

## Quarterly Report on Bank Trading and Derivatives Activities

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Second Quarter 2016

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## **Executive Summary**

- Insured U.S. commercial banks and savings associations reported trading revenue of \$6.9 billion in the second quarter of 2016, \$1.1 billion more (19.5 percent) than in the previous quarter and \$1.4 billion higher (25.0 percent) than a year earlier (see page 4).
- Credit exposure from derivatives increased in the second quarter of 2016. Net current credit exposure (NCCE) increased \$45.7 billion, or 9.9 percent, to \$505.7 billion (see page 8).
- Trading risk, as measured by value-at-risk (VaR), decreased in the second quarter of 2016. Total average VaR across the top five dealer banking companies decreased \$35.0 million, or 10.6 percent, to \$295.0 million (see page 11).
- Notional derivatives decreased in the second quarter by \$3.1 trillion, or 1.6 percent, to \$189.8 trillion (see page 14).
- Derivative contracts remained concentrated in interest rate products, which represented 75.7 percent of total derivative notional amounts (see page 14).

The Office of the Comptroller of the Currency's (OCC) quarterly report on bank trading and derivative activities is based on call report information provided by all insured U.S. commercial banks (including trust companies) and savings associations (collectively, banks); reports filed by U.S. financial holding companies; and other published data. A total of 1,442 insured U.S. commercial banks and savings associations reported derivative activities at the end of the second quarter of 2016. A small group of large financial institutions continues to dominate derivative activity in the U.S. commercial banking system. During the second quarter of 2016, four large commercial banks represented 91.0 percent of the total banking industry notional amounts and 81.5 percent of industry NCCE.

The OCC and other supervisors have examiners on site at the largest banks to evaluate continuously the credit, market, operational, reputation, and compliance risks of bank derivative activities. In addition to the OCC's on-site supervisory activities, the OCC works with other financial supervisors and major market participants to address infrastructure, clearing, and margining issues in over-the-counter (OTC) derivatives. Activities include development of objectives and milestones for stronger trade processing and improved market transparency across all OTC derivative categories, migration of certain highly liquid products to clearinghouses, and requirements for posting and collecting margin.

## **Revenue**

### ***Insured U.S. Commercial Banks and Savings Associations' Trading Revenue***

Insured U.S. commercial banks and savings associations reported \$6.9 billion in trading revenue in the second quarter of 2016, \$1.1 billion more (19.5 percent) than in the previous quarter and \$1.4 billion more (25.0 percent) than a year earlier (see table 1).

Relative to the first quarter of 2016, the \$1.1 billion increase in trading revenue primarily reflects an increase in combined interest rate and foreign exchange (FX) revenue, which increased \$1.2 billion to \$5.6 billion. Since dealers often use interest rate contracts to hedge exposures in FX derivatives, it is useful to view these categories collectively.

**Table 1. Quarterly Bank Trading Revenue, in Millions of Dollars**

	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change	2015 Q2	Y/Y Change	Y/Y % Change
Interest Rate	\$1,904	\$3,071	-\$1,166	-38.0%	\$3,406	-\$1,502	-44.1%
Foreign Exchange	\$3,736	\$1,407	\$2,329	165.5%	\$855	\$2,881	337.1%
Equity	\$972	\$674	\$298	44.2%	\$587	\$386	65.7%
Commodity & Other	\$161	\$271	-\$110	-40.7%	\$129	\$32	24.6%
Credit	\$108	\$334	-\$226	-67.6%	\$530	-\$422	-79.6%
Total Trading Revenue	\$6,882	\$5,757	\$1,124	19.5%	\$5,507	\$1,375	25.0%

Source: Call report, Schedule RI

### ***Holding Company Trading Revenue***

Consolidated bank holding company (BHC) trading performance provides a more complete picture of trading revenue in the banking system. As shown in table 2, consolidated holding company trading revenue of \$15.1 billion in the second quarter of 2016 was \$3.3 billion (28.1 percent) higher than in the previous quarter, and \$2.3 billion (17.6 percent) higher than a year earlier. A \$1.5 billion increase in combined interest rate and FX revenue, as well as a \$0.9 billion increase in credit revenue and a \$0.8 billion increase in commodity revenue, drove the \$3.3 billion increase in trading revenue from the previous quarter.

