

# Bank of America 4Q18 Financial Results

January 16, 2019

# 2018 Financial Results

Summary Income Statement (\$B, except per share data)	Reported		2018 vs. 2017	Excl. Tax Act	2018 Reported vs. 2017 Excl. Tax Act
	2018	2017	% Inc / (Dec)	2017 <sup>1,2</sup>	% Inc / (Dec)
Total revenue, net of interest expense	\$91.2	\$87.4	4 %	\$88.3	3 %
Noninterest expense	53.4	54.7	(2)	54.7	(2)
Provision for credit losses	3.3	3.4	(3)	3.4	(3)
Pretax income	34.6	29.2	18	30.2	15
Income tax expense	6.4	11.0	(41)	9.0	(29)
Net income	\$28.1	\$18.2	54	\$21.1	33
Diluted earnings per share	\$2.61	\$1.56	67	\$1.83	43
Average diluted common shares (in millions)	10,237	10,778	(5)	10,778	(5)

6% operating leverage YoY<sup>2,4</sup>

## Return Metrics and Efficiency

Return on average assets	1.21 %	0.80 %		0.93 %
Return on average common shareholders' equity	11.0	6.7		7.9
Return on average tangible common shareholders' equity <sup>3</sup>	15.5	9.4		11.0
Efficiency ratio	59	63		62

Note: Amounts may not total due to rounding.

<sup>1</sup> On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was enacted, which included a lower U.S. corporate tax rate effective in 2018. The Tax Act reduced 2017 net income by \$2.9B, or \$0.27 per diluted common share, which included a \$0.9B pretax charge in other noninterest income, predominantly related to the revaluation of certain tax-advantaged energy investments, as well as \$1.9B of tax expense principally associated with the revaluation of certain deferred tax assets and liabilities.

<sup>2</sup> Represents a non-GAAP financial measure. For a reconciliation to GAAP of the presented return metrics, see note A on slide 28. For important presentation information, see slide 31.

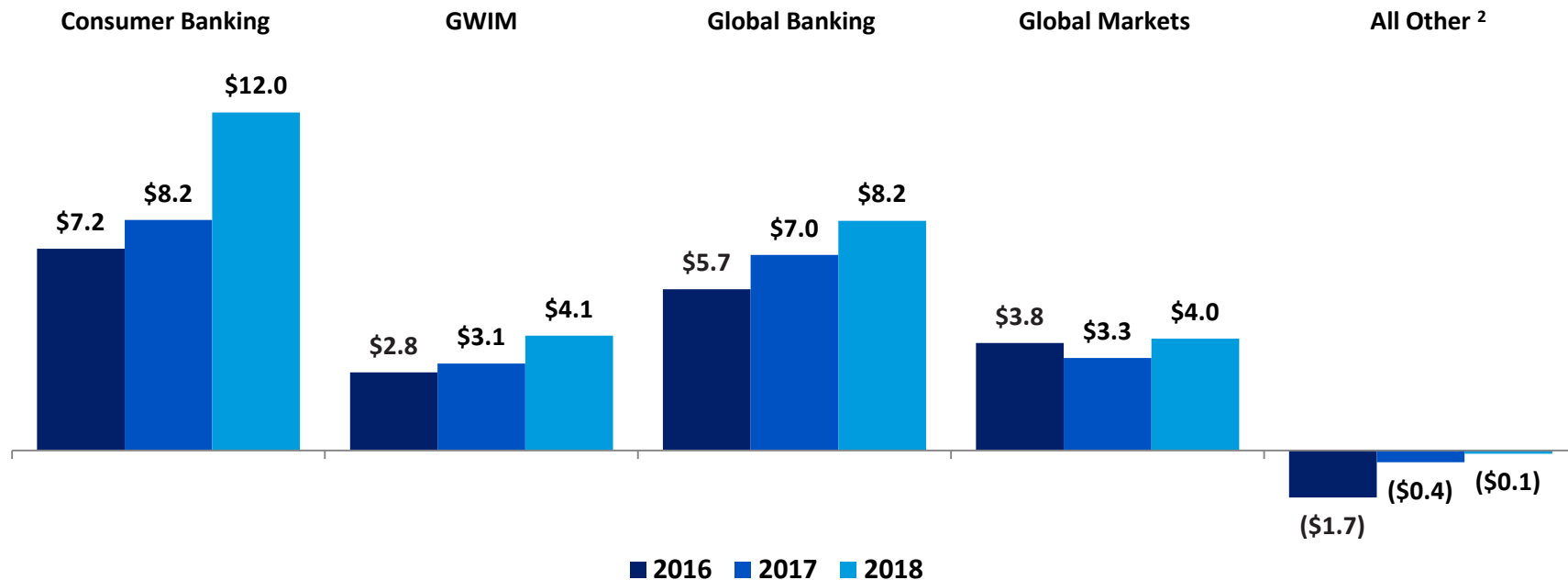
<sup>3</sup> Represents a non-GAAP financial measure. For important presentation information, see note A on slide 28, and slide 31.

<sup>4</sup> Reported operating leverage of 7%.



# Full Year Business Results <sup>1</sup>

## Net Income (Loss) (\$B)



FY 2018	Consumer Banking	GWIM	Global Banking	Global Markets
ROAAC <sup>3</sup>	33%	28%	20%	11%
Efficiency ratio	47%	71%	44%	67%
Operating leverage	9%	2%	(2%) <sup>4</sup>	1%

<sup>1</sup> All business segments and All Other are presented on a fully-taxable equivalent (FTE) basis throughout this presentation.

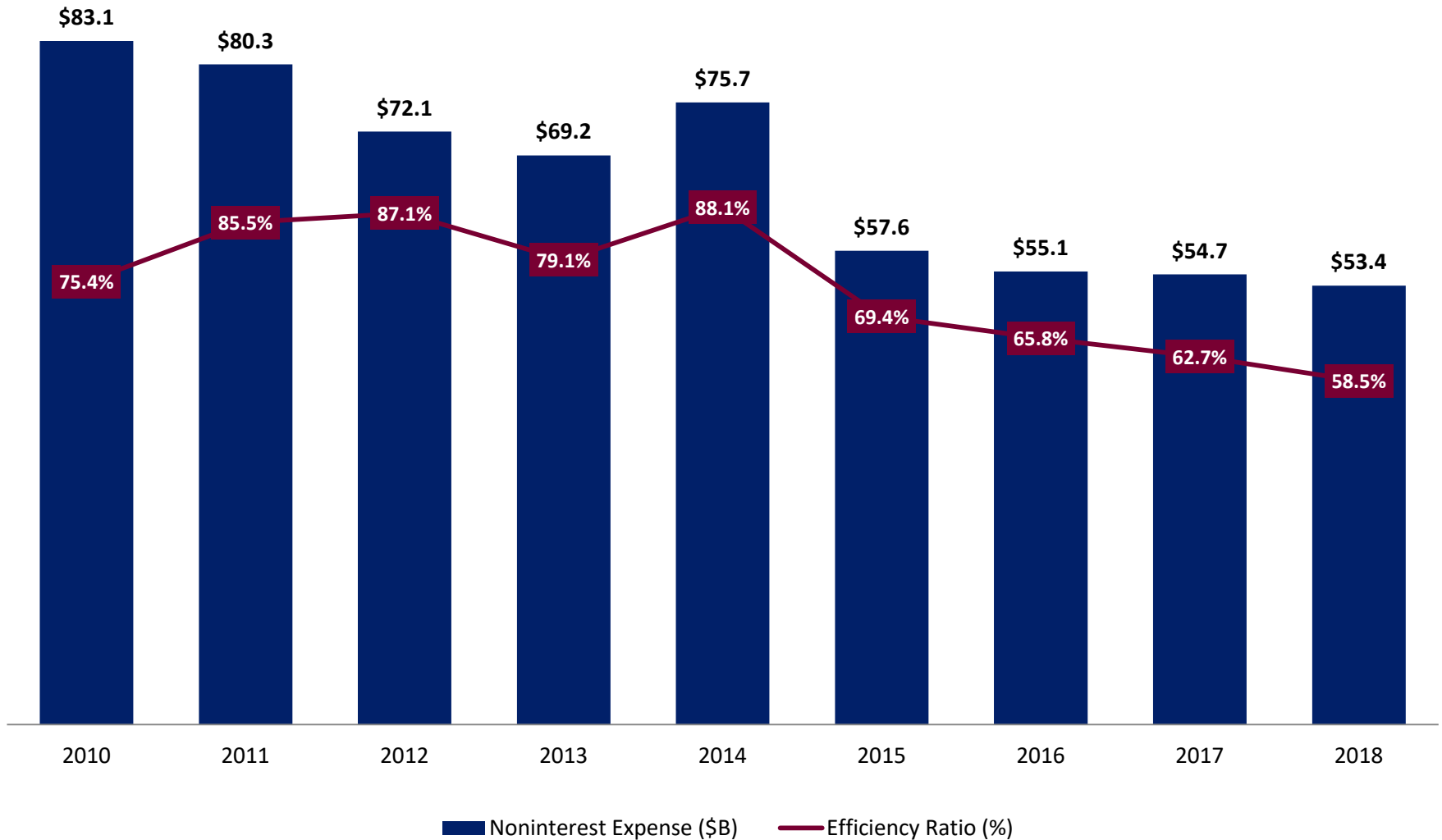
<sup>2</sup> All Other adjusted to exclude the \$2.9B charge for the 2017 enactment of the Tax Act. Reported net loss for All Other for FY 2017 was \$3.3B.

<sup>3</sup> ROAAC defined as return on average allocated capital.

<sup>4</sup> Global Banking revenue and operating leverage were negatively impacted by the Tax Act in 2018. Excluding tax reform impact on revenue in 2018, operating leverage for Global Banking was 2%.

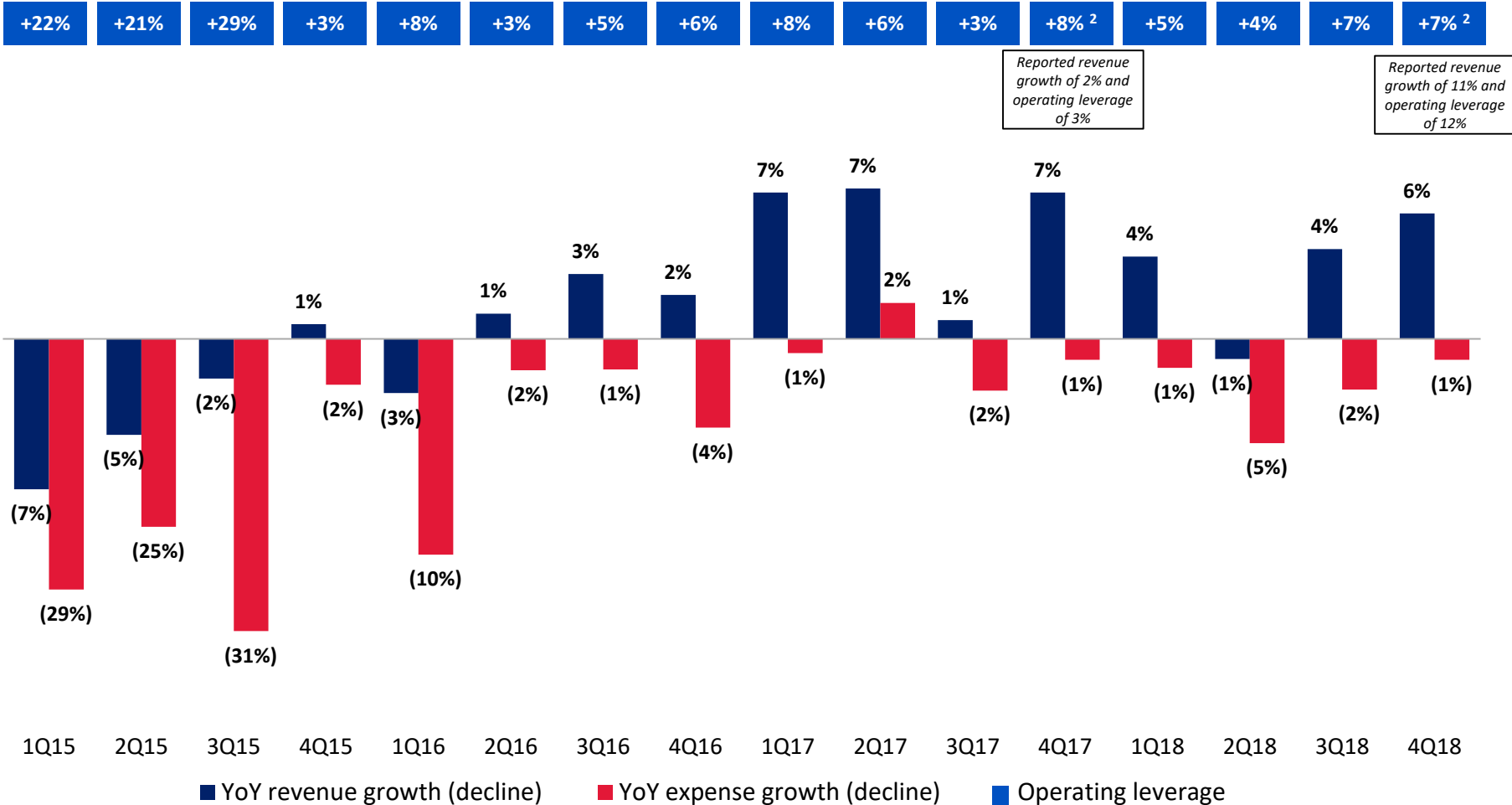


# Significantly Reduced Expenses While Investing in the Franchise



# Delivered Positive Operating Leverage for 16 Consecutive Quarters

Operating Leverage Trend <sup>1</sup>



Note: Amounts may not total due to rounding.

