The changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the first nine months of 2015, are presented in Table 13.10.

Table 13.10: Changes in Level 3 Fair Value Assets and Liabilities on a Recurring Basis – Nine months ended September 30, 2015

		Total net gains (losses) included in							
(in millions)	Balance, beginning of period	Net income	Other compre-hensive income	Purchases, sales, issuances and settlements, net (1)	Transfers into Level 3	Transfers out of Level 3	Balance, end of period	Net unrealized gains (losses) included in income related to assets and liabilities held at period end	(2)
Nine months ended September 30, 2015									
Trading assets (excluding derivatives):									
Securities of U.S. states and political subdivisions	$ 7	—	—	2	—	—	9	—	
Collateralized loan obligations	445	39	—	(94)	—	—	390	5	
Corporate debt securities	54	1	—	(8)	10	(11)	46	(2)	
Mortgage-backed securities	—	—	—	—	—	—	—	—	
Asset-backed securities	79	16	—	(14)	—	(81)	—	—	
Equity securities	10	1	—	(10)	—	—	1	—	
Total trading securities	595	57	—	(124)	10	(92)	446	3	
Other trading assets	55	4	—	(25)	1	(1)	34	(15)	
Total trading assets (excluding derivatives)	650	61	—	(149)	11	(93)	480	(12)	(3)
Available-for-sale securities:									
Securities of U.S. states and political subdivisions	2,277	4	(14)	(274)	—	(76)	1,917	(5)	
Mortgage-backed securities:									
Residential	24	4	(6)	(22)	—	—	—	—	
Commercial	109	6	(9)	(22)	—	—	84	(2)	
Total mortgage-backed securities	133	10	(15)	(44)	—	—	84	(2)	
Corporate debt securities	252	7	(12)	134	—	—	381	(2)	
Collateralized loan and other debt obligations	1,087	132	(87)	(407)	—	—	725	—	
Asset-backed securities:									
Automobile loans and leases	245	—	3	—	—	—	248	—	
Other asset-backed securities	1,372	2	(15)	(119)	—	—	1,240	—	
Total asset-backed securities	1,617	2	(12)	(119)	—	—	1,488	—	
Total debt securities	5,366	155	(140)	(710)	—	(76)	4,595	(9)	(4)
Marketable equity securities:									
Perpetual preferred securities	663	3	(2)	(24)	—	(640)	—	—	
Other marketable equity securities	—	—	—	—	—	—	—	—	
Total marketable equity securities	663	3	(2)	(24)	—	(640)	—	—	(5)
Total available-for-sale securities	6,029	158	(142)	(734)	—	(716)	4,595	(9)	
Mortgages held for sale	2,313	53	—	(595)	155	(464)	1,462	14	(6)
Loans	5,788	(51)	—	(208)	—	—	5,529	(37)	(6)
Mortgage servicing rights (residential) (7)	12,738	(2,144)	—	1,184	—	—	11,778	(553)	(6)
Net derivative assets and liabilities:									
Interest rate contracts	293	987	—	(837)	—	—	443	240	
Commodity contracts	1	3	—	2	(2)	—	4	4	
Equity contracts	(84)	65	—	(26)	(10)	(49)	(104)	96	
Foreign exchange contracts	—	—	—	—	—	—	—	—	
Credit contracts	(189)	(4)	—	152	—	—	(41)	2	
Other derivative contracts	(44)	(26)	—	—	—	—	(70)	(26)	
Total derivative contracts	(23)	1,025	—	(709)	(12)	(49)	232	316	(8)
Other assets	2,512	136	—	97	—	—	2,745	—	(5)
Short sale liabilities	(6)	—	—	6	—	—	—	—	(3)
Other liabilities (excluding derivatives)	(28)	(2)	—	10	—	—	(20)	—	(6)

(1) See Table 13.11 for detail.
(2) Represents only net gains (losses) that are due to changes in economic conditions and management's estimates of fair value and excludes changes due to the collection/realization of cash flows over time.
(3) Included in net gains (losses) from trading activities and other noninterest income in the income statement.
(4) Included in net gains (losses) from debt securities in the income statement.
(5) Included in net gains (losses) from equity investments in the income statement.
(6) Included in mortgage banking and other noninterest income in the income statement.
(7) For more information on the changes in mortgage servicing rights, see Note 8 (Mortgage Banking Activities).
(8) Included in mortgage banking, trading activities, equity investments and other noninterest income in the income statement.

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Table 13.11 presents gross purchases, sales, issuances and settlements related to the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the first nine months of 2015.