**Table 2. Quarterly Holding Company Trading Revenue, in Millions of Dollars**

	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change	2015 Q2	Y/Y Change	Y/Y % Change
Interest Rate	\$2,971	\$3,809	-\$838	-22.0%	\$5,663	-\$2,692	-47.5%
Foreign Exchange	\$4,326	\$2,017	\$2,309	114.4%	\$552	\$3,774	684.4%
Equity	\$3,612	\$3,441	\$171	5.0%	\$4,481	-\$868	-19.4%
Commodity & Other	\$1,491	\$738	\$753	102.1%	\$871	\$621	71.3%
Credit	\$2,724	\$1,799	\$924	51.4%	\$1,294	\$1,429	110.4%
Total HC Trading Revenue	\$15,124	\$11,804	\$3,320	28.1%	\$12,860	\$2,264	17.6%

Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

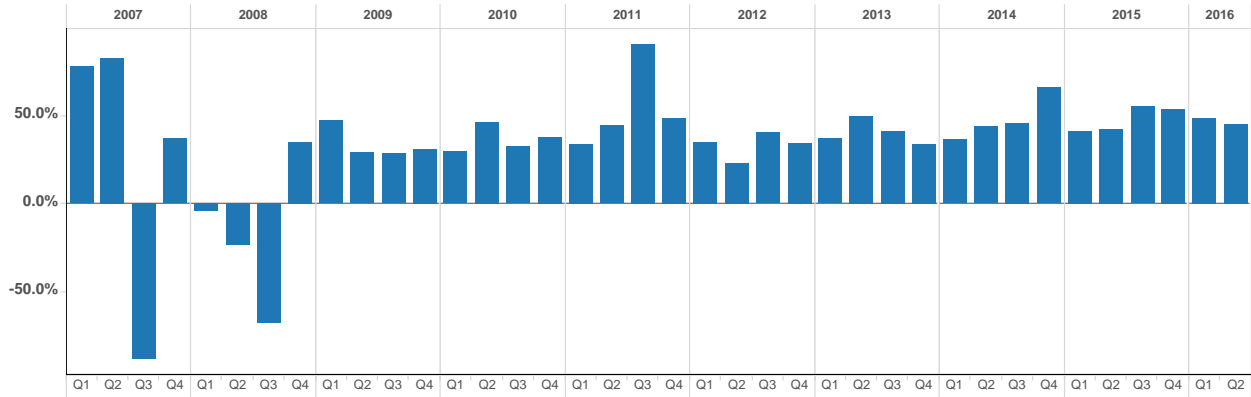
### ***Bank Trading Revenue as a Percent of Consolidated Holding Company Trading Revenue***

Before the financial crisis, trading revenue at banks typically ranged from 60 percent to 80 percent of consolidated BHC trading revenue. Since the financial crisis and the adoption of bank charters by the former investment banks, the percentage of bank trading revenue to consolidated BHC trading revenue has fallen generally between 30 percent and 50 percent. This

decline reflects the significant amount of trading activity by the former investment banks that, while included in BHC results, remains outside the insured commercial banks. More generally, insured U.S. commercial banks and savings associations have more limited legal authorities than their holding companies, particularly in trading commodity and equity products.

In the second quarter of 2016, banks generated 45.5 percent of consolidated holding company trading revenue, down from 48.8 percent in the previous quarter (see figure 1).

**Figure 1. Bank Trading Revenue as a Percentage of Consolidated Holding Company Trading Revenue**



Source: Consolidated Financial Statements for Holding Companies—FR Y-9C (Schedule HI) and call report (Schedule RI)

## **Credit Risk**

Credit risk is a significant risk in bank derivative trading activities. The notional amount of a derivative contract is a reference amount that determines contractual payments, but it is generally not an amount at risk. The credit risk in a derivative contract is a function of a number of variables, such as whether counterparties exchange notional principal, the volatility of the underlying market factors (interest rate, currency, commodity, equity, or corporate reference entity), the maturity and liquidity of the contract, and the creditworthiness of the counterparty.

Credit risk in derivatives differs from credit risk in loans because of the more uncertain nature of the potential credit exposure. Because the credit exposure is a function of movements in market factors, banks do not know, and can only estimate, how much the value of the derivative contract might be at various points in the future.