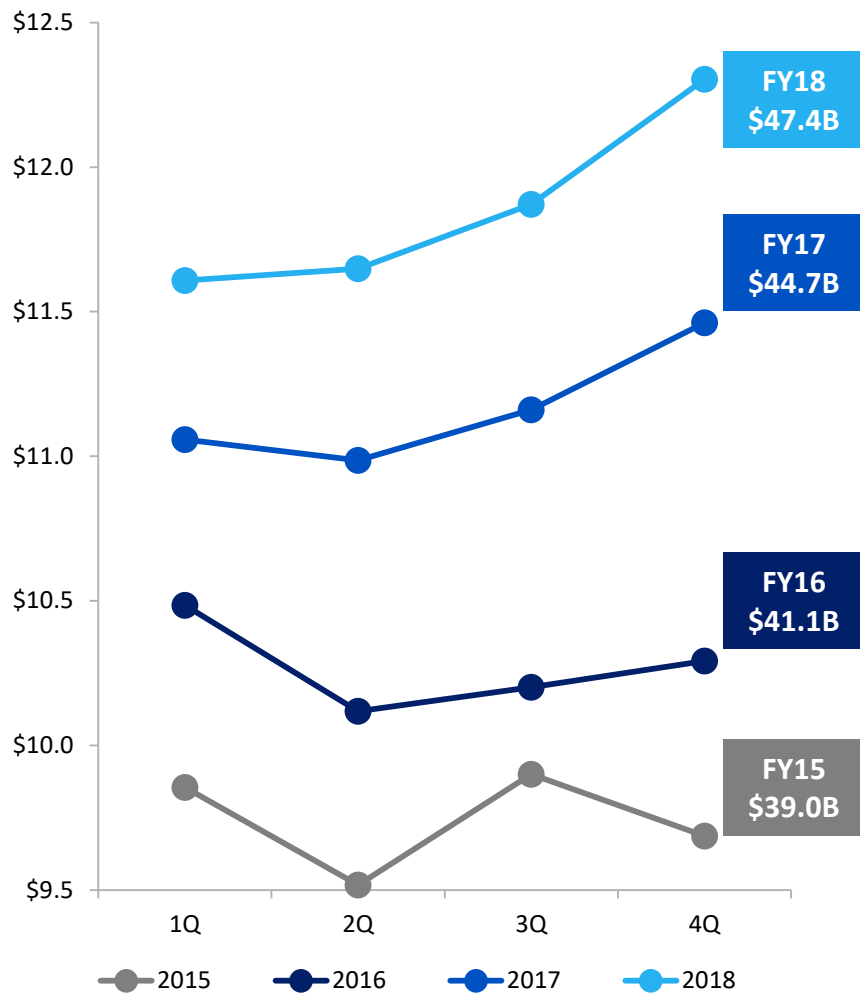
<sup>1</sup> Operating leverage calculated as the year-over-year percentage change in revenue, net of interest expense, less the percentage change in noninterest expense. Quarterly expense for 2017 and 2016 has been restated to reflect the accounting change for retirement-eligible equity incentives adopted in 4Q17; 2015 and 2014 periods are as reported.

<sup>2</sup> Revenue growth and operating leverage adjusted to exclude the \$0.9B noninterest income charge in 4Q17 from the Tax Act; represents a non-GAAP financial measure. For important presentation information, see slide 8, Note A on slide 28, and slide 31.

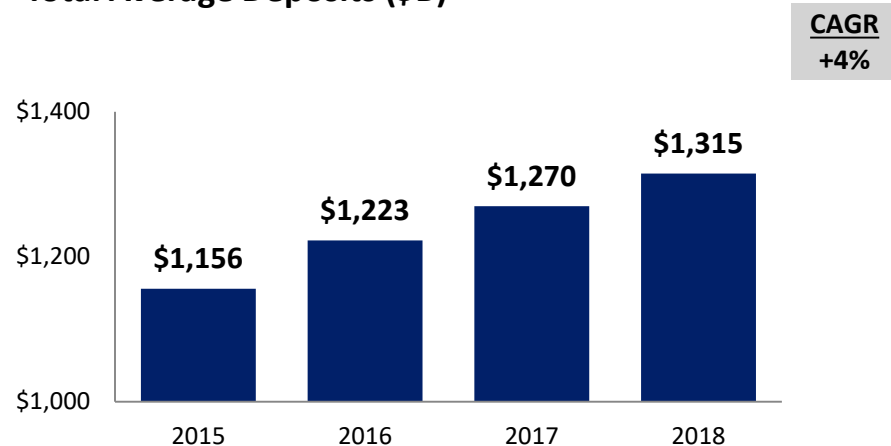


# Growth in NII Driven by Rates as well as Client Activity

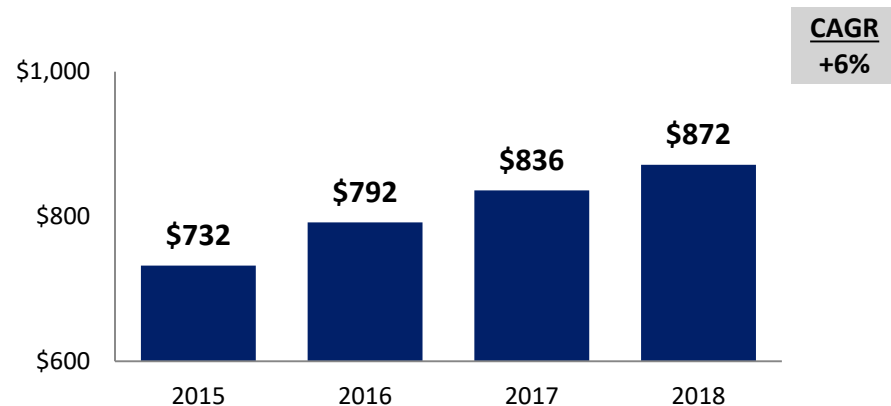
## Quarterly Net Interest Income (\$B)



## Total Average Deposits (\$B)



## Average Loans and Leases in Business Segments (\$B) <sup>1</sup>

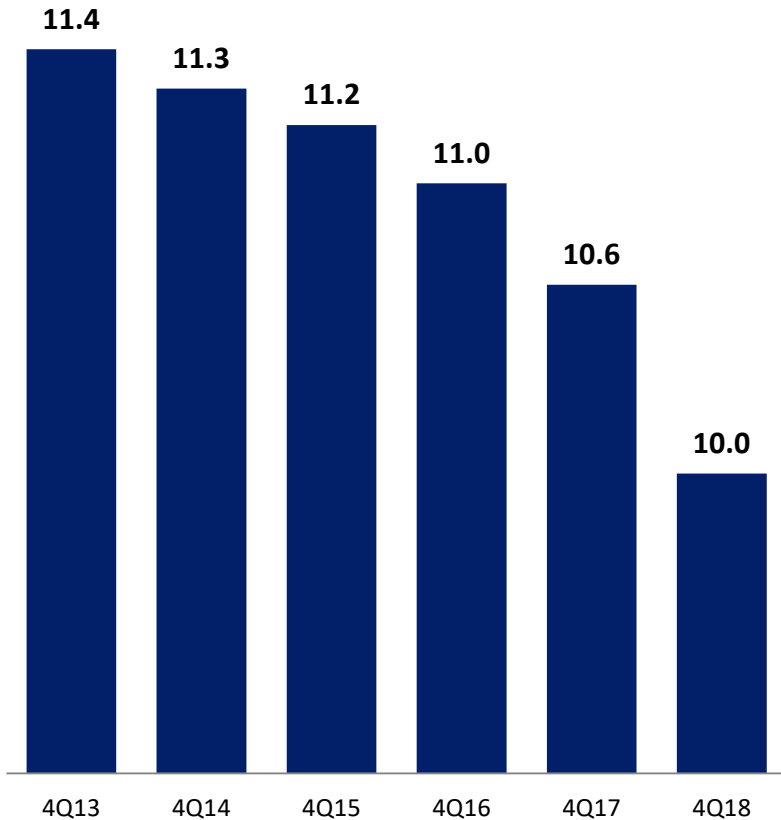


Note: Amounts may not total due to rounding.

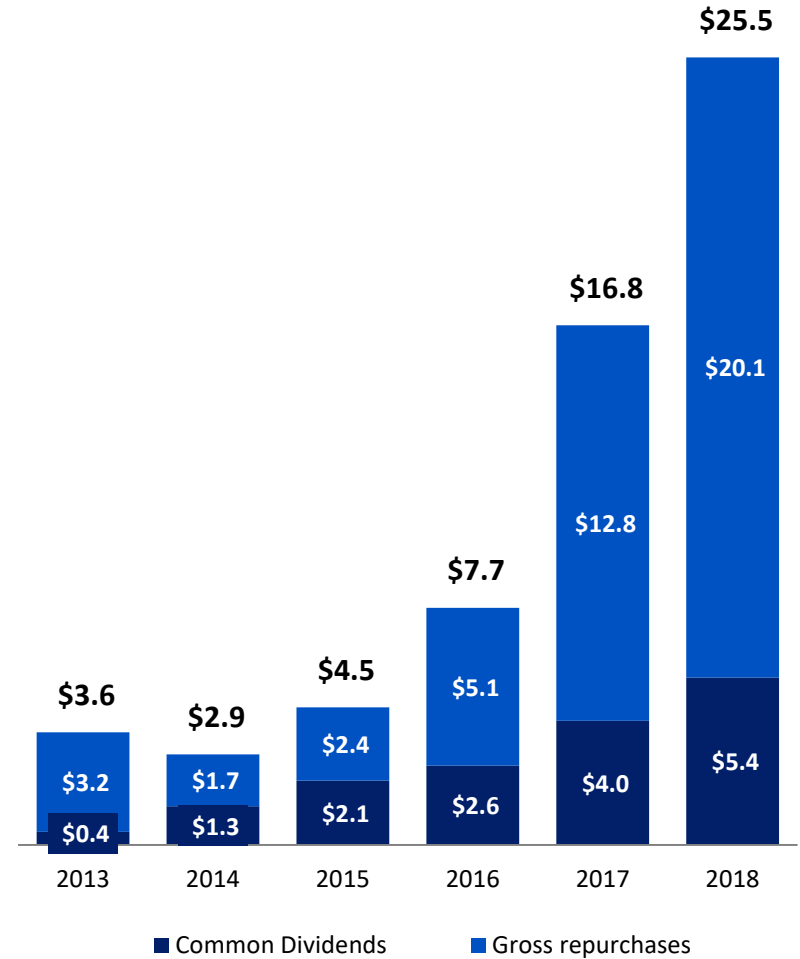
<sup>1</sup> Loans in Business Segments exclude loan balances in All Other of \$61B, \$82B, \$109B and \$145B for 2018, 2017, 2016 and 2015, respectively. Total loans and leases were \$933B, \$919B, \$900B and \$877B for 2018, 2017, 2016 and 2015, respectively.

# Increased Capital Returned to Shareholders

Average Diluted Shares Outstanding (B)



Common Dividends and Share Repurchases (\$B)



Note: Amounts may not total due to rounding.

# 4Q18 Financial Results

Summary Income Statement (\$B, except per share data)	Reported		4Q18 vs. 4Q17	Excl. Tax Act	4Q18 Reported vs. 4Q17 Excl. Tax Act
	4Q18	4Q17	% Inc / (Dec)	4Q17 <sup>1,2</sup>	% Inc / (Dec)
Total revenue, net of interest expense	\$22.7	\$20.4	11 %	\$21.4	6 %
Noninterest expense	13.1	13.3	(1)	13.3	(1)
Provision for credit losses	0.9	1.0	(10)	1.0	(10)
Pretax income	8.7	6.2	41	7.1	22
Income tax expense	1.4	3.8	(63)	1.9	(24)
Net income	\$7.3	\$2.4	208	\$5.3	39
Diluted earnings per share	\$0.70	\$0.20	250	\$0.47	49
Average diluted common shares (in millions)	9,996	10,622	(6)	10,622	(6)

7% operating leverage YoY<sup>2,4</sup>

## Return Metrics and Efficiency

Return on average assets	1.24 %	0.41 %		0.90 %
Return on average common shareholders' equity	11.6	3.3		7.8
Return on average tangible common shareholders' equity <sup>3</sup>	16.3	4.6		10.9
Efficiency ratio	58	65		62

Note: Amounts may not total due to rounding.