Table 13.11: Gross Purchases, Sales, Issuances and Settlements – Level 3 – Nine months ended September 30, 2015

(in millions)	Purchases	Sales	Issuances	Settlements	Net
Nine months ended September 30, 2015					
Trading assets (excluding derivatives):					
Securities of U.S. states and political subdivisions	$ 4	(2)	—	—	2
Collateralized loan obligations	1,060	(1,154)	—	—	(94)
Corporate debt securities	36	(44)	—	—	(8)
Mortgage-backed securities	—	—	—	—	—
Asset-backed securities	—	(5)	—	(9)	(14)
Equity securities	—	—	—	(10)	(10)
Total trading securities	1,100	(1,205)	—	(19)	(124)
Other trading assets	3	(27)	—	(1)	(25)
Total trading assets (excluding derivatives)	1,103	(1,232)	—	(20)	(149)
Available-for-sale securities:					
Securities of U.S. states and political subdivisions	—	(41)	555	(788)	(274)
Mortgage-backed securities:					
Residential	—	(22)	—	—	(22)
Commercial	—	(5)	—	(17)	(22)
Total mortgage-backed securities	—	(27)	—	(17)	(44)
Corporate debt securities	153	(11)	—	(8)	134
Collateralized loan and other debt obligations	74	(188)	—	(293)	(407)
Asset-backed securities:					
Automobile loans and leases	—	—	—	—	—
Other asset-backed securities	30	(1)	268	(416)	(119)
Total asset-backed securities	30	(1)	268	(416)	(119)
Total debt securities	257	(268)	823	(1,522)	(710)
Marketable equity securities:					
Perpetual preferred securities	—	—	—	(24)	(24)
Other marketable equity securities	—	—	—	—	—
Total marketable equity securities	—	—	—	(24)	(24)
Total available-for-sale securities	257	(268)	823	(1,546)	(734)
Mortgages held for sale	164	(1,059)	592	(292)	(595)
Loans	70	—	287	(565)	(208)
Mortgage servicing rights (residential) (1)	—	5	1,184	(5)	1,184
Net derivative assets and liabilities:					
Interest rate contracts	—	—	—	(837)	(837)
Commodity contracts	—	—	—	2	2
Equity contracts	15	(103)	—	62	(26)
Foreign exchange contracts	—	—	—	—	—
Credit contracts	10	(2)	—	144	152
Other derivative contracts	—	—	—	—	—
Total derivative contracts	25	(105)	—	(629)	(709)
Other assets	97	—	—	—	97
Short sale liabilities	21	(15)	—	—	6
Other liabilities (excluding derivatives)	—	—	—	10	10

(1) For more information on the changes in mortgage servicing rights, see Note 8 (Mortgage Banking Activities).

Table 13.12 and Table 13.13 provide quantitative information about the valuation techniques and significant unobservable inputs used in the valuation of substantially all of our Level 3 assets and liabilities measured at fair value on a recurring basis for which we use an internal model.

The significant unobservable inputs for Level 3 assets and liabilities that are valued using fair values obtained from third party vendors are not included in the table, as the specific inputs applied are not provided by the vendor. In addition, the table excludes the valuation techniques and significant unobservable inputs for certain classes of Level 3 assets and liabilities measured using an internal model that we consider, both individually and in the aggregate, insignificant relative to our overall Level 3 assets and liabilities. We made this determination based upon an evaluation of each class, which considered the magnitude of the positions, nature of the unobservable inputs and potential for significant changes in fair value due to changes in those inputs. For information on how changes in significant unobservable inputs affect the fair values of Level 3 assets and liabilities, see Note 17 (Fair Values of Assets and Liabilities) to Financial Statements in our 2015 Form 10-K.