The credit exposure is bilateral in most derivative transactions, such as swaps (which make up the bulk of bank derivative contracts). Each party to the contract may (and, if the contract has a long enough tenor, probably will) have a current credit exposure to the other party at various times during the contract's life. With a funded loan, the amount at risk is the amount advanced to the borrower. The credit risk is unilateral as the bank faces the credit exposure of the borrower.

Measuring credit exposure in derivative contracts involves identifying those contracts where a bank would lose value if the counterparty to a contract defaulted. The total of all contracts with positive value (i.e., derivative receivables) to the bank is the gross positive fair value (GPFV) and represents an initial measurement of credit exposure. The total of all contracts with negative value (i.e., derivative payables) to the bank is the gross negative fair value (GNFV) and represents a measurement of the exposure the bank poses to its counterparties.

GPFV increased by \$0.3 trillion (8.8 percent) in the second quarter of 2016 to \$4.1 trillion, driven by a 9.9 percent increase in receivables from interest rate and FX contracts (see table 3). Because interest rate contracts make up 75.7 percent of total notional derivative contracts, changes in interest rates drive credit exposure in derivative portfolios. Declines in interest rates tend to increase exposure. This effect has increased in recent years, as the maturity profile of interest rate derivatives has increased, making credit exposure more sensitive to changes in longer-term rates.

Because banks hedge the market risk of their derivative portfolios, a similar increase in GNFVs matched the change in GPFV. Derivative payables, GNFV, increased \$0.3 trillion (8.3 percent) to \$4.0 trillion during the quarter, driven by increases in payables on interest rate and FX contracts.

**Table 3. Gross Positive Fair Values and Gross Negative Fair Values, in Billions of Dollars**

	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change	2015 Q2	Y/Y Change	Y/Y % Change
Interest Rate	\$3,120	\$2,856	\$264	9.2%	\$2,241	\$879	39.2%
Foreign Exchange	\$706	\$626	\$80	12.8%	\$525	\$181	34.4%
Equity	\$101	\$101	\$1	0.7%	\$112	-\$10	-9.1%
Commodity & Other	\$51	\$53	-\$2	-3.3%	\$60	-\$8	-14.2%
Credit	\$101	\$114	-\$13	-11.7%	\$130	-\$29	-22.1%
<b>Gross Positive Fair Value</b>	<b>\$4,079</b>	<b>\$3,750</b>	<b>\$329</b>	<b>8.8%</b>	<b>\$3,067</b>	<b>\$1,012</b>	<b>33.0%</b>

	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change	2015 Q2	Y/Y Change	Y/Y % Change
Interest Rate	\$3,045	\$2,781	\$264	9.5%	\$2,170	\$875	40.4%
Foreign Exchange	\$694	\$637	\$57	8.9%	\$544	\$150	27.5%
Equity	\$95	\$96	-\$1	-0.9%	\$109	-\$14	-13.0%
Commodity & Other	\$54	\$57	-\$3	-5.1%	\$63	-\$9	-14.0%
Credit	\$100	\$112	-\$12	-10.9%	\$128	-\$28	-22.1%
<b>Gross Negative Fair Value</b>	<b>\$3,988</b>	<b>\$3,683</b>	<b>\$305</b>	<b>8.3%</b>	<b>\$3,015</b>	<b>\$974</b>	<b>32.3%</b>

Source: Call report, Schedule RC-L

A legally enforceable netting agreement with a counterparty creates a single legal obligation for all transactions (called a “netting set”) under the agreement. Therefore, when banks have such agreements with their counterparties, contracts with negative values (an amount a bank would pay to its counterparty) can offset contracts with positive values (an amount owed by the counterparty to the bank), leaving an NCCE as shown in table 4.

**Table 4. Netting Contract Examples**

Bank A Portfolio With Counterparty B	Number of Contracts	Value of Contracts	Credit Measure/Metric
Contracts With Positive Value to Bank A	6	\$500	Gross Positive Fair Value
Contracts With Negative Value to Bank A	4	\$350	Gross Negative Fair Value
Total Contracts	10	\$150	NCCE to Bank A From Counterparty B