<sup>1</sup> Enactment of the Tax Act reduced 4Q17 net income by \$2.9B, or \$0.27 per diluted common share, which included a \$0.9B pretax charge recorded in other noninterest income, predominantly related to the revaluation of certain tax-advantaged energy investments, as well as \$1.9B of tax expense principally associated with the revaluation of certain deferred tax assets and liabilities.

<sup>2</sup> Represents a non-GAAP financial measure. For a reconciliation to GAAP of the presented return metrics, see note A on slide 28. For important presentation information, see slide 31.

<sup>3</sup> Represents a non-GAAP financial measure. For important presentation information, see Note A on slide 28, and slide 31.

<sup>4</sup> Reported operating leverage of 12%.





# Fourth Quarter 2018 Highlights

(% comparisons are to 4Q17 adjusted for enactment of Tax Act)

## Earnings

- Diluted earnings per share of \$0.70, up 49%<sup>1</sup>
- Record net income of \$7.3B, up 39%<sup>1</sup>
- Pretax income of \$8.7B, up 22%<sup>1</sup>
- Total revenue of \$22.7B, up 6%<sup>1</sup>
- Noninterest expense of \$13.1B, down 1%
- Net charge-off ratio of 0.39%, down 14 bps

## Returns and Efficiency

- Return on average assets of 1.24% improved 34 bps<sup>1</sup>
- Return on average common shareholders' equity of 11.6% increased 373 bps<sup>1</sup>
- Return on average tangible common shareholders' equity of 16.3% improved 543 bps<sup>1,2</sup>
- Efficiency ratio of 58% improved 432 bps<sup>1</sup>

## Client Balances

- Average loans and leases in business segments grew 3%
  - Consumer up 4% and commercial up 2%
- Average deposits increased 4%
- Full year Merrill Edge client flows of \$25B
- Full year total client balance flows within Global Wealth & Investment Management of \$56B

## Capital and Liquidity

- \$167B of Common Equity Tier 1 Capital (CET1) and CET1 ratio of 11.6%<sup>3</sup>
- \$544B of average Global Liquidity Sources<sup>4</sup>
- Capital returned to shareholders
  - Repurchased \$20.1B of common shares and paid \$5.4B in common dividends in 2018; returned 96% of net income available to common shareholders

<sup>1</sup> Represent non-GAAP financial measures which exclude 4Q17 charge for enactment of the Tax Act. See slide 31 for important presentation information. In addition, for the non-GAAP financial measures under the "Earnings" section, see slide 8 for the percentages calculated using GAAP financial measures along with reconciliations. For the non-GAAP financial measures under "Returns and Efficiency", see slide 8 for the percentages calculated using GAAP financial measures and note A on slide 28 for reconciliations.

<sup>2</sup> Return on average tangible common shareholders' equity is a non-GAAP financial measure. See slide 8 for additional information.

<sup>3</sup> Regulatory capital ratios at December 31, 2018 are preliminary. The Company reports regulatory capital ratios under both the Standardized and Advanced approaches. The approach that yields the lower ratio is used to assess capital adequacy, which for CET1 is the Standardized approach for 4Q18.

<sup>4</sup> See note B on slide 28 for definition of Global Liquidity Sources.



# Balance Sheet, Liquidity and Capital

(EOP basis unless noted)

<b>Balance Sheet (\$B)</b>	<b>4Q18</b>	<b>3Q18</b>	<b>4Q17</b>
Total assets	\$2,354.5	\$2,338.8	\$2,281.2
Total loans and leases	946.9	929.8	936.7
Total loans and leases in business segments <sup>1</sup>	898.8	874.8	867.3
Total debt securities	441.8	446.1	440.1
<b>Funding &amp; Liquidity (\$B)</b>			
Total deposits	\$1,381.5	\$1,345.6	\$1,309.5
Long-term debt	229.3	234.1	227.4
Global Liquidity Sources (average) <sup>2</sup>	544	537	522
<b>Equity (\$B)</b>			
Common shareholders' equity	\$243.0	\$239.8	\$244.8
Common equity ratio	10.3 %	10.3 %	10.7 %
Tangible common shareholders' equity <sup>4</sup>	\$173.1	\$169.9	\$174.5
Tangible common equity ratio <sup>4</sup>	7.6 %	7.5 %	7.9 %
<b>Per Share Data</b>			
Book value per common share	\$25.13	\$24.33	\$23.80
Tangible book value per common share <sup>4</sup>	17.91	17.23	16.96
Common shares outstanding (in billions)	9.67	9.86	10.29

<b>Basel 3 Capital (\$B) <sup>3</sup></b>	<b>4Q18</b>	<b>3Q18</b>	<b>4Q17</b>
Common equity tier 1 capital (CET1)	\$167.3	\$164.4	\$168.5
<b>Standardized approach</b>			
Risk-weighted assets	\$1,437	\$1,439	\$1,443
CET1 ratio	11.6 %	11.4 %	11.7 %
<b>Advanced approaches</b>			
Risk-weighted assets	\$1,408	\$1,424	\$1,459
CET1 ratio	11.9 %	11.5 %	11.5 %
<b>Supplementary leverage</b>			
Supplementary leverage ratio (SLR)	6.8 %	6.7 %	n/a

Note: n/a = not applicable.

<sup>1</sup> Excludes loans and leases in All Other.

<sup>2</sup> See note B on slide 28 for definition of Global Liquidity Sources.

<sup>3</sup> Regulatory capital ratios at December 31, 2018 are preliminary. The Company reports regulatory capital ratios under both the Standardized and Advanced approaches. The approach that yields the lower ratio is used to assess capital adequacy. Basel 3 transition provisions for regulatory capital adjustments and deductions were fully phased-in as of January 1, 2018. Prior periods are presented on a fully phased-in basis. SLR requirements became effective January 1, 2018.

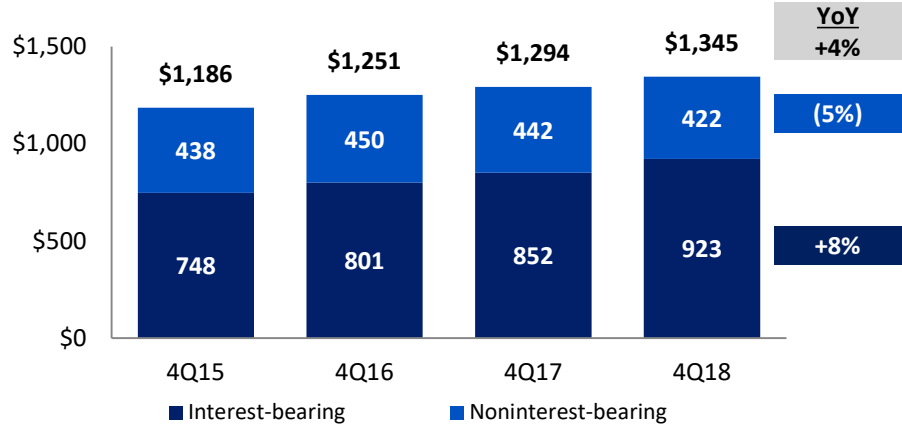
<sup>4</sup> Represents a non-GAAP financial measure. For important presentation information, see slide 31.



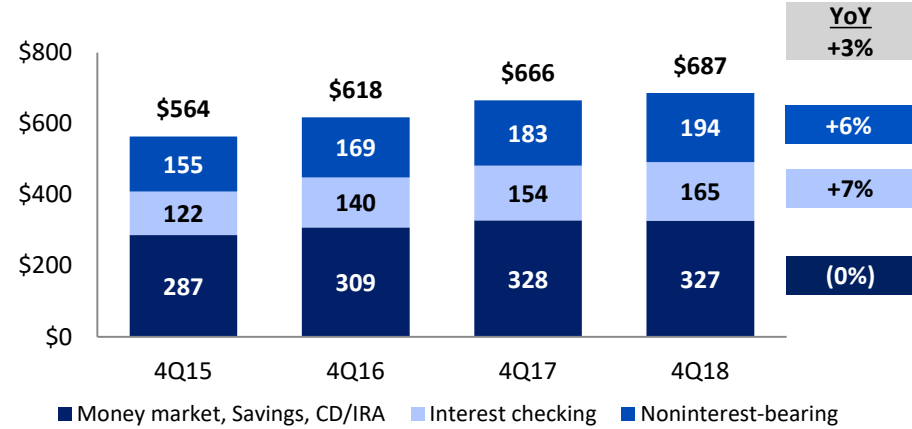
# Average Deposits

Bank of America Ranked #1 in U.S. Deposit Market Share <sup>1</sup>

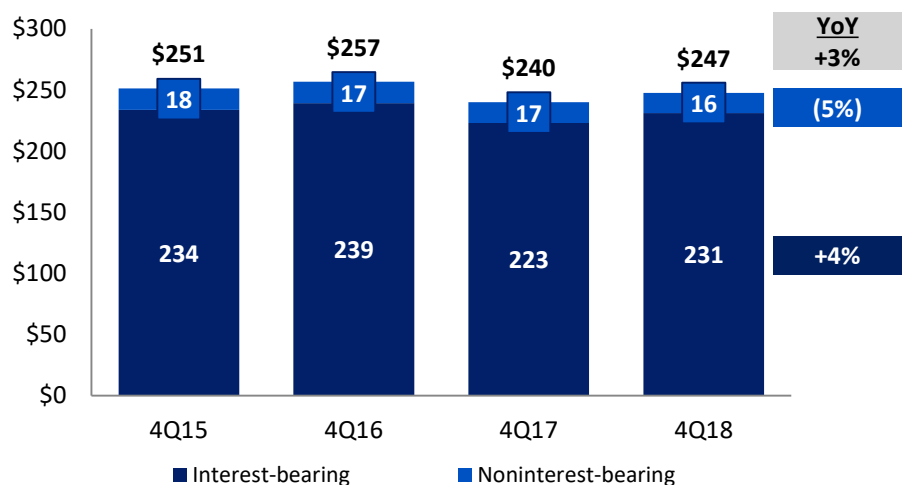
## Total Corporation (\$B)



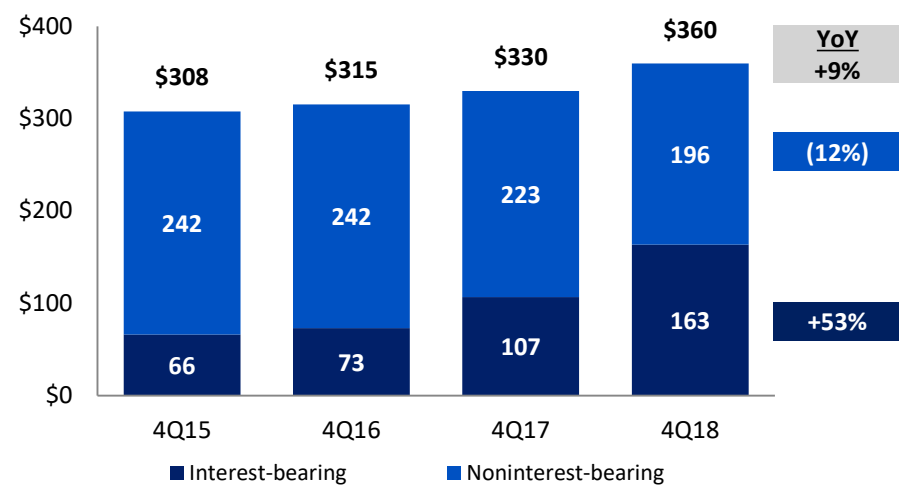
## Consumer Banking (\$B)



## GWIM (\$B)



## Global Banking (\$B)

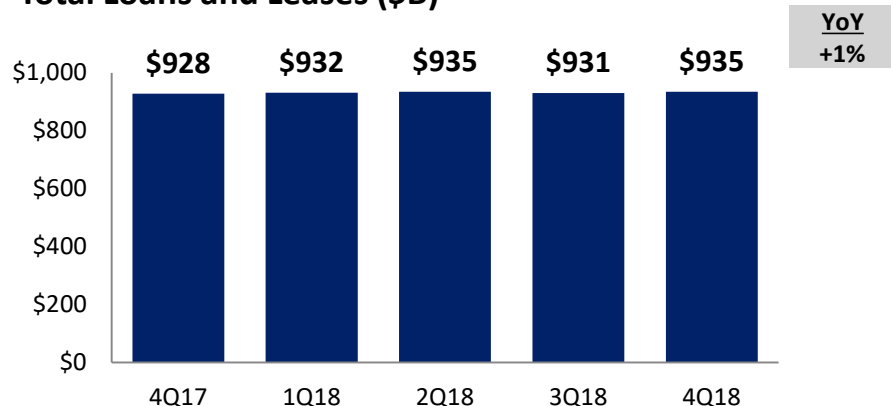


Note: Amounts may not total due to rounding. Total corporation includes Global Markets & All Other.