Table 13.12: Valuation Techniques – Recurring Basis – September 30, 2016

($ in millions, except cost to service amounts)	Fair Value Level 3		Valuation Technique(s)	Significant Unobservable Input	Range of Inputs				Weighted Average (1)
September 30, 2016									
Trading and available-for-sale securities:									
Securities of U.S. states and political subdivisions:									
Government, healthcare and other revenue bonds	$ 951		Discounted cash flow	Discount rate	0.9	-	4.8	%	1.7
	49		Vendor priced						
Auction rate securities and other municipal bonds	203		Discounted cash flow	Discount rate	1.5	-	5.1		3.0
				Weighted average life	1.9	-	17.7	yrs	9.2
Collateralized loan and other debt obligations (2)	288		Market comparable pricing	Comparability adjustment	(21.3)	-	20.3	%	2.9
	960		Vendor priced						
Asset-backed securities:									
Diversified payment rights (3)	437		Discounted cash flow	Discount rate	1.4	-	4.1		2.8
Other commercial and consumer	603	(4)	Discounted cash flow	Discount rate	2.6	-	5.4		3.2
				Weighted average life	0.9	-	10.8	yrs	3.0
	6		Vendor priced						
Mortgages held for sale (residential)	1,070		Discounted cash flow	Default rate	0.5	-	8.9	%	2.1
				Discount rate	2.0	-	6.2		4.4
				Loss severity	0.1	-	40.3		21.3
				Prepayment rate	7.7	-	16.5		10.6
	37		Market comparable pricing	Comparability adjustment	(53.3)	-	0.0		(32.9)
Loans	4,788	(5)	Discounted cash flow	Discount rate	0.0	-	3.2		2.7
				Prepayment rate	0.4	-	100.0		18.2
				Utilization rate	0.0	-	0.8		0.3
Mortgage servicing rights (residential)	10,415		Discounted cash flow	Cost to service per loan (6)	$ 70	-	566		161
				Discount rate	5.9	-	13.4	%	6.2
				Prepayment rate (7)	10.9	-	23.2		13.5
Net derivative assets and (liabilities):									
Interest rate contracts	397		Discounted cash flow	Default rate	0.1	-	6.8		2.1
				Loss severity	50.0	-	50.0		50.0
				Prepayment rate	2.8	-	12.5		9.7
Interest rate contracts: derivative loan commitments	236		Discounted cash flow	Fall-out factor	1.0	-	99.0		20.8
				Initial-value servicing	(21.7)	-	131.2	bps	71.5
Equity contracts	90		Discounted cash flow	Conversion factor	(10.5)	-	0.0	%	(7.9)
				Weighted average life	0.8	-	3.3	yrs	2.2
	(465)		Option model	Correlation factor	(77.0)	-	98.5	%	47.1
				Volatility factor	6.5	-	100.0		27.5
Credit contracts	(31)		Market comparable pricing	Comparability adjustment	(12.5)	-	25.7	%	1.4
	101		Option model	Credit spread	0.0	-	5.9		1.2
				Loss severity	13.0	-	60.0		51.1
Other assets: nonmarketable equity investments	10		Discounted cash flow	Discount rate	5.0	-	10.3		6.2
	3,408		Market comparable pricing	Comparability adjustment	(22.7)	-	(6.3)		(17.0)
Insignificant Level 3 assets, net of liabilities	605	(8)							
Total level 3 assets, net of liabilities	$ 24,158	(9)							

(1) Weighted averages are calculated using outstanding unpaid principal balance for cash instruments, such as loans and securities, and notional amounts for derivative instruments.
(2) Includes $832 million of collateralized debt obligations.
(3) Securities backed by specified sources of current and future receivables generated from foreign originators.
(4) A significant portion of the balance consists of investments in asset-backed securities that are revolving in nature, for which the timing of advances and repayments of principal are uncertain.
(5) Consists of reverse mortgage loans.
(6) The high end of the range of inputs is for servicing modified loans. For non-modified loans the range is $70 - $315.
(7) Includes a blend of prepayment speeds and expected defaults. Prepayment speeds are influenced by mortgage interest rates as well as our estimation of drivers of borrower behavior.
(8) Represents the aggregate amount of Level 3 assets and liabilities measured at fair value on a recurring basis that are individually and in the aggregate insignificant. The amount includes corporate debt securities, mortgage-backed securities, other trading assets, other liabilities and certain net derivative assets and liabilities, such as commodity contracts and other derivative contracts.
(9) Consists of total Level 3 assets of $25.9 billion and total Level 3 liabilities of $1.8 billion, before netting of derivative balances.