Most, but not necessarily all, derivative transactions that a bank has with an individual counterparty are typically subject to a legally enforceable netting agreement. Some transactions may be subject to the laws of a jurisdiction that does not provide legal certainty of netting agreements, in which case banks must regard such transactions as separate from the netting set. Other transactions may involve nonstandard contractual documentation. Transactions that are not subject to the same legally enforceable netting agreement become unique netting sets that have distinct values that cannot be netted, and for which the appropriate current credit measure is the gross exposure to the bank, if that amount is positive. In some cases, transactions that fall under separate netting sets may be tied together under a separate legally enforceable netting agreement. While banks can net exposures within a netting set under the same netting agreement, they cannot net exposures across netting sets without a separate legally enforceable netting agreement. As a result, a bank’s NCCE to a particular counterparty equals the sum of the credit exposures across all netting sets with that counterparty. A bank’s NCCE across all counterparties equals the sum of its NCCE to each of its counterparties.

NCCE is the primary metric used by the OCC to evaluate credit risk in bank derivative activities. NCCE for insured U.S. commercial banks and saving associations increased by \$45.7 billion

(9.9 percent) to \$505.7 billion in the second quarter of 2016 (see table 5).<sup>1</sup> Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 87.6 percent (\$3.6 trillion) in the second quarter of 2016.

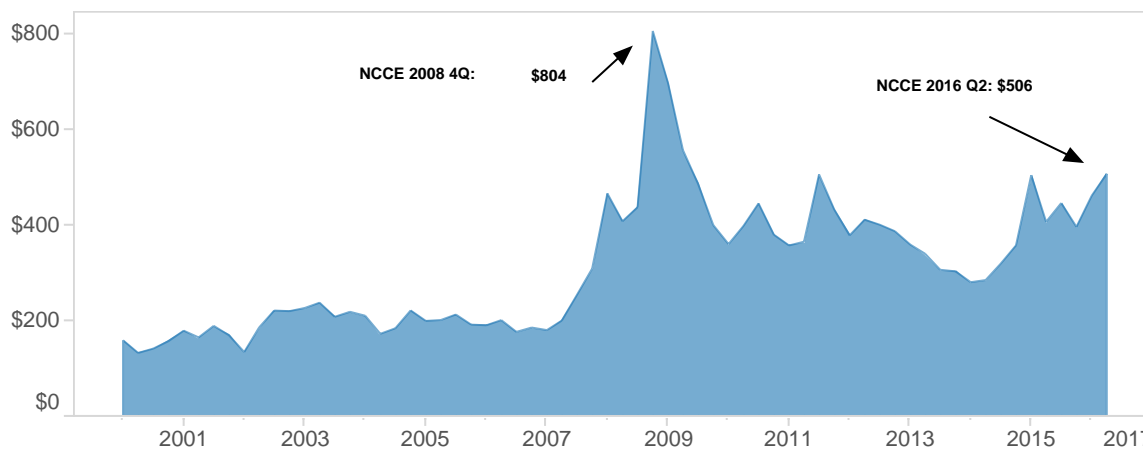
**Table 5. Net Current Credit Exposure, in Billions of Dollars**

	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change
Gross Positive Fair Value	\$4,079	\$3,750	\$329	8.8%
NCCE RC-R	\$506	\$460	\$46	9.9%
Netting Benefit RC-R	\$3,573	\$3,290	\$284	8.6%
Netting % RC-R	87.6%	87.7%		-0.1%

Source: Call report, Schedules RC-L and RC-R

NCCE peaked at \$804.1 billion at the end of 2008, during the financial crisis, when interest rates had plunged and credit spreads were very high (see figure 2). The significant decline in NCCE since 2008 has largely resulted from declines in the GPFV of interest rate and credit contracts. GPFV from interest rate contracts has fallen from \$5.1 trillion at the end of 2008 to \$3.1 trillion at the end of the second quarter of 2016. On June 30, 2016, exposure from credit contracts of \$101.0 billion was \$1.0 trillion lower (91.0 percent) than the \$1.1 trillion on December 31, 2008. New regulations and a decrease in client demand have led to the reduction in credit derivative notional amounts.