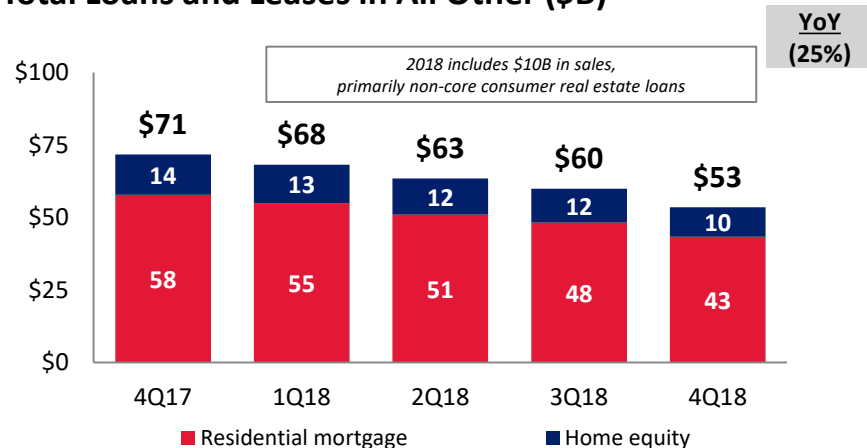
<sup>1</sup> Based on June 30, 2018 FDIC deposit data.

# Average Loans and Leases

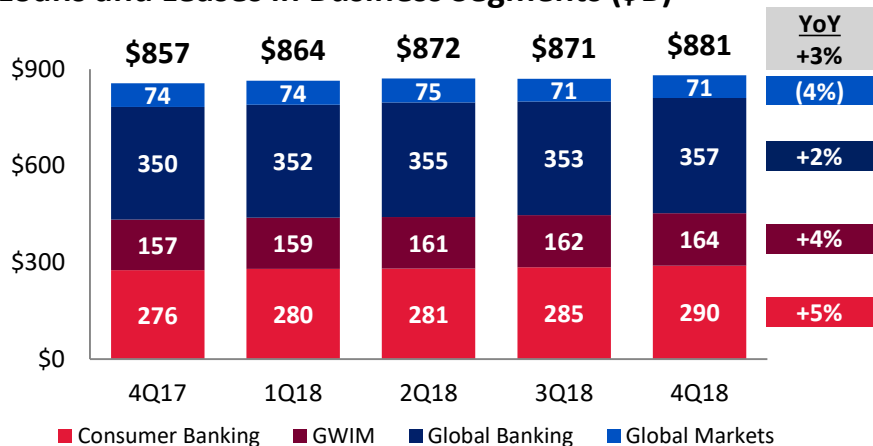
## Total Loans and Leases (\$B)



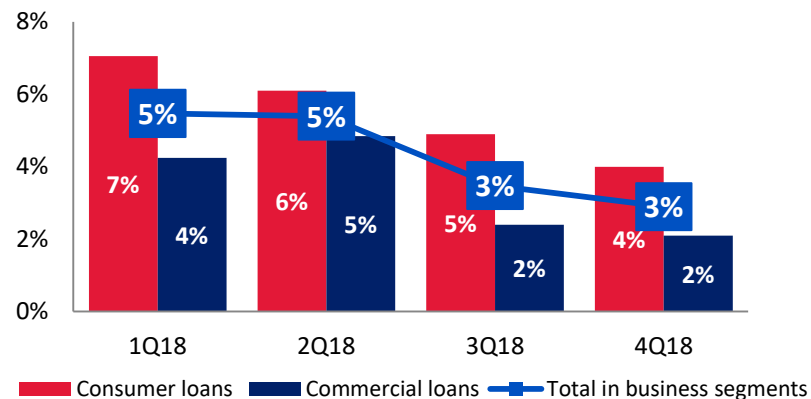
## Total Loans and Leases in All Other (\$B)



## Loans and Leases in Business Segments (\$B)



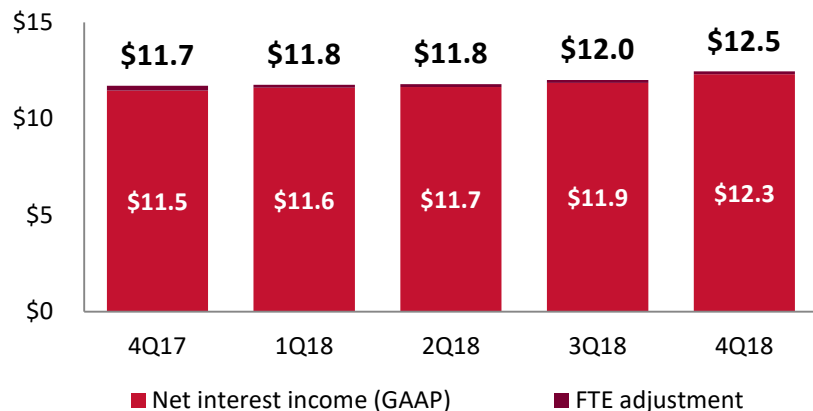
## Year-over-Year Growth in Business Segments



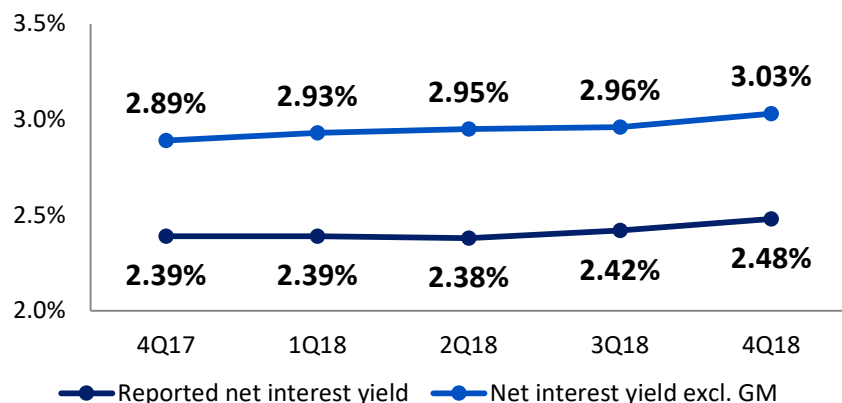
Note: Amounts may not total due to rounding.

# Net Interest Income

## Net Interest Income (FTE, \$B) <sup>1</sup>



## Net Interest Yield (FTE) <sup>1</sup>



- Net interest income of \$12.3B (\$12.5B FTE <sup>1</sup>)
  - Increased \$0.8B from 4Q17, reflecting the benefits from higher interest rates as well as loan and deposit growth, modestly offset by loan spread compression and higher funding costs in Global Markets
  - Increased \$0.4B from 3Q18, driven by benefits from higher interest rates, loan and deposit growth, and lower long-term debt costs
- Net interest yield of 2.48% increased 9 bps from 4Q17
  - Excluding Global Markets, the net interest yield was 3.03%, up 14 bps from 4Q17 <sup>1</sup>
- Interest rate sensitivity as of December 31, 2018 <sup>2</sup>
  - Remain positioned for NII to benefit as rates move higher
  - +100 bps parallel shift in interest rate yield curve is estimated to benefit NII by \$2.7B over the next 12 months, driven primarily by sensitivity to short-end interest rates
- 1Q19 will be negatively impacted by approximately \$200MM for two fewer interest accrual days than 4Q18

Notes: FTE stands for fully taxable-equivalent basis. GM stands for Global Markets.

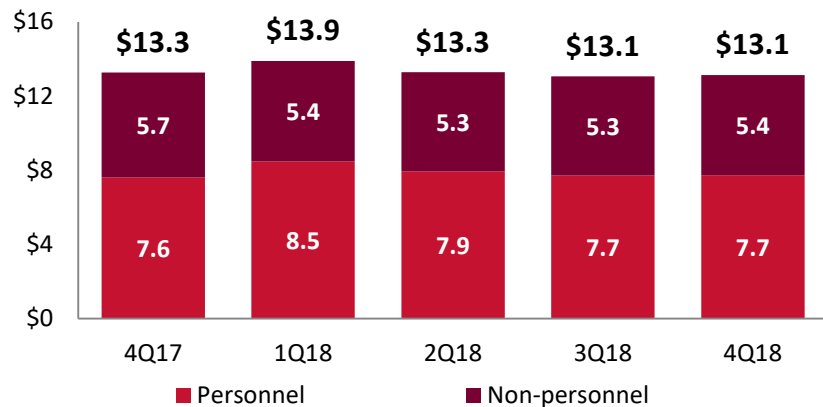
<sup>1</sup> Represent non-GAAP financial measures. Net interest yield adjusted to exclude Global Markets NII of \$746MM, \$754MM, \$801MM, \$870MM and \$932MM, and average earning assets of \$458B, \$459B, \$490B, \$486B and \$464B for 4Q18, 3Q18, 2Q18, 1Q18 and 4Q17, respectively. The Company believes the presentation of net interest yield excluding Global Markets provides investors with transparency of NII and net interest yield in core banking activities. For important presentation information, see slide 31.

<sup>2</sup> NII asset sensitivity represents banking book positions.

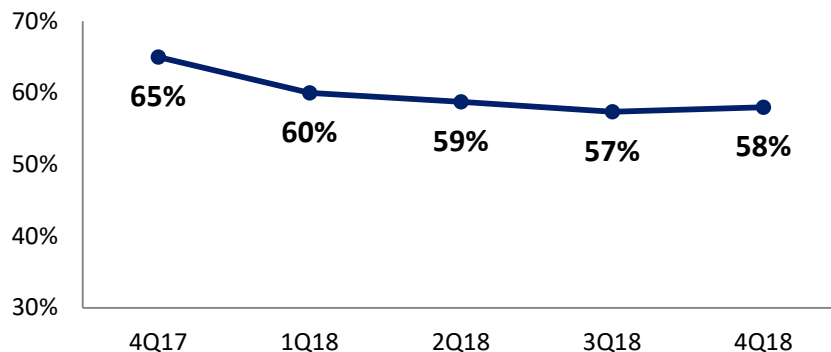


# Expense and Efficiency

## Total Noninterest Expense (\$B)



## Efficiency Ratio



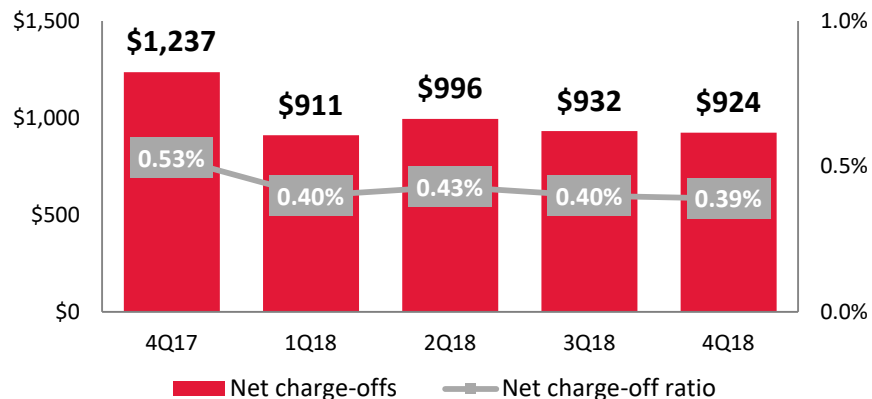
- Total noninterest expense of \$13.1B declined \$0.1B, or 1%, from 4Q17, as efficiency savings offset investments and inflationary costs
  - Noninterest expense flat versus 3Q18, as impact of “Shared Success” year-end bonus to associates as well as higher marketing spend offset lower FDIC expense
- Efficiency ratio improved to 58% in 4Q18
- Compared to 4Q18, 1Q19 expenses expected to include approximately \$0.5B for seasonally elevated personnel costs



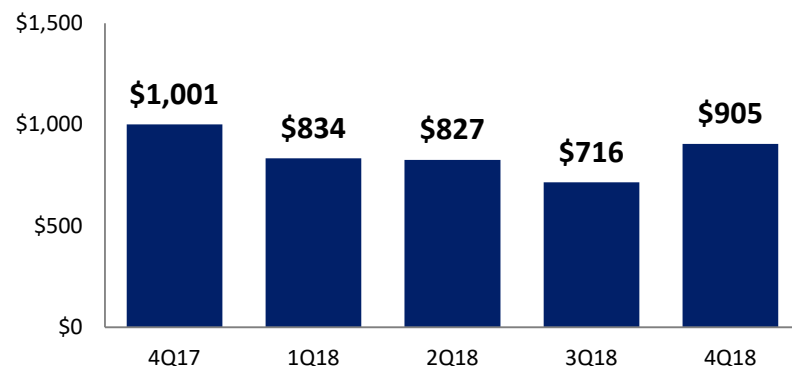
Note: Amounts may not total due to rounding.