Table 13.13: Valuation Techniques – Recurring Basis – December 31, 2015

($ in millions, except cost to service amounts)	Fair Value Level 3	Valuation Technique(s)	Significant Unobservable Input	Range of Inputs	Weighted Average (1)
December 31, 2015					
Trading and available-for-sale securities:					
Securities of U.S. states and political subdivisions:					
Government, healthcare and other revenue bonds	$ 1,213	Discounted cash flow	Discount rate	0.8 - 5.6 %	1.9
	51	Vendor priced			
Auction rate securities and other municipal bonds	244	Discounted cash flow	Discount rate	0.8 - 4.5	2.0
			Weighted average life	1.0 - 10.0 yrs	4.7
Collateralized loan and other debt obligations (2)	343	Market comparable pricing	Comparability adjustment	(20.0) - 20.3 %	2.9
	565	Vendor priced			
Asset-backed securities:					
Diversified payment rights (3)	608	Discounted cash flow	Discount rate	1.0 - 5.0	3.2
Other commercial and consumer	508 (4)	Discounted cash flow	Discount rate	2.5 - 6.3	3.8
			Weighted average life	1.0 - 9.4 yrs	4.3
	66	Vendor priced			
Mortgages held for sale (residential)	1,033	Discounted cash flow	Default rate	0.5 - 13.7 %	3.6
			Discount rate	1.1 - 6.3	4.7
			Loss severity	0.1 - 22.7	11.2
			Prepayment rate	2.6 - 9.6	6.4
	49	Market comparable pricing	Comparability adjustment	(53.3) - 0.0	(32.6)
Loans	5,316 (5)	Discounted cash flow	Discount rate	0.0 - 3.9	3.1
			Prepayment rate	0.2 - 100.0	14.6
			Utilization rate	0.0 - 0.8	0.3
Mortgage servicing rights (residential)	12,415	Discounted cash flow	Cost to service per loan (6)	$ 70 - 599	168
			Discount rate	6.8 - 11.8 %	7.3
			Prepayment rate (7)	10.1 - 18.9	11.4
Net derivative assets and (liabilities):					
Interest rate contracts	230	Discounted cash flow	Default rate	0.1 - 9.6	2.6
			Loss severity	50.0 - 50.0	50.0
			Prepayment rate	0.3 - 2.5	2.2
Interest rate contracts: derivative loan commitments	58 (8)	Discounted cash flow	Fall-out factor	1.0 - 99.0	18.8
			Initial-value servicing	(30.6) - 127.0 bps	41.5
Equity contracts	72	Discounted cash flow	Conversion factor	(10.6) - 0.0 %	(8.1)
			Weighted average life	0.5 - 2.0 yrs	1.5
	(183)	Option model	Correlation factor	(77.0) - 98.5 %	66.0
			Volatility factor	6.5 - 91.3	24.2
Credit contracts	(9)	Market comparable pricing	Comparability adjustment	(53.6) - 18.2	(0.6)
	6	Option model	Credit spread	0.0 - 19.9	1.6
			Loss severity	13.0 - 73.0	49.6
Other assets: nonmarketable equity investments	3,065	Market comparable pricing	Comparability adjustment	(19.1) - (5.5)	(15.1)
Insignificant Level 3 assets, net of liabilities	493 (9)				
Total level 3 assets, net of liabilities	$ 26,143 (10)				

(1) Weighted averages are calculated using outstanding unpaid principal balance for cash instruments, such as loans and securities, and notional amounts for derivative instruments.
(2) Includes $257 million of collateralized debt obligations.
(3) Securities backed by specified sources of current and future receivables generated from foreign originators.
(4) Consists largely of investments in asset-backed securities that are revolving in nature, for which the timing of advances and repayments of principal are uncertain.
(5) Consists of reverse mortgage loans.
(6) The high end of the range of inputs is for servicing modified loans. For non-modified loans the range is $70 - $335.
(7) Includes a blend of prepayment speeds and expected defaults. Prepayment speeds are influenced by mortgage interest rates as well as our estimation of drivers of borrower behavior.
(8) Total derivative loan commitments were a net asset of $56 million, of which a $2 million derivative liability was classified as level 2 at December 31, 2015.
(9) Represents the aggregate amount of Level 3 assets and liabilities measured at fair value on a recurring basis that are individually and in the aggregate insignificant. The amount includes corporate debt securities, mortgage-backed securities, other trading assets, other liabilities and certain net derivative assets and liabilities, such as commodity contracts and other derivative contracts.
(10) Consists of total Level 3 assets of $27.6 billion and total Level 3 liabilities of $1.5 billion, before netting of derivative balances.

The valuation techniques used for our Level 3 assets and liabilities, as presented in the previous tables, are described as follows:

- Discounted cash flow – Discounted cash flow valuation techniques generally consist of developing an estimate of future cash flows that are expected to occur over the life of an instrument and then discounting those cash flows at a rate of return that results in the fair value amount.
- Market comparable pricing – Market comparable pricing valuation techniques are used to determine the fair value of certain instruments by incorporating known inputs, such as recent transaction prices, pending transactions, or prices of other similar investments that require significant adjustment to reflect differences in instrument characteristics.
- Option model – Option model valuation techniques are generally used for instruments in which the holder has a contingent right or obligation based on the occurrence of a future event, such as the price of a referenced asset going above or below a predetermined strike price. Option models estimate the likelihood of the specified event occurring by incorporating assumptions such as volatility estimates, price of the underlying instrument and expected rate of return.
- Vendor-priced – Prices obtained from third party pricing vendors or brokers that are used to record the fair value of the asset or liability for which the related valuation technique and significant unobservable inputs are not provided.

