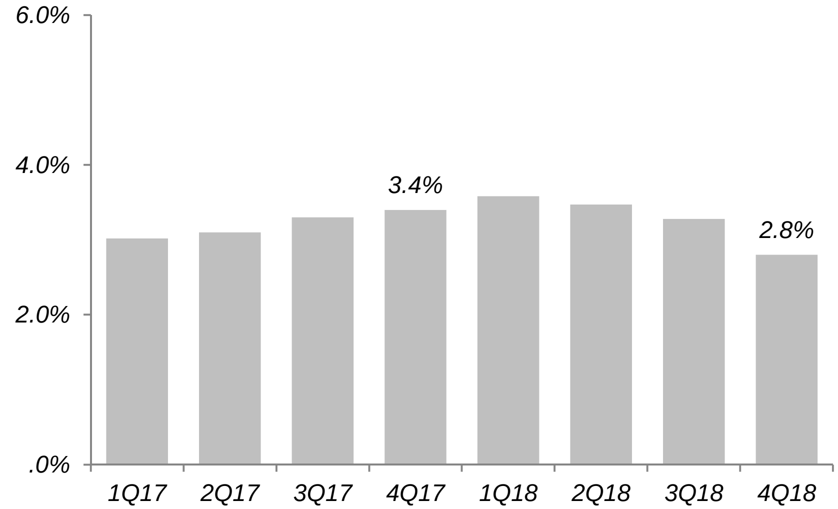
Delinquencies to Period-end Total Loans

Continuing operations



Criticized Outstandings[a] to Period-end Total Loans

Continuing operations



Metric[b]	4Q18	3Q18	2Q18	1Q18	4Q17
Delinquencies to EOP total loans: 30-89 days	.35 %	.41 %	.49 %	.35 %	.42 %
Delinquencies to EOP total loans: 90+ days	.13	.10	.12	.09	.10
NPLs to EOP portfolio loans[c]	.61	.72	.62	.61	.58
NPAs to EOP portfolio loans + OREO + Other NPAs[c]	.64	.75	.65	.65	.62
Allowance for loan losses to period-end loans	.99	.99	1.01	1.00	1.01
Allowance for loan losses to NPLs	162.9	137.5	162.8	162.8	174.4

(a) Loan and lease outstandings; excludes purchase credit impaired loans from the First Niagara acquisition
(b) From continuing operations
(c) Nonperforming loan balances exclude $575 million, $606 million, $629 million, $690 million, and $738 million of purchased credit impaired loans at December 31, 2018, September 30, 2018, June 30, 2018, March 31, 2018, and December 31, 2017, 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 (%)
	12/31/18	**4Q18**	**4Q18**	**4Q18**	**12/31/18**	**12/31/18**	**12/31/18**	**12/31/18**
Commercial and industrial[a]	$ 45,753	$ 45,129	$ 26	0.23%	$ 152	$ 532	1.16%	350.00%
Commercial real estate:								
Commercial Mortgage	14,285	14,656	11	.30	81	142	.99	175.31
Construction	1,666	1,761	(1)	(.23)	2	33	1.98	N/M
Commercial lease financing[e]	4,606	4,482	-	-	9	36	.78	400.00
Real estate – residential mortgage	5,513	5,496	-	-	62	7	.13	11.29
Home equity	11,142	11,234	5	.18	210	35	.31	16.67
Credit cards	1,144	1,112	8	2.85	2	30	2.62	N/M
Consumer direct loans	1,809	1,806	7	1.54	4	20	1.11	500.00
Consumer indirect loans	3,634	3,612	4	.44	20	48	1.32	240.00
Continuing total	**$ 89,552**	**$ 89,288**	**$ 60**	**.27%**	**$ 542**	**$ 883**	**.99%**	**162.92%**
Discontinued operations	1,073	1,096	3	1.09	8	14	1.30	175.00
Consolidated total	**$ 90,625**	**$ 90,384**	**$ 63**	**.28%**	**$ 550**	**$ 897**	**.99%**	**163.09%**

N/M = Not meaningful

(a) 12/31/18 ending loan balance includes $132 million of commercial credit card balances; average loan balance includes $132 million of assets from commercial credit cards
(b) Net loan charge-off amounts are annualized in calculation
(c) 12/31/18 NPL amount excludes $575 million of purchased credit impaired loans
(d) 12/31/18 allowance by portfolio is estimated
(e) Commercial lease financing includes receivables held as collateral for a secured borrowing of $10 million at December 31, 2018. Principal reductions are based on the cash payments received from these related receivables