**Figure 2. Net Current Credit Exposure, in Billions of Dollars**



Source: Call report, Schedule RC-R

The bulk of NCCE in the financial system is concentrated in banks and securities firms (49.0 percent) and corporations and other counterparties (42.3 percent) (see table 6). Relative to the first quarter of 2016, the second quarter of 2016 saw a decrease in the percentage of total credit exposure to banks and securities firms (from 49.7 percent to 49.0 percent), and an increase

<sup>1</sup> Banks report NCCE in two different schedules (RC-R and RC-L) of the call report, and the amounts reported are not the same because of differences in the scope of coverage. Neither measure comprehensively captures NCCE. RC-L includes exposure only from OTC derivative transactions; it excludes exchange-traded transactions. RC-R excludes transactions not subject to capital requirements. The recent change to reflect central counterparty exposures in RC-R, however, has led to a convergence in the two schedules. This report, which has used RC-L for NCCE since the second quarter of 2014, now again uses the RC-R measure for NCCE.



in the percentage of total credit exposure to corporations and other counterparties (from 41.4 percent to 42.3 percent).

The combined exposure to hedge funds, sovereign governments, and monoline financial firms was small (8.7 percent in total). The sheer size of aggregate counterparty exposures, however, results in the potential for major losses, even in sectors where credit exposure is a small percentage of the total. For example, notwithstanding the minimal share of NCCE to monolines, banks suffered material losses on these exposures during the credit crisis. Sovereign credit exposures were also a small component (6.5 percent) of NCCE during the quarter and, like monoline exposures before the financial crisis, are largely unsecured.

**Table 6. Net Current Credit Exposure by Counterparty Type as a Percentage of Total Net Current Credit Exposure**

		<b>Banks &amp; Securities Firms</b>	<b>Monoline Financial Firms</b>	<b>Hedge Funds</b>	<b>Sovereign Governments</b>	<b>Corporations &amp; All Other Counterparties</b>
2016	Q2	49.0%	0.1%	2.1%	6.5%	42.3%
2016	Q1	49.7%	0.1%	2.2%	6.7%	41.4%
2015	Q2	54.8%	0.1%	1.9%	5.8%	37.4%
2014	Q2	53.6%	0.1%	2.5%	7.7%	36.0%

Source: Call report, Schedule RC-L

A more risk-sensitive measure of credit exposure would consider the value of collateral held against counterparty exposures. Commercial banks and savings associations with total assets greater than \$10 billion report the fair value of collateral held against various classifications of counterparty exposure.

Reporting banks held collateral against 86.2 percent of their total NCCE at the end of the second quarter of 2016, up from 83.7 percent in the first quarter of 2016 (see table 7). The increase in the ratio of collateral held against counterparty exposure was due primarily to stronger collateral coverage of exposures to banks and securities firms, which increased from 94.6 percent to 103.1 percent. Collateral held against hedge fund exposures decreased in the second quarter, but coverage remains very high at 368.4 percent. Hedge fund exposures have always been secured well, because banks take “initial margin” on transactions with hedge funds, in addition to fully securing any current credit exposure. Collateral coverage of corporate, monoline, and sovereign exposures is much less than coverage of financial institutions and hedge funds, although coverage of corporate exposures has been increasing over the past several years because of increases in the volume of trades cleared at central counterparties.

**Table 7. Fair Value Collateral to Net Current Credit Exposure**

		<b>FV Banks &amp; Securities Firms</b>	<b>FV Monoline Financial Firms</b>	<b>FV Hedge Funds</b>	<b>FV Sovereign Governments</b>	<b>FV Corporations &amp; All Other Counterparties</b>	<b>FV/NCCE%</b>
2016	Q2	103.1%	4.6%	368.4%	26.7%	62.4%	86.2%
2016	Q1	94.6%	0.0%	378.8%	20.1%	65.5%	83.7%
2015	Q2	95.7%	0.0%	441.6%	11.4%	64.8%	85.5%
2014	Q2	102.3%	0.0%	353.7%	14.3%	51.7%	83.4%

Source: Call report, Schedule RC-L

Collateral quality held by banks was very high and liquid during the quarter, with 77.5 percent held in cash (both U.S. dollar and non-dollar) and an additional 7.4 percent held in U.S. Treasuries and government agencies (see table 8). Supervisors assess changes in the quality of collateral held as a key early indicator of potential easing in credit terms. Examiners review the collateral management practices of derivative dealers as a regular part of their supervision activities.