# Asset Quality

## Net Charge-offs (\$MM) <sup>1</sup>



## Provision for Credit Losses (\$MM)



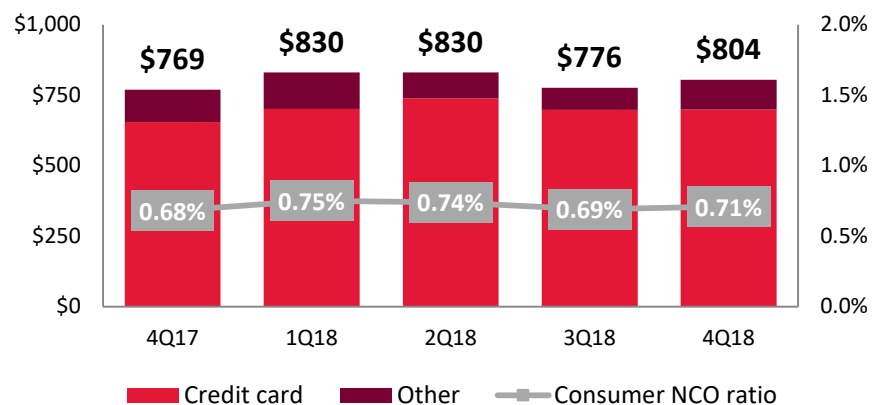
- Total net charge-offs of \$0.9B were stable from 3Q18
  - Consumer and Commercial net charge-offs of \$0.8B and \$0.1B were relatively flat from 3Q18
- Net charge-off ratio of 39 bps decreased 1 bp from 3Q18 and 14 bps from 4Q17
  - Consumer and Commercial net charge-off ratios remained low at 71 bps and 10 bps, respectively
- Provision expense of \$0.9B increased \$0.2B from 3Q18
  - Provision expense closely matched net charge-offs
- Allowance for loan and lease losses of \$9.6B represented 1.02% of total loans and leases <sup>1</sup>
- Nonperforming loans (NPLs) decreased \$0.2B from 3Q18, driven by improvements in Consumer
  - 49% of consumer NPLs are contractually current
- Commercial reservable criticized utilized exposure decreased \$0.5B from 3Q18, reflecting broad-based improvements across several industries



<sup>1</sup> Excludes loans measured at fair value.

# Asset Quality – Consumer and Commercial Portfolios

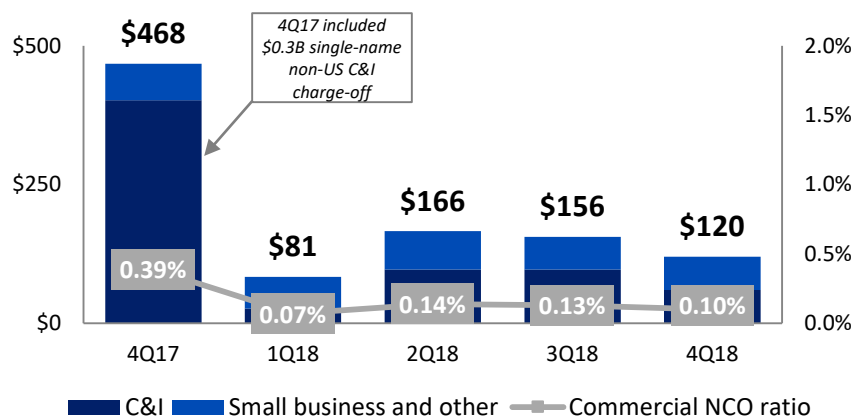
## Consumer Net Charge-offs (\$MM)



## Consumer Metrics (\$MM)

	4Q18	3Q18	4Q17
Provision	\$734	\$710	\$619
Nonperforming loans and leases	3,842	4,306	5,166
% of loans and leases <sup>1</sup>	0.86 %	0.97 %	1.14 %
Consumer 30+ days performing past due	\$6,741	\$7,158	\$8,811
Fully-insured <sup>2</sup>	2,790	3,183	4,466
Non fully-insured	3,951	3,975	4,345
Allowance for loans and leases	4,802	4,980	5,383
% of loans and leases <sup>1</sup>	1.08 %	1.12 %	1.18 %
# times annualized NCOs	1.51 x	1.62 x	1.76 x

## Commercial Net Charge-offs (\$MM)



## Commercial Metrics (\$MM)

	4Q18	3Q18	4Q17
Provision	\$171	\$6	\$382
Reservable criticized utilized exposure	11,061	11,597	13,563
Nonperforming loans and leases	1,102	848	1,304
% of loans and leases <sup>1</sup>	0.22 %	0.18 %	0.27 %
Allowance for loans and leases	\$4,799	\$4,754	\$5,010
% of loans and leases <sup>1</sup>	0.97 %	0.99 %	1.05 %



<sup>1</sup> Excludes loans measured at fair value.

<sup>2</sup> Fully-insured loans are FHA-insured loans and other loans individually insured under long-term standby agreements.



# Consumer Banking

Summary Income Statement (\$MM) <sup>1</sup>	Inc / (Dec)		
	4Q18	3Q18	4Q17
Total revenue, net of interest expense	\$9,877	\$474	\$922
Provision for credit losses	915	45	29
Noninterest expense	4,483	129	(26)
Pretax income	4,479	300	919
Income tax expense	1,141	75	(223)
Net income	\$3,338	\$225	\$1,142

Key Indicators (\$B)	4Q18	3Q18	4Q17
Average deposits	\$686.8	\$687.5	\$665.5
Rate paid on deposits	0.07 %	0.06 %	0.04 %
Cost of deposits <sup>2</sup>	1.52	1.52	1.61
Average loans and leases	\$289.9	\$285.0	\$275.7
Net charge-off ratio	1.22 %	1.19 %	1.21 %
Client brokerage assets	\$185.9	\$203.9	\$177.0
Active mobile banking users (MM)	26.4	25.9	24.2
% Consumer sales through digital channels	27 %	23 %	24 %
Number of financial centers	4,341	4,385	4,477
Combined credit / debit purchase volumes <sup>3</sup>	\$151.9	\$146.4	\$143.4
Total consumer credit card risk-adjusted margin <sup>3</sup>	8.83 %	8.15 %	8.74 %
Return on average allocated capital	36	33	24
Allocated capital	\$37	\$37	\$37
Efficiency ratio	45 %	46 %	50 %

- Net income of \$3.3B increased 52% from 4Q17; ROAAC of 36%
  - 11% operating leverage and steady credit costs drove results
- Revenue of \$9.9B increased \$0.9B, or 10%, from 4Q17, driven primarily by NII due to higher interest rates and growth in deposits and loans, as well as higher card income and service charges
- Provision increased modestly from 4Q17
  - Net charge-offs increased due to credit card portfolio seasoning and loan growth
- Noninterest expense declined 1% from 4Q17, as investments for business growth were more than offset by improved productivity and lower FDIC expense
  - Efficiency ratio improved nearly 500 bps to 45%
  - Continued investment in financial center builds/renovations and digital capabilities
  - Active mobile banking users of 26.4MM increased 9% from 4Q17, and mobile channel usage increased 16% from 4Q17
- Average deposits of \$687B grew \$21B, or 3%, from 4Q17
  - 52% of deposits in checking accounts; 91% primary accounts <sup>4</sup>
  - Average cost of deposits of 1.52% <sup>2</sup>; rate paid of 7 bps
- Average loans and leases of \$290B increased \$14B, or 5%, from 4Q17, driven by growth in residential mortgage and credit card
- Client brokerage assets of \$186B grew \$9B, or 5%, from 4Q17
  - \$25B of strong client flows were partially offset by \$16B lower market valuation
- Combined card spend grew 6% from 4Q17

Note: ROAAC stands for return on average allocated capital.

<sup>1</sup> Tax expense compared to prior year impacted by a lower U.S. corporate tax rate.

<sup>2</sup> Cost of deposits calculated as annualized noninterest expense as a percentage of total average deposits within the Deposits subsegment.

<sup>3</sup> Includes U.S. consumer credit card portfolios in Consumer Banking and GWIM.

<sup>4</sup> Represents the percentage of consumer checking accounts that are estimated to be the customer's primary account based on multiple relationship factors (e.g., linked to their direct deposit).

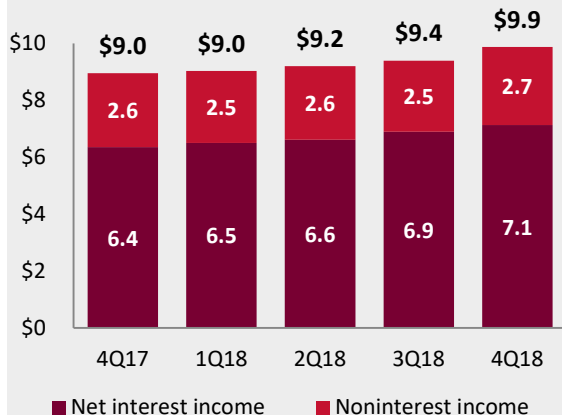


# Consumer Banking Trends

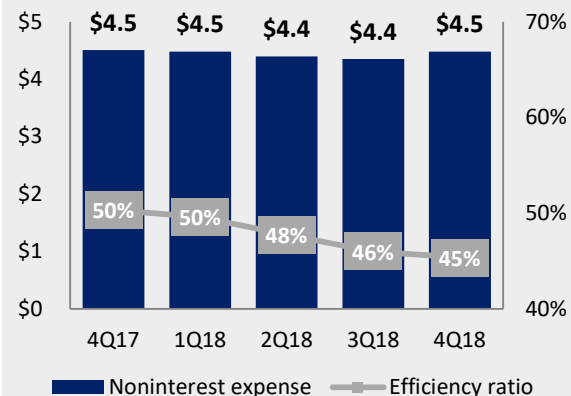
## Business Leadership <sup>1</sup>

- #1 Consumer Deposit Market Share <sup>A</sup>
- 2018 and 2019 J.D. Power Certified Mobile App
- 2019 J.D. Power Certified Website
- Named North America's Best Digital Bank <sup>B</sup>
- #1 Online Banking and Mobile Banking Functionality <sup>C</sup>
- #1 U.S. Checking Account Digital Sales Functionality <sup>D</sup>
- 4-Star Rating by Barron's 2018 Best Online Brokers
- #1 Home Equity Originator <sup>E</sup>
- #1 in Prime Auto Credit distribution of new originations among peers <sup>F</sup>
- #2 Small Business Lender <sup>G</sup>
- Global Retail Bank of the Year <sup>H</sup>

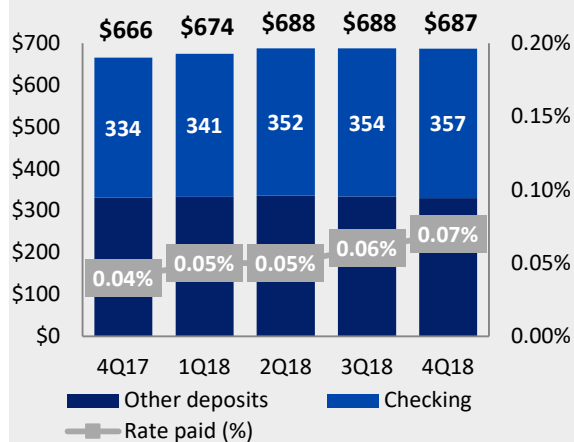
## Total Revenue (\$B)



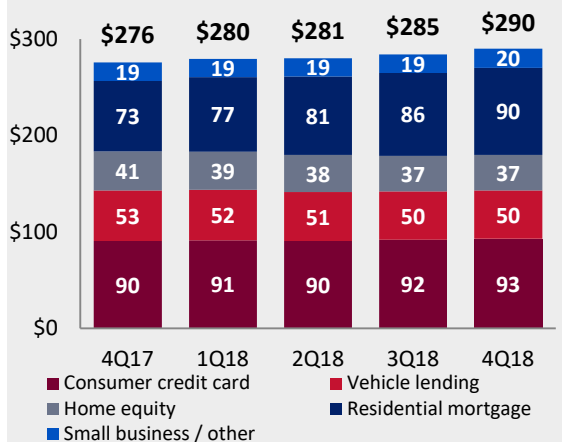
## Total Expense (\$B) and Efficiency



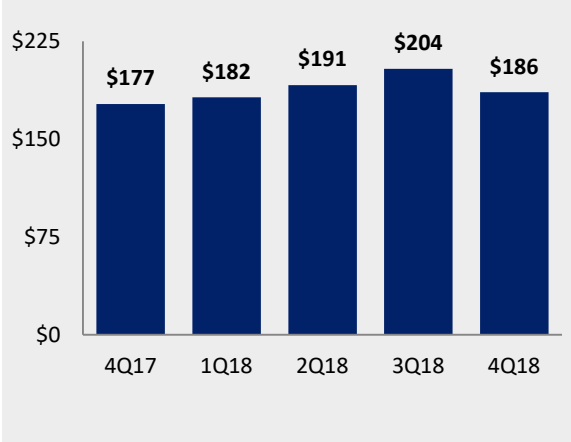
## Average Deposits (\$B)