GAAP to Non-GAAP Reconciliation

$ in millions	Three months ended			Twelve months ended	
	12/31/2018	9/30/2018	12/31/17	12/31/2018	12/31/2017
Notable Items					
Efficiency initiative expenses	$ 24	-	-	$ 24	-
Pension settlement charge	17	-	-	17	-
Merger-related charges	-	-	$ (56)	-	$ (217)
Impacts of tax reform and related actions	-	-	(30)	-	(30)
Merchant services gain	-	-	-	-	59
Purchase accounting finalization, net	-	-	-	-	43
Charitable contribution	-	-	-	-	(20)
Total notable items	$ 41	$ -	$ (86)	$ 41	$ (165)
Income taxes	$ 10	-	$ (26)	$ 10	$ (53)
Revaluation of certain tax related assets	-	-	147	-	147
Total notable items after tax	$ 31	$ -	$ (207)	$ 31	$ (259)
Earnings per common share (EPS) excluding notable items					
EPS from continuing operations attributable to Key common shareholders – assuming dilution	$ .45	$ .45	$ .17		
Add: EPS impact of notable items	.03	-	.19		
EPS from continuing operations attributable to Key common shareholders excluding notable items (non-GAAP)	$ .48	$ .45	$ .36		
Tangible common equity to tangible assets at period end					
Key shareholders' equity (GAAP)	$ 15,959	$ 15,208	$ 15,023		
Less: Intangible assets (a)	2,818	2,838	2,928		
Preferred Stock (b)	1,421	1,421	1,009		
Tangible common equity (non-GAAP)	$ 11,356	$ 10,949	$ 11,086		
Total assets (GAAP)	$ 136,613	$ 138,805	$ 137,698		
Less: Intangible assets (a)	2,818	2,838	2,928		
Tangible common equity to tangible assets ratio (non-GAAP)	$ 136,795	$ 135,967	$ 134,770		
Tangible common equity to tangible assets ratio (non-GAAP)	8.30%	8.05%	8.23%		

(a) For the three months ended December 31, 2018, September 30, 2018, and December 31, 2017, intangible assets exclude $14 million, $17 million, and $26 million, respectively, of period-end purchased credit card receivables

(b) Net of capital surplus

GAAP to Non-GAAP Reconciliation

$ in millions	Three months ended 12/31/2018	Three months ended 9/30/2018	Three months ended 12/31/17	Twelve months ended 12/31/2018	Twelve months ended 12/31/2017
Average tangible common equity					
Average Key shareholders' equity (GAAP)	$ 15,384	$ 15,210	$ 15,268	$ 15,131	$ 15,224
Less: Intangible assets (average) [(a)]	2,828	2,848	2,939	2,869	2,837
Preferred Stock (average)	1,450	1,316	1,025	1,205	1,137
Average tangible common equity (non-GAAP)	$ 11,106	$ 11,046	$ 11,304	$ 11,057	$ 11,250
Return on average tangible common equity from continuing operations					
Net income (loss) from continuing operations attributable to Key common shareholders (GAAP)	$ 459	$ 468	$ 181	$ 1,793	$ 1,219
Plus: Notable items, after tax	31	-	207	31	259
Net income (loss) from continuing operations attributable to Key common shareholders excl. notable items	$ 490	$ 468	$ 388	$ 1,824	$ 1,478
Average tangible common equity (non-GAAP)	11,106	11,046	11,304	11,057	11,250
Return on average tangible common equity from continuing operations (non- GAAP)	16.40%	16.81%	6.35%	16.22%	10.84%
Return on average tangible common equity from continuing operations excl. notable items (non- GAAP)	17.50%	16.81%	13.62%	16.50%	13.14%
Cash efficiency ratio					
Noninterest expense (GAAP)	$ 1,012	$ 964	$ 1,098	$ 3,975	$ 4,098
Less: Intangible asset amortization	22	23	26	99	95
Adjusted noninterest expense (non-GAAP)	$ 990	$ 941	$ 1,072	$ 3,876	$ 4,003
Less: Notable items	41	-	85	41	262
Adjusted noninterest expense (non-GAAP)	$ 949	$ 941	$ 987	$ 3,835	$ 3,741
Net interest income (GAAP)	$ 1,000	$ 986	$ 938	$ 3,909	$ 3,777
Plus: Taxable-equivalent adjustment	8	7	14	31	53
Noninterest income	645	609	656	2,515	2,478
Total taxable-equivalent revenue (non-GAAP)	$ 1,653	$ 1,602	$ 1,608	$ 6,455	$ 6,308
Plus: Notable items	-	-	1	-	(97)
Adjusted total taxable-equivalent revenue (non-GAAP)	$ 1,653	$ 1,602	$ 1,609	$ 6,455	$ 6,211
Cash efficiency ratio (non-GAAP)	59.9%	58.7%	66.7%	60.0%	63.5%
Cash efficiency ratio excluding notable items (non-GAAP)	57.4%	58.7%	61.3%	59.4%	60.2%

(a) For the three months ended December 31, 2018, September 30, 2018, and December 31, 2017, average intangible assets exclude $15 million, $18 million, and $28 million, respectively, of average purchased credit card receivables. For the twelve months ended December 31, 2018, and December 31, 2017, average intangible assets exclude $20 million and $34 million, respectively, of average purchased credit card receivables