Significant unobservable inputs presented in the previous tables are those we consider significant to the fair value of the Level 3 asset or liability. We consider unobservable inputs to be significant if by their exclusion the fair value of the Level 3 asset or liability would be impacted by a predetermined percentage change. We also consider qualitative factors, such as nature of the instrument, type of valuation technique used, and the significance of the unobservable inputs relative to other inputs used within the valuation. Following is a description of the significant unobservable inputs provided in the table.

- Comparability adjustment – is an adjustment made to observed market data, such as a transaction price in order to reflect dissimilarities in underlying collateral, issuer, rating, or other factors used within a market valuation approach, expressed as a percentage of an observed price.
- Conversion Factor – is the risk-adjusted rate in which a particular instrument may be exchanged for another instrument upon settlement, expressed as a percentage change from a specified rate.
- Correlation factor – is the likelihood of one instrument changing in price relative to another based on an established relationship, expressed as a percentage of relative change in price over a period over time.
- Cost to service – is the expected cost per loan of servicing a portfolio of loans, which includes estimates for unreimbursed expenses (including delinquency and foreclosure costs) that may occur as a result of servicing such loan portfolios.
- Credit spread – is the portion of the interest rate in excess of a benchmark interest rate, such as Overnight Index Swap (OIS), LIBOR or U.S. Treasury rates, that when applied to an investment captures changes in the obligor's creditworthiness.
- Default rate – is an estimate of the likelihood of not collecting contractual amounts owed expressed as a constant default rate (CDR).
- Discount rate – is a rate of return used to calculate the present value of the future expected cash flow to arrive at the fair value of an instrument. The discount rate consists of a benchmark rate component and a risk premium component. The benchmark rate component, for example, OIS, LIBOR or U.S. Treasury rates, is generally observable within the market and is necessary to appropriately reflect the time value of money. The risk premium component reflects the amount of compensation market participants require due to the uncertainty inherent in the instruments' cash flows resulting from risks such as credit and liquidity.
- Fall-out factor – is the expected percentage of loans associated with our interest rate lock commitment portfolio that are likely of not funding.
- Initial-value servicing – is the estimated value of the underlying loan, including the value attributable to the embedded servicing right, expressed in basis points of outstanding unpaid principal balance.
- Loss severity – is the estimated percentage of contractual cash flows lost in the event of a default.
- Prepayment rate – is the estimated rate at which forecasted prepayments of principal of the related loan or debt instrument are expected to occur, expressed as a constant prepayment rate (CPR).
- Utilization rate – is the estimated rate in which incremental portions of existing reverse mortgage credit lines are expected to be drawn by borrowers, expressed as an annualized rate.
- Volatility factor – is the extent of change in price an item is estimated to fluctuate over a specified period of time, expressed as a percentage of relative change in price over a period over time.
- Weighted average life – is the weighted average number of years an investment is expected to remain outstanding based on its expected cash flows, reflecting the estimated date the issuer will call or extend the maturity of the instrument or otherwise reflecting an estimate of the timing of an instrument's cash flows whose timing is not contractually fixed.

Assets and Liabilities Recorded at Fair Value on a Nonrecurring Basis

We may be required, from time to time, to measure certain assets at fair value on a nonrecurring basis in accordance with GAAP. These adjustments to fair value usually result from application of LOCOM accounting or write-downs of individual assets. Table 13.14 provides the fair value hierarchy and carrying amount of all assets that were still held as of September 30, 2016, and December 31, 2015, and for which a nonrecurring fair value adjustment was recorded during the periods presented.

Table 13.14: Fair Value on a Nonrecurring Basis

			September 30, 2016					December 31, 2015
(in millions)	**Level 1**	**Level 2**	**Level 3**	**Total**	Level 1	Level 2	Level 3	Total
Mortgages held for sale (LOCOM) (1)	**$ —**	**2,069**	**1,525**	**3,594**	—	4,667	1,047	5,714
Loans held for sale	**—**	**183**	**—**	**183**	—	279	—	279
Loans:								
Commercial	**—**	**440**	**—**	**440**	—	191	—	191
Consumer	**—**	**758**	**6**	**764**	—	1,406	7	1,413
Total loans (2)	**—**	**1,198**	**6**	**1,204**	—	1,597	7	1,604
Other assets - excluding nonmarketable equity investments at NAV (3)	**—**	**226**	**416**	**642**	—	280	368	648
Total included in the fair value hierarchy	**$ —**	**3,676**	**1,947**	**5,623**	—	6,823	1,422	8,245
Other assets - nonmarketable equity investments at NAV (4)				**24**				286
Total assets at fair value on a nonrecurring basis				**$ 5,647**				8,531