**Table 8. Composition of Collateral**

		Cash U.S. Dollar	Cash Other Currencies	U.S. Treasury Securities	U.S. Gov't Agency	Corporate Bonds	Equity Securities	All Other Collateral
2016	Q2	44.2%	33.3%	5.2%	2.2%	1.3%	4.9%	8.8%
2016	Q1	45.7%	32.2%	4.9%	1.9%	1.2%	4.9%	9.0%
2015	Q2	42.8%	31.6%	4.1%	1.6%	1.5%	5.2%	13.2%
2014	Q2	46.0%	32.2%	2.0%	3.1%	0.8%	2.0%	13.9%

Source: Call report, Schedule RC-L

Credit quality metrics for derivative exposures softened in the second quarter of 2016, as banks reported net charge-offs of \$18.6 million, compared to net charge-offs of \$13.3 million in the first quarter of 2016 (see graph 8 in the appendix). The number of banks reporting charge-offs increased from 15 to 16 banks. Net charge-offs in the second quarter of 2016 represented 0.004 percent of the NCCE from derivative contracts. For comparison purposes, commercial and industrial (C&I) loan net charge-offs increased \$310.3 million, or 16.7 percent, to \$2.2 billion during the quarter, and were 0.1 percent of total C&I loans. Charge-offs of derivative exposures typically are associated with problem commercial lending exposures, in which the borrower has an associated swap transaction.

**Market Risk****Value-at-Risk**

Banks primarily control market risk in trading operations by establishing limits against potential losses. Banks use VaR to quantify the maximum expected loss over a specified time period and at a certain confidence level in normal markets. VaR is not the maximum potential loss. Since VaR does not measure the maximum potential loss, banks stress test trading portfolios to assess the potential for loss beyond the VaR measure. Banks and supervisors have been working to expand the use of stress testing to complement the VaR risk measurement process that banks typically use to assess a bank's exposure to market risk.

The large trading banks disclose average VaR data in published financial reports. Comparing the VaR numbers over time to equity capital and net income provides perspective on market risk of trading activities. As shown in table 9, market risk reported by the five largest banking companies, as measured by VaR, is small as a percentage of their capital.

**Table 9. Value-at-Risk at Major Bank Holding Companies, in Millions of Dollars**

	JPMorgan	Citigroup	Bank of America	Goldman Sachs	Morgan Stanley	Total
2016 Q2 VaR	\$45	\$88	\$54	\$62	\$46	\$295
2016 Q1 VaR	\$54	\$108	\$50	\$72	\$46	\$330
Q/Q Change	-\$9	-\$20	\$4	-\$10	\$0	-\$35
Q/Q % Change	-19.1%	-18.5%	7.7%	-13.9%	0.0%	-10.6%
Equity Capital	\$252,423	\$231,888	\$267,069	\$86,514	\$77,116	\$915,010
2015 Net Income	\$61,568	\$45,535	\$41,107	\$18,137	\$17,941	\$184,288
Avg VaR/Equity	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%
Avg VaR/Net Income	0.1%	0.2%	0.1%	0.3%	0.3%	0.2%

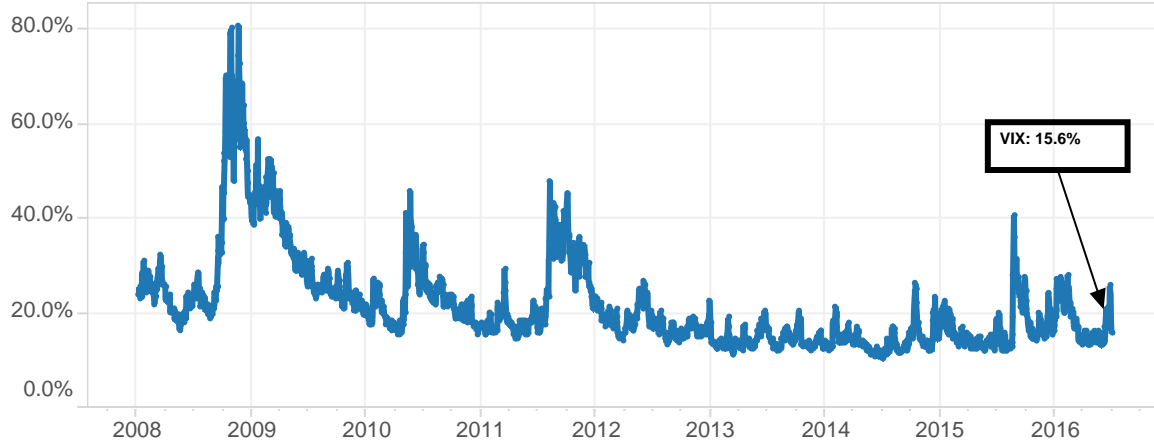
Source: 10K & 10Q U.S. Securities and Exchange Commission reports

VaR measures are not comparable across firms, because of methodological differences in calculating VaR, as well as differences in the scope of coverage. These differences can result in materially different VaR estimates across firms, even for the same portfolios. When assessing trading risk in the banking system, it is therefore appropriate to review the trend in VaR at individual firms, not in aggregate across firms.