## Average Loans and Leases (\$B)

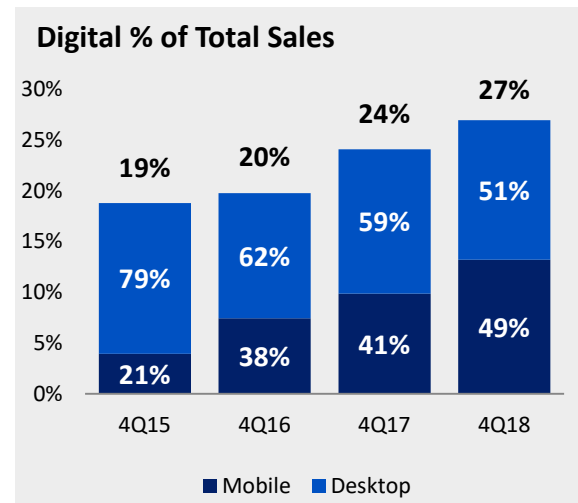
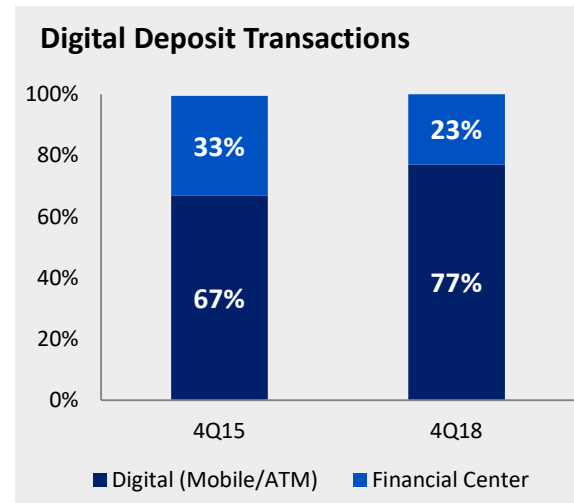
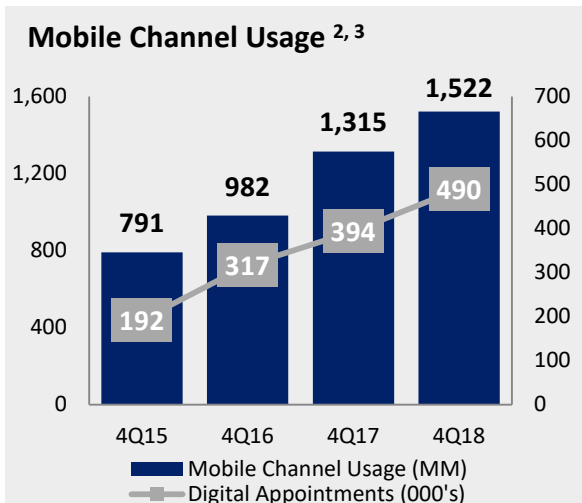
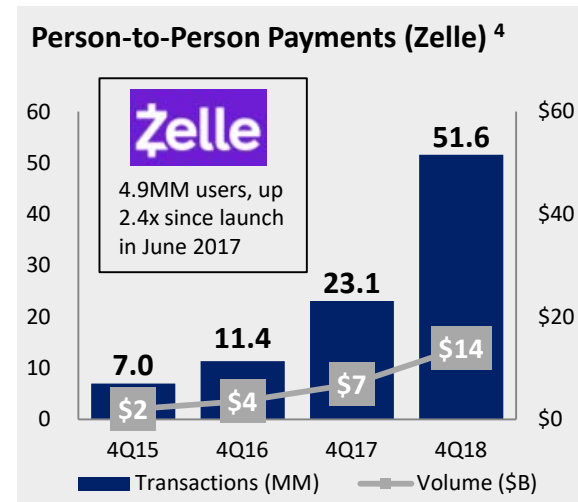
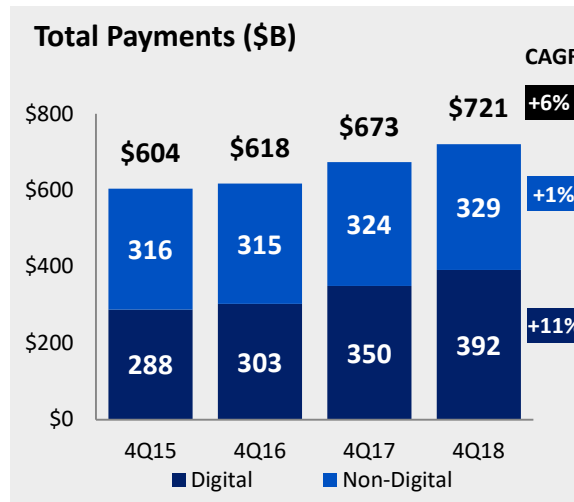
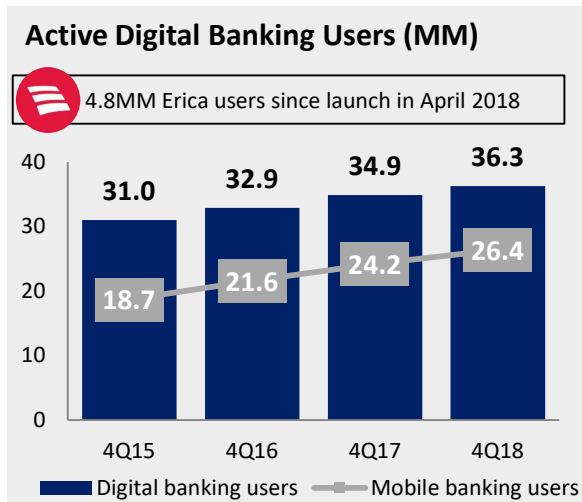


## Client Brokerage Assets (EOP, \$B)



Note: Amounts may not total due to rounding.  
<sup>1</sup> See slide 29 for business leadership sources.

# Consumer Banking Digital Usage Trends <sup>1</sup>



<sup>1</sup> Digital users represent mobile and/or online users in consumer businesses.

<sup>2</sup> Mobile channel usage represents the total number of application logins using a smartphone or tablet.

<sup>3</sup> Digital appointments represent the number of appointments made via online, smartphone or tablet.

<sup>4</sup> Includes Bank of America person-to-person payments sent and/or received through e-mail or mobile identification.

# Global Wealth & Investment Management

Summary Income Statement (\$MM) <sup>1</sup>	Inc / (Dec)		
	4Q18	3Q18	4Q17
Total revenue, net of interest expense	\$4,990	\$207	\$307
Provision for credit losses	23	10	17
Noninterest expense	3,542	128	72
Pretax income	1,425	69	218
Income tax expense	363	17	(100)
Net income	\$1,062	\$52	\$318

Key Indicators (\$B)	4Q18	3Q18	4Q17
Average deposits	\$247.4	\$238.3	\$240.1
Average loans and leases	163.5	161.9	157.1
Net charge-off ratio	0.02 %	0.03 %	0.01 %
AUM flows	(\$6.2)	\$7.6	\$18.2
Pretax margin	29 %	28 %	26 %
Return on average allocated capital	29	28	21
Allocated capital	\$14.5	\$14.5	\$14.0

- Record net income of \$1.1B increased 43% from 4Q17; ROAAC of 29%
  - Strong pretax margin of 29%
- Revenue of \$5.0B increased 7% from 4Q17, driven primarily by higher net interest income and asset management fees, as well as a small gain on sale of a non-core asset, partially offset by lower transactional revenue
  - 83% of revenue from asset management fees and net interest income
  - Impact of December equity market declines will be reflected in 1Q19 results
- Noninterest expense increased 2% from 4Q17, as higher revenue-related incentives and investment in business growth were largely offset by continued expense discipline
- Client balances of \$2.6T, down 5% from 4Q17, as strong flows were more than offset by impact of lower market valuations
  - Total client balance flows of \$35B in 4Q18 driven by strong deposit and brokerage flows, partially offset by AUM flows of (\$6B), reflecting impact of investor sentiment towards cash due to market volatility
- Organic growth in net new Merrill Lynch households in 2018 was more than four times 2017 level
- Average deposits of \$247B increased 3% from 4Q17
  - Included the impact of some client portfolio rebalancing out of AUM, as well as account structure simplification
- Average loans and leases of \$164B increased \$6B, or 4%, from 4Q17, driven by residential mortgage and custom lending
- Wealth advisors grew 1% from 4Q17 to 19,459 <sup>2</sup>



<sup>1</sup> Tax expense compared to prior year impacted by a lower U.S. corporate tax rate.

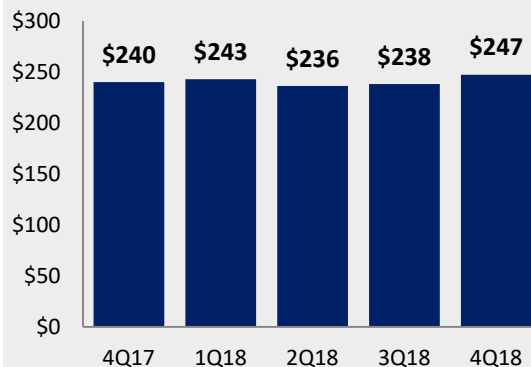
<sup>2</sup> Includes financial advisors in Consumer Banking of 2,722 and 2,402 in 4Q18 and 4Q17.

# Global Wealth & Investment Management Trends

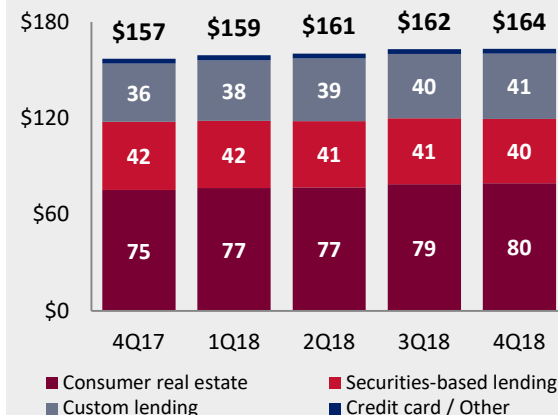
## Business Leadership <sup>1</sup>

- #1 U.S. wealth management market position across client assets, deposits and loans <sup>1</sup>
- #1 in personal trust assets under management <sup>1</sup>
- #1 in Barron's U.S. high net worth client assets (2018)
- #1 in Barron's Top 1,200 ranked Financial Advisors (2018)
- #1 in Forbes' Top 500 America's Top Next Generation Advisors (2018)
- #1 in Financial Times Top 401K Retirement Plan Advisors (2018)
- #1 in Barron's Top 100 Women Advisors (2018)

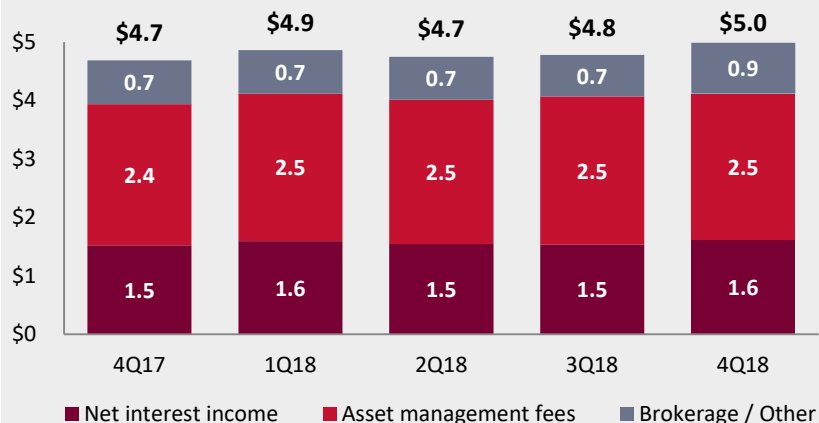
## Average Deposits (\$B)



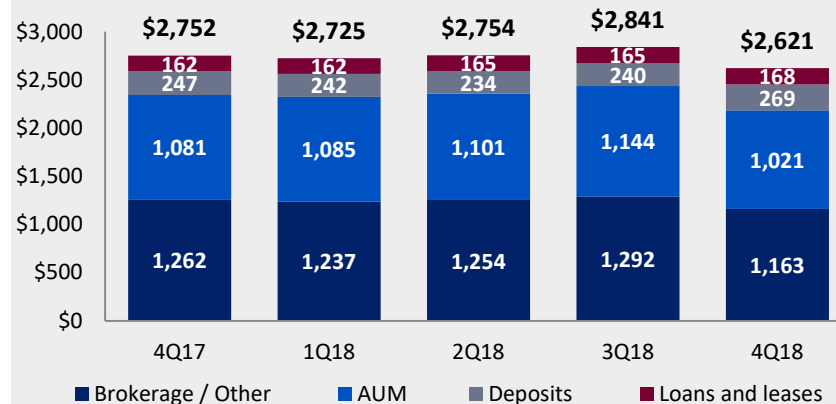
## Average Loans and Leases (\$B)



## Total Revenue (\$B)



## Client Balances (EOP, \$B) <sup>2</sup>



Note: Amounts may not total due to rounding.

<sup>1</sup> See slide 29 for business leadership sources.

<sup>2</sup> Loans and leases include margin receivables which are classified in customer and other receivables on the consolidated balance sheet.