(1) Consists of commercial mortgages and residential real estate 1-4 family first mortgage loans.
(2) Represents the carrying value of loans for which nonrecurring adjustments are based on the appraised value of the collateral.
(3) Includes the fair value of foreclosed real estate, other collateral owned, operating lease assets and nonmarketable equity investments.
(4) Consists of certain nonmarketable equity investments that are measured at fair value on a nonrecurring basis using NAV per share (or its equivalent) as a practical expedient and are excluded from the fair value hierarchy.

Table 13.15 presents the increase (decrease) in value of certain assets held at the end of the respective reporting periods presented for which a nonrecurring fair value adjustment was recognized during the reporting period.

Table 13.15: Change in Value of Assets with Nonrecurring Fair Value Adjustment

	Nine months ended September 30,	
(in millions)	**2016**	2015
Mortgages held for sale (LOCOM)	**$ 26**	17
Loans held for sale	**(21)**	(3)
Loans:		
Commercial	**(736)**	(113)
Consumer	**(578)**	(816)
Total loans (1)	**(1,314)**	(929)
Other assets (2)	**(339)**	(223)
Total	**$ (1,648)**	(1,138)

(1) Represents write-downs of loans based on the appraised value of the collateral.
(2) Includes the losses on foreclosed real estate and other collateral owned that were measured at fair value subsequent to their initial classification as foreclosed assets. Also includes impairment losses on nonmarketable equity investments.

Table 13.16 provides quantitative information about the valuation techniques and significant unobservable inputs used in the valuation of substantially all of our Level 3 assets that are measured at fair value on a nonrecurring basis using an internal model. The table is limited to financial instruments that had nonrecurring fair value adjustments during the periods presented.

We have excluded from the table classes of Level 3 assets measured using an internal model that we consider, both individually and in the aggregate, insignificant relative to our overall Level 3 nonrecurring measurements. We made this determination based upon an evaluation of each class that considered the magnitude of the positions, nature of the unobservable inputs and potential for significant changes in fair value due to changes in those inputs.

Table 13.16: Valuation Techniques – Nonrecurring Basis

($ in millions)	Fair Value Level 3		Valuation Technique(s) (1)	Significant Unobservable Inputs (1)		Range of inputs	Weighted Average (2)
September 30, 2016							
Residential mortgages held for sale (LOCOM)	**$ 1,525**	**(3)**	**Discounted cash flow**	**Default rate**	**(4)**	**0.2 — 7.3%**	**2.4%**
				Discount rate		**1.5 — 8.5**	**3.5**
				Loss severity		**0.0 — 56.3**	**2.0**
				Prepayment rate	**(5)**	**3.2 — 100.0**	**62.4**
Other assets: nonmarketable equity investments	**—**		**Market comparable pricing**	**Comparability adjustment**		**0.0 — 0.0**	**0.0**
	170		**Discounted cash flow**	**Discount rate**		**7.7 — 9.3**	**8.2**
Insignificant level 3 assets	**252**						
Total	**$ 1,947**						
December 31, 2015							
Residential mortgages held for sale (LOCOM)	$ 1,047	(3)	Discounted cash flow	Default rate	(4)	0.5 — 5.0 %	4.2 %
				Discount rate		1.5 — 8.5	3.5
				Loss severity		0.0 — 26.1	2.9
				Prepayment rate	(5)	2.6 — 100.0	65.4
Other assets: nonmarketable equity investments	228		Market comparable pricing	Comparability adjustment		5.0 — 9.2	8.5
	—		Discounted cash flow	Discount rate		0.0 — 0.0	0.0
Insignificant level 3 assets	147						
Total	$ 1,422						

(1) Refer to the narrative following Table 13.13 of this Note for a definition of the valuation technique(s) and significant unobservable inputs.
(2) For residential MHFS, weighted averages are calculated using the outstanding unpaid principal balance of the loans.
(3) Consists of approximately $1.5 billion and $1.0 billion of government insured/guaranteed loans purchased from GNMA-guaranteed mortgage securitizations at September 30, 2016, and December 31, 2015, respectively, and $35 million and $41 million of other mortgage loans that are not government insured/guaranteed at September 30, 2016 and December 31, 2015, respectively.
(4) Applies only to non-government insured/guaranteed loans.
(5) Includes the impact on prepayment rate of expected defaults for government insured/guaranteed loans, which impact the frequency and timing of early resolution of loans.