Because of methodological differences in calculating VaR, readers are cautioned that a higher VaR figure at a particular bank may not necessarily imply that the bank has more trading risk than another bank with a lower VaR. For example, JPMorgan, Goldman Sachs, and Morgan Stanley calculate VaR using a 95 percent confidence interval. If those firms used a 99 percent confidence interval, as Bank of America and Citigroup do, their VaR estimates would be meaningfully higher. The data series used to measure risk also is an important factor in the calculated risk. VaR for a single portfolio of exposures will differ if the historical period used to measure risk differs. The scope of coverage of the VaR measure is also important when reviewing risks across institutions. Some firms disclose VaR based only on their trading and intermediation activity, while others also include risks from hedging mortgage-servicing assets, fair value option portfolios, and asset and liability management activities. Graph 16 in the appendix illustrates the trend over the past seven years in average VaR at each of the top five large trading companies.

Figure 3 shows the VIX, a volatility index,<sup>2</sup> which measures the market’s expectation of stock market volatility of S&P 500 index options over the next 30-day period. The chart illustrates that there has been an extended period of low volatility since the end of the financial crisis.

**Figure 3. Volatility Index (VIX)**

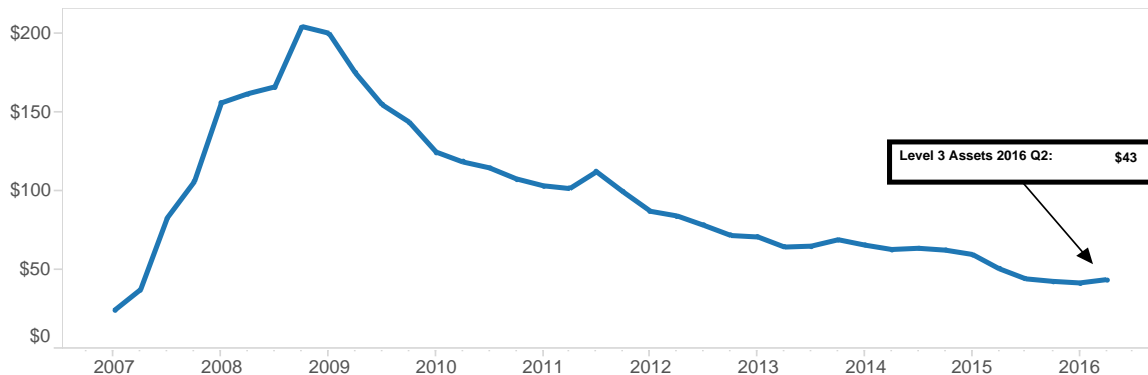


Source: Bloomberg

**Level 3 Trading Assets**

Another measure used to assess market risk is the volume of and changes in level 3 trading assets. Level 3 trading assets are assets whose fair value cannot be determined by using observable inputs, such as market prices. Since the peak of the financial crisis at the end of 2008, major dealers have reduced the volume of level 3 trading assets. Because banks cannot observe inputs into the models that determine the fair value of these illiquid exposures, banks use their own assumptions in determining their fair values. Level 3 assets peaked at \$204.1 billion at the end of 2008 (see figure 4). At the end of the second quarter of 2016, banks held \$43.4 billion of level 3 trading assets, up 5.1 percent from the previous quarter, and 13.9 percent lower than a year ago. Level 3 assets are \$160.7 billion (78.7 percent) lower than the peak level from 2008.

**Figure 4. Level 3 Trading Assets, in Billions of Dollars**



Source: Call reports, Schedule RC-Q

<sup>2</sup> VIX is the trademarked ticker symbol for the Chicago Board Options Exchange SPX Volatility Index.

### Credit Derivatives