# Global Banking

Summary Income Statement (\$MM) <sup>1</sup>	4Q18	Inc/(Dec)	
		3Q18	4Q17
Total revenue, net of interest expense <sup>2</sup>	\$5,050	\$312	\$31
Provision (benefit) for credit losses	85	155	(47)
Noninterest expense	2,119	(2)	(42)
Pretax income	2,846	159	120
Income tax expense	740	41	(306)
<b>Net income</b>	<b>\$2,106</b>	<b>\$118</b>	<b>\$426</b>

Selected Revenue Items (\$MM)	4Q18	3Q18	4Q17
Total Corporation IB fees (excl. self-led) <sup>2</sup>	\$1,348	\$1,204	\$1,418
Global Banking IB fees <sup>2</sup>	760	644	811
Business Lending revenue	2,180	2,084	2,262
Global Transaction Services revenue	2,055	1,972	1,876

Key Indicators (\$B)	4Q18	3Q18	4Q17
Average deposits	\$359.6	\$337.7	\$329.8
Average loans and leases	357.4	352.7	350.3
Net charge-off ratio	0.06 %	0.10 %	0.30 %
Return on average allocated capital	20	19	17
Allocated capital	\$41	\$41	\$40
Efficiency ratio	42 %	45 %	43 %

- Net income of \$2.1B increased 25% from 4Q17; ROAAC of 20%
- Revenue of \$5.1B increased 1% from 4Q17
  - Reflected higher NII from the benefit of higher interest rates and growth in deposits, partially offset by lower investment banking fees
- Total Corporation investment banking fees of \$1.3B (excl. self-led) declined 5% from 4Q17 driven primarily by debt underwriting and advisory fees
- Provision improved \$47MM from 4Q17, driven by the absence of prior year's single-name non-U.S. commercial charge-off <sup>2</sup>
- Noninterest expense decreased 2% from 4Q17, reflecting lower FDIC expense, partially offset by continued investment in the business
- Average loans and leases of \$357B increased 2% from 4Q17
- Strong average deposit growth of \$30B to \$360B, or 9%, compared to 4Q17



<sup>1</sup> Tax expense compared to prior year impacted by a lower U.S. corporate tax rate.

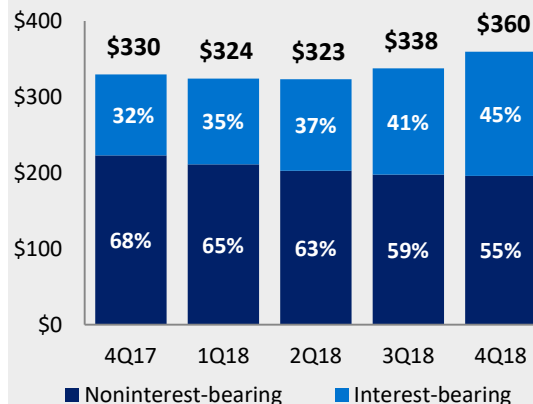
<sup>2</sup> Global Banking and Global Markets share in certain deal economics from investment banking, loan origination activities and sales and trading activities.

# Global Banking Trends

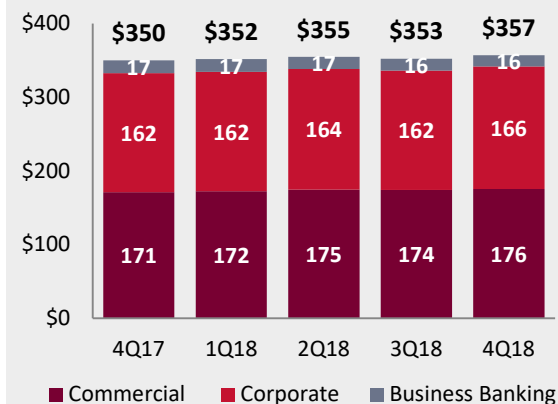
## Business Leadership <sup>1</sup>

- North America's Best Bank for Small to Medium-sized Enterprises <sup>B</sup>
- Most Innovative Investment Bank of the Year from North America <sup>K</sup>
- Best Transaction Bank in North America <sup>K</sup>
- 2018 Quality, Share and Excellence Awards for U.S. Large Corporate Banking and Cash Management <sup>L</sup>
- Best Global Debt Bank <sup>M</sup>
- Relationships with 79% of the Global Fortune 500; 94% of the U.S. Fortune 1,000 (2018)

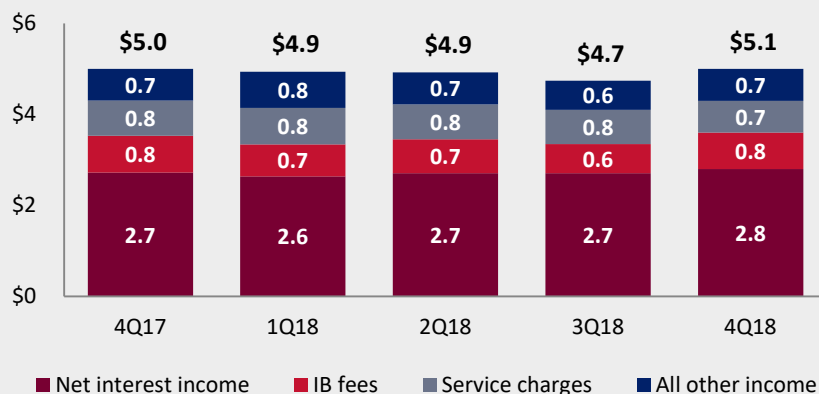
## Average Deposits (\$B)



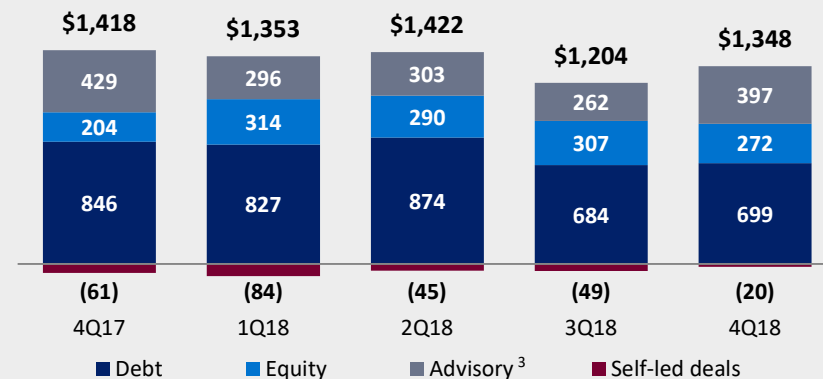
## Average Loans and Leases (\$B)



## Total Revenue (\$B) <sup>2</sup>



## Total Corporation IB Fees (\$MM) <sup>2</sup>



Note: Amounts may not total due to rounding.

<sup>1</sup> See slide 29 for business leadership sources.

<sup>2</sup> Global Banking and Global Markets share in certain deal economics from investment banking, loan origination activities and sales and trading activities.

<sup>3</sup> Advisory includes fees on debt and equity advisory and mergers and acquisitions.

# Global Markets

Summary Income Statement (\$MM) <sup>1</sup>	Inc/(Dec)		
	4Q18	3Q18	4Q17
Total revenue, net of interest expense <sup>2</sup>	\$3,213	(\$630)	(\$183)
<i>Net DVA</i>	52	151	170
<i>Total revenue (excl. net DVA) <sup>2,3</sup></i>	3,161	(781)	(353)
Provision for credit losses	6	8	(156)
Noninterest expense	2,540	(73)	(74)
Pretax income	667	(565)	47
Income tax expense	174	(146)	(36)
Net income	\$493	(\$419)	\$83
<i>Net income (excl. net DVA) <sup>3</sup></i>	\$453	(\$534)	(\$30)
<b>Selected Revenue Items (\$MM) <sup>2</sup></b>	<b>4Q18</b>	<b>3Q18</b>	<b>4Q17</b>
Sales and trading revenue	\$2,556	\$2,972	\$2,539
Sales and trading revenue (excl. net DVA) <sup>3</sup>	2,504	3,071	2,657
FICC (excl. net DVA)	1,446	2,060	1,707
Equities (excl. net DVA)	1,058	1,011	950
Global Markets IB fees	514	522	597
<b>Key Indicators (\$B)</b>	<b>4Q18</b>	<b>3Q18</b>	<b>4Q17</b>
Average total assets	\$655.1	\$652.5	\$659.4
Average trading-related assets	464.0	460.3	449.7
Average 99% VaR (\$MM) <sup>4</sup>	36	31	36
Average loans and leases	70.6	71.2	73.6
Return on average allocated capital	6 %	10 %	5 %
Allocated capital	\$35	\$35	\$35
Efficiency ratio	79 %	68 %	77 %

- Net income of \$0.5B increased 20% from 4Q17; ROAAC of 6%
  - Excluding net DVA, net income of \$0.5B decreased 6%
- Revenue declined 5% from 4Q17; excluding net DVA, revenue decreased 10%
  - Reflects lower sales and trading revenue (ex-DVA), absence of a prior-year gain on the sale of a non-core asset, and lower investment banking fees
- Sales and trading revenue of \$2.6B increased 1% from 4Q17
- Excluding net DVA, sales and trading revenue of \$2.5B decreased 6% from 4Q17 <sup>3</sup>
  - FICC revenue of \$1.4B decreased 15% from 4Q17, due to weakness in credit and mortgage markets and lower client activity in credit products
  - Equities revenue of \$1.1B increased 11% from 4Q17, driven by strength in client financing and derivatives
- Provision improved \$156MM from 4Q17, driven by the absence of prior year's single-name non-U.S. commercial charge-off <sup>2</sup>
- Noninterest expense decreased 3% vs. 4Q17, driven by lower revenue-related expenses
- Average VaR remained low at \$36MM in 4Q18 <sup>4</sup>

<sup>1</sup> Tax expense compared to prior year impacted by a lower U.S. corporate tax rate.

<sup>2</sup> Global Banking and Global Markets share in certain deal economics from investment banking, loan origination activities and sales and trading activities.

<sup>3</sup> Represents a non-GAAP financial measure; see note C on slide 28.

<sup>4</sup> See note D on slide 28 for definition of VaR.



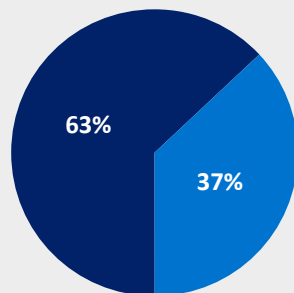


# Global Markets Trends and Revenue Mix

## Business Leadership <sup>1</sup>

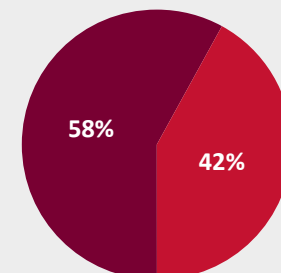
- #1 Equity Portfolio Trading Share – North American Institutions <sup>L</sup>
- #1 for U.S. FICC Overall Trading Quality and #1 for U.S. FICC Overall Sales Quality <sup>L</sup>
- 2018 Quality Leader in Global Top-Tier Foreign Exchange Sales and Corporate FX Sales <sup>L</sup>
- 2018 Share Leader in U.S. Fixed Income Market Share - #1 Securitized, #2 Emerging Markets <sup>L</sup>
- #1 Municipal Bonds Underwriter <sup>N</sup>
- #2 Global Research Firm <sup>O</sup>

## 2018 Global Markets Revenue Mix (excl. net DVA) <sup>2</sup>



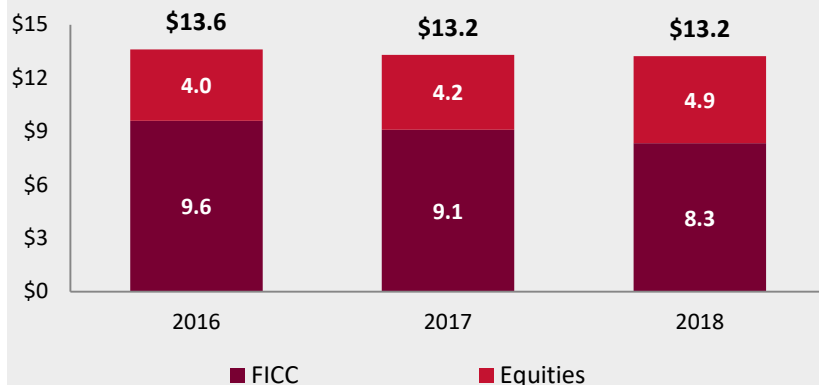
■ U.S. / Canada ■ International

## 2018 Total FICC S&T Revenue Mix (excl. net DVA) <sup>2</sup>

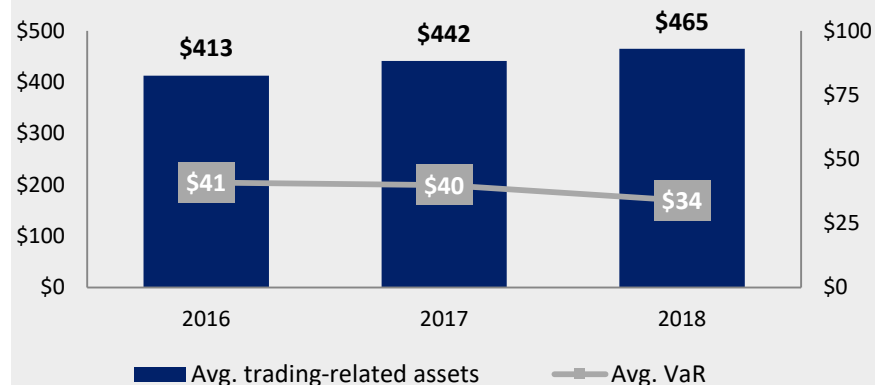


■ Credit / other ■ Macro <sup>3</sup>

## Total Sales & Trading Revenue (excl. net DVA) (\$B) <sup>2</sup>



## Average Trading-related Assets (\$B) and VaR (\$MM) <sup>4</sup>



Note: Amounts may not total due to rounding.