Alternative Investments

We hold certain nonmarketable equity investments for which we use NAV per share (or its equivalent) as a practical expedient for fair value measurements, including estimated fair values for investments accounted for under the cost method. The funds predominantly consist of private equity funds that invest in equity and debt securities issued by private and publicly-held companies in connection with leveraged buyouts, recapitalizations and expansion opportunities. The fair values of these investments and related unfunded commitments totaled $67 million and $52 million, respectively, at September 30, 2016, and $642 million and $144 million, respectively, at December 31, 2015. The investments do not allow redemptions. We receive distributions as the underlying assets of the funds liquidate, which we expect to occur over the next 12 months.

Fair Value Option

The fair value option is an irrevocable election, generally only permitted upon initial recognition of financial assets or liabilities, to measure eligible financial instruments at fair value with changes in fair value reflected in earnings. We may elect the fair value option to align the measurement model with how the financial assets or liabilities are managed or to reduce complexity or accounting asymmetry. For more information, including the basis for our fair value option elections, see Note 17 (Fair Values of Assets and Liabilities) to Financial Statements in our 2015 Form 10-K.

Table 13.17 reflects differences between the fair value carrying amount of certain assets for which we have elected the fair value option and the contractual aggregate unpaid principal amount at maturity.

Table 13.17: Fair Value Option

	September 30, 2016			December 31, 2015		
(in millions)	Fair value carrying amount	Aggregate unpaid principal	Fair value carrying amount less aggregate unpaid principal	Fair value carrying amount	Aggregate unpaid principal	Fair value carrying amount less aggregate unpaid principal
Trading assets – loans:						
Total loans	$ 738	788	(50)	886	935	(49)
Nonaccrual loans	49	57	(8)	—	—	—
Mortgages held for sale:						
Total loans	22,647	21,857	790	13,539	13,265	274
Nonaccrual loans	136	179	(43)	161	228	(67)
Loans 90 days or more past due and still accruing	14	17	(3)	19	22	(3)
Loans held for sale:						
Total loans	—	6	(6)	—	5	(5)
Nonaccrual loans	—	6	(6)	—	5	(5)
Loans:						
Total loans	4,788	4,692	96	5,316	5,184	132
Nonaccrual loans	277	295	(18)	305	322	(17)
Other assets (1)	3,441	N/A	N/A	3,065	N/A	N/A

(1) Consists of nonmarketable equity investments carried at fair value. See Note 6 (Other Assets) for more information.

The assets and liabilities accounted for under the fair value option are initially measured at fair value. Gains and losses from initial measurement and subsequent changes in fair value are recognized in earnings. The changes in fair value related to initial measurement and subsequent changes in fair value included in earnings for these assets and liabilities measured at fair value are shown in Table 13.18 by income statement line item.

Table 13.18: Fair Value Option – Changes in Fair Value Included in Earnings

			2016			2015
(in millions)	**Mortgage banking noninterest income**	**Net gains (losses) from trading activities**	**Other noninterest income**	Mortgage banking noninterest income	Net gains (losses) from trading activities	Other noninterest income
Quarter ended September 30,						
Trading assets - loans	**$ —**	**21**	**1**	—	(16)	1
Mortgages held for sale	**563**	**—**	**—**	662	—	—
Loans	**—**	**—**	**(25)**	—	—	(2)
Other assets	**—**	**—**	**383**	—	—	109
Other interests held (1)	**—**	**(3)**	**—**	—	(3)	—
Nine months ended September 30,						
Trading assets – loans	**$ —**	**47**	**2**	—	3	3
Mortgages held for sale	**1,739**	**—**	**—**	1,559	—	—
Loans	**—**	**—**	**(29)**	—	—	(45)
Other assets	**—**	**—**	**149**	—	—	137
Other interests held (1)	**—**	**(4)**	**—**	—	(5)	—

(1) Includes retained interests in securitizations.

For performing loans, instrument-specific credit risk gains or losses were derived principally by determining the change in fair value of the loans due to changes in the observable or implied credit spread. Credit spread is the market yield on the loans less the relevant risk-free benchmark interest rate. For nonperforming loans, we attribute all changes in fair value to instrument-specific credit risk. Table 13.19 shows the estimated gains and losses from earnings attributable to instrument-specific credit risk related to assets accounted for under the fair value option.