<sup>1</sup> See slide 29 for business leadership sources.

<sup>2</sup> Represents a non-GAAP financial measure. Reported sales & trading revenue was \$13.1B, \$12.8B and \$13.4B for 2018, 2017 and 2016, respectively. Reported FICC sales & trading revenue was \$8.2B, \$8.7B and \$9.4B for 2018, 2017 and 2016, respectively. Reported Equities sales & trading revenue was \$4.9B, \$4.1B and \$4.0B for 2018, 2017 and 2016, respectively. See note C on slide 28.

<sup>3</sup> Macro includes G10 FX, rates and commodities products.

<sup>4</sup> See note D on slide 28 for definition of VaR.



# All Other <sup>1</sup>

Summary Income Statement (\$MM) <sup>2</sup>	Inc/(Dec)		
	4Q18	3Q18	4Q17
Total revenue, net of interest expense	(\$239)	(\$400)	\$1,127
Provision (benefit) for credit losses	(124)	(29)	61
Noninterest expense	449	(116)	(71)
Pretax income (loss)	(564)	(255)	1,137
Income tax expense (benefit)	(843)	(390)	(1,807)
Net income (loss)	\$279	\$135	\$2,944

- Net income of \$0.3B improved \$2.9B from 4Q17
  - 4Q17 included charges of \$2.9B from the enactment of the Tax Act, comprised of \$0.9B revenue impact (other income) and \$1.9B tax expense
- Revenue improved \$1.1B from 4Q17
  - Revenue, excluding the Tax Act impact, improved \$0.2B from 4Q17, driven by a small gain from the sale of non-core consumer real estate loans
- Provision benefit decreased \$61MM from 4Q17, due to a slower pace of portfolio improvement driven by runoff and the sale of non-core consumer real estate loans
- Noninterest expense declined \$71MM from 4Q17, reflecting lower FDIC expense and other costs
- 4Q18 included \$0.2B in net tax benefits, including lower tax expense on international earnings due to updated tax guidance, partially offset by charges related to a variety of other tax matters

<sup>1</sup> All Other consists of asset and liability management (ALM) activities, equity investments, non-core mortgage loans and servicing activities, the net impact of periodic revisions to the mortgage servicing rights (MSR) valuation model for core and non-core MSRs and the related economic hedge results, liquidating businesses and residual expense allocations. ALM activities encompass certain residential mortgages, debt securities, interest rate and foreign currency risk management activities, the impact of certain allocation methodologies and hedge ineffectiveness. The results of certain ALM activities are allocated to our business segments. Equity investments include our merchant services joint venture, as well as a portfolio of equity, real estate and other alternative investments.

<sup>2</sup> Tax expense compared to prior year impacted by a lower U.S. corporate tax rate.



# Appendix



# Notes

- <sup>A</sup> Enactment of the Tax Act reduced 4Q17 and 2017 net income by \$2.9B, or \$0.27 per diluted common share, which included a \$0.9B pretax charge in other noninterest income (which reduced pretax income and revenue, net of interest expense) predominantly related to the revaluation of certain tax-advantaged energy investments, as well as \$1.9B of tax expense principally associated with the revaluation of certain deferred tax assets and liabilities. The enactment negatively impacted 4Q17 and 2017 return on average assets by 49 bps and 13 bps, respectively; return on average common shareholders' equity by 455 bps and 117 bps, respectively; return on average tangible common shareholders' equity by 630 bps and 162 bps, respectively; and efficiency ratio by 287 bps and 67 bps, respectively. Reported metrics are shown on slide 2 and slide 8.
- <sup>B</sup> Global Liquidity Sources (GLS) include cash and high-quality, liquid, unencumbered securities, limited to U.S. government securities, U.S. agency securities, U.S. agency MBS, and a select group of non-U.S. government and supranational securities, and are readily available to meet funding requirements as they arise. It does not include Federal Reserve Discount Window or Federal Home Loan Bank borrowing capacity. Transfers of liquidity among legal entities may be subject to certain regulatory and other restrictions.
- <sup>C</sup> Revenue for all periods included net debit valuation adjustments (DVA) on derivatives, as well as amortization of own credit portion of purchase discount and realized DVA on structured liabilities. Net DVA gains (losses) were \$52MM, (\$99MM) and (\$118MM) for 4Q18, 3Q18 and 4Q17, respectively, and (\$162MM), (\$428MM) and (\$238MM) for 2018, 2017 and 2016, respectively. Net DVA gains (losses) included in FICC revenue were \$45MM, (\$80MM) and (\$112MM) for 4Q18, 3Q18 and 4Q17, respectively, and (\$142MM), (\$394MM) and (\$238MM) for 2018, 2017 and 2016, respectively. Net DVA gains (losses) included in Equities revenue were \$7MM, (\$19MM) and (\$6MM) for 4Q18, 3Q18 and 4Q17, respectively, and (\$20MM), (\$34MM) and \$0MM for 2018, 2017 and 2016, respectively.
- <sup>D</sup> VaR model uses historical simulation approach based on three years of historical data and an expected shortfall methodology equivalent to a 99% confidence level. Using a 95% confidence level, average VaR was \$22MM, \$17MM and \$17MM for 4Q18, 3Q18 and 4Q17, respectively.



# Sources

<sup>A</sup> Estimated retail consumer deposits based on June 30, 2018 FDIC deposit data.

<sup>B</sup> Euromoney, 2018.

<sup>C</sup> Dynatrace 4Q18 Online Banker Scorecard, Javelin 2018 Online Banking Scorecard, Dynatrace 3Q18 Mobile Banking Scorecard, and Javelin 2018 Mobile Banking Scorecard.

<sup>D</sup> Forrester 2018 Banking Sales Wave: U.S. Mobile Sites.

<sup>E</sup> Inside Mortgage Finance YTD 3Q18.

<sup>F</sup> Largest percentage of 680+ Vantage 3.0 originations among key competitors as of October 2018.

<sup>G</sup> FDIC, 3Q18.

<sup>H</sup> 2018 Global Retail Banking Awards.

<sup>I</sup> U.S.-based full-service wirehouse peers based on 3Q18 earnings releases.

<sup>J</sup> Industry 3Q18 call reports.

<sup>K</sup> The Banker, 2018.

<sup>L</sup> Greenwich, 2018.

<sup>M</sup> Global Finance, 2018.

<sup>N</sup> Thomson Reuters, 2018.

<sup>O</sup> Institutional Investor, 2018.



# Forward-Looking Statements

Bank of America Corporation (the “Company”) and its management may make certain statements that constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as “anticipates,” “targets,” “expects,” “hopes,” “estimates,” “intends,” “plans,” “goals,” “believes,” “continue” and other similar expressions or future or conditional verbs such as “will,” “may,” “might,” “should,” “would” and “could.” Forward-looking statements represent the Company’s current expectations, plans or forecasts of its future results, revenues, expenses, efficiency ratio, capital measures, strategy, and future business and economic conditions more generally, and other future matters. These statements are not guarantees of future results or performance and involve certain known and unknown risks, uncertainties and assumptions that are difficult to predict and are often beyond the Company’s control. Actual outcomes and results may differ materially from those expressed in, or implied by, any of these forward-looking statements.

You should not place undue reliance on any forward-looking statement and should consider the following uncertainties and risks, as well as the risks and uncertainties more fully discussed under Item 1A. Risk Factors of the Company’s 2017 Annual Report on Form 10-K and in any of the Company’s subsequent Securities and Exchange Commission filings: the Company’s potential claims, damages, penalties, fines and reputational damage resulting from pending or future litigation, regulatory proceedings and enforcement actions, and the possibility that amounts may be in excess of the Company’s recorded liability and estimated range of possible loss for litigation and regulatory exposures; the possibility that the Company could face increased servicing, securities, fraud, indemnity, contribution or other claims from one or more counterparties, including trustees, purchasers of loans, underwriters, issuers, other parties involved in securitizations, monolines or private-label and other investors; the possibility that future representations and warranties losses may occur in excess of the Company’s recorded liability and estimated range of possible loss for its representations and warranties exposures; the Company’s ability to resolve representations and warranties repurchase and related claims, including claims brought by investors or trustees seeking to avoid the statute of limitations for repurchase claims; the risks related to the discontinuation of LIBOR and other reference rates, including increased expenses and litigation and the effectiveness of hedging strategies; uncertainties about the financial stability and growth rates of non-U.S. jurisdictions, the risk that those jurisdictions may face difficulties servicing their sovereign debt, and related stresses on financial markets, currencies and trade, and the Company’s exposures to such risks, including direct, indirect and operational; the impact of U.S. and global interest rates, inflation, currency exchange rates, economic conditions, trade policies, including tariffs, and potential geopolitical instability; the impact on the Company’s business, financial condition and results of operations of a potential higher interest rate environment; the possibility that future credit losses may be higher than currently expected due to changes in economic assumptions, customer behavior, adverse developments with respect to U.S. or global economic conditions and other uncertainties; the Company’s ability to achieve its expense targets, net interest income expectations, or other projections; adverse changes to the Company’s credit ratings from the major credit rating agencies; estimates of the fair value of certain of the Company’s assets and liabilities; uncertainty regarding the content, timing and impact of regulatory capital and liquidity requirements; the impact of adverse changes to total loss-absorbing capacity requirements and/or global systemically important bank surcharges; the potential impact of Federal Reserve actions on the Company’s capital plans; the effect of regulations, other guidance or additional information on our estimated impact of the Tax Act; the impact of implementation and compliance with U.S. and international laws, regulations and regulatory interpretations, including, but not limited to, recovery and resolution planning requirements, Federal Deposit Insurance Corporation (FDIC) assessments, the Volcker Rule, fiduciary standards and derivatives regulations; a failure in or breach of the Company’s operational or security systems or infrastructure, or those of third parties, including as a result of cyber-attacks; the impact on the Company’s business, financial condition and results of operations from the planned exit of the United Kingdom from the European Union; the impact of a prolonged federal government shutdown and threats not to increase the federal government’s debt limit; and other similar matters.

Forward-looking statements speak only as of the date they are made, and the Company undertakes no obligation to update any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made.



# Important Presentation Information

- The information contained herein is preliminary and based on Company data available at the time of the earnings presentation. It speaks only as of the particular date or dates included in the accompanying slides. Bank of America does not undertake an obligation to, and disclaims any duty to, update any of the information provided.
- The Company may present certain key performance indicators and ratios, including year-over-year comparisons of revenue, noninterest expense and pretax income, excluding certain items (e.g., DVA) which result in non-GAAP financial measures. The Company believes the use of these non-GAAP financial measures provides additional clarity in understanding its results of operations and trends. For more information about the non-GAAP financial measures contained herein, please see the presentation of the most directly comparable financial measures calculated in accordance with GAAP and accompanying reconciliations in the earnings press release for the quarter ended December 31, 2018 and other earnings-related information available through the Bank of America Investor Relations website at: <http://investor.bankofamerica.com>.
- The Company views net interest income and related ratios and analyses on a fully taxable-equivalent (FTE) basis, which when presented on a consolidated basis are non-GAAP financial measures. The Company believes managing the business with net interest income on an FTE basis provides investors with a more accurate picture of the interest margin for comparative purposes. The Company believes that the presentation allows for comparison of amounts from both taxable and tax-exempt sources and is consistent with industry practices. The FTE adjustment was \$155MM, \$151MM, \$154MM, \$150MM and \$251MM for 4Q18, 3Q18, 2Q18, 1Q18 and 4Q17 respectively.
- The Company allocates capital to its business segments using a methodology that considers the effect of regulatory capital requirements in addition to internal risk-based capital models. The Company's internal risk-based capital models use a risk-adjusted methodology incorporating each segment's credit, market, interest rate, business and operational risk components. Allocated capital is reviewed periodically and refinements are made based on multiple considerations that include, but are not limited to, risk-weighted assets measured under Basel 3 Standardized and Advanced approaches, business segment exposures and risk profile, and strategic plans. As a result of this process, in the first quarter of 2018, the Company adjusted the amount of capital being allocated to its business segments.



**BANK OF AMERICA**