Table 13.19: Fair Value Option – Gains/Losses Attributable to Instrument-Specific Credit Risk

	Quarter ended September 30,		Nine months ended September 30,	
(in millions)	**2016**	2015	**2016**	2015
Gains (losses) attributable to instrument-specific credit risk:				
Trading assets – loans	**$ 21**	(16)	**47**	3
Mortgages held for sale	**1**	(5)	**(4)**	43
Total	**$ 22**	(21)	**43**	46

Disclosures about Fair Value of Financial Instruments

Table 13.20 is a summary of fair value estimates for financial instruments, excluding financial instruments recorded at fair value on a recurring basis, as they are included within Table 13.2 in this Note. The carrying amounts in the following table are recorded on the balance sheet under the indicated captions, except for nonmarketable equity investments, which are included in other assets.

We have not included assets and liabilities that are not financial instruments in our disclosure, such as the value of the long-term relationships with our deposit, credit card and trust customers, amortized MSRs, premises and equipment, goodwill and other intangibles, deferred taxes and other liabilities. The total of the fair value calculations presented does not represent, and should not be construed to represent, the underlying value of the Company.

Table 13.20: Fair Value Estimates for Financial Instruments

(in millions)	Carrying amount	Estimated fair value Level 1	Level 2	Level 3	Total
September 30, 2016					
Financial assets					
Cash and due from banks (1)	**$ 19,287**	**19,287**	**—**	**—**	**19,287**
Federal funds sold, securities purchased under resale agreements and other short-term investments (1)	**298,325**	**17,043**	**281,196**	**86**	**298,325**
Held-to-maturity securities	**99,241**	**46,891**	**53,190**	**2,466**	**102,547**
Mortgages held for sale (2)	**4,776**	**—**	**3,284**	**1,525**	**4,809**
Loans held for sale	**183**	**—**	**183**	**—**	**183**
Loans, net (3)	**926,262**	**—**	**61,422**	**884,473**	**945,895**
Nonmarketable equity investments (cost method)					
Excluding investments at NAV	**8,029**	**—**	**18**	**8,591**	**8,609**
Total financial assets included in the fair value hierarchy	**1,356,103**	**83,221**	**399,293**	**897,141**	**1,379,655**
Investments at NAV (4)	**48**				**67**
Total financial assets	**$ 1,356,151**				**1,379,722**
Financial liabilities					
Deposits	**$ 1,275,894**	**—**	**1,251,257**	**24,873**	**1,276,130**
Short-term borrowings (1)	**124,668**	**—**	**124,668**	**—**	**124,668**
Long-term debt (5)	**254,827**	**—**	**242,172**	**10,700**	**252,872**
Total financial liabilities	**$ 1,655,389**	**—**	**1,618,097**	**35,573**	**1,653,670**
December 31, 2015					
Financial assets					
Cash and due from banks (1)	$ 19,111	19,111	—	—	19,111
Federal funds sold, securities purchased under resale agreements and other short-term investments (1)	270,130	14,057	255,911	162	270,130
Held-to-maturity securities	80,197	45,167	32,052	3,348	80,567
Mortgages held for sale (2)	6,064	—	5,019	1,047	6,066
Loans held for sale	279	—	279	—	279
Loans, net (3)	887,497	—	60,848	839,816	900,664
Nonmarketable equity investments (cost method)					
Excluding investments at NAV	6,659	—	14	7,271	7,285
Total financial assets included in the fair value hierarchy	1,269,937	78,335	354,123	851,644	1,284,102
Investments at NAV (4)	376				619
Total financial assets	$ 1,270,313				1,284,721
Financial liabilities					
Deposits	$ 1,223,312	—	1,194,781	28,616	1,223,397
Short-term borrowings (1)	97,528	—	97,528	—	97,528
Long-term debt (5)	199,528	—	188,015	10,468	198,483
Total financial liabilities	$ 1,520,368	—	1,480,324	39,084	1,519,408

(1) Amounts consist of financial instruments for which carrying value approximates fair value.
(2) MHFS exclude balances for which we elected the fair value option.
(3) Loans exclude balances for which we elected the fair value option and also exclude lease financing with a carrying amount of $18.9 billion and $12.4 billion at September 30, 2016, and December 31, 2015, respectively.
(4) Consists of certain nonmarketable equity investments for which estimated fair values are determined using NAV per share (or its equivalent) as a practical expedient and are excluded from the fair value hierarchy.
(5) The carrying amount and fair value exclude obligations under capital leases of $8 million at both September 30, 2016, and December 31, 2015.

Loan commitments, standby letters of credit and commercial and similar letters of credit are not included in the table above. A reasonable estimate of the fair value of these instruments is the carrying value of deferred fees plus the allowance for unfunded credit commitments, which totaled $1.2 billion and $1.0 billion at September 30, 2016, and December 31, 2015, respectively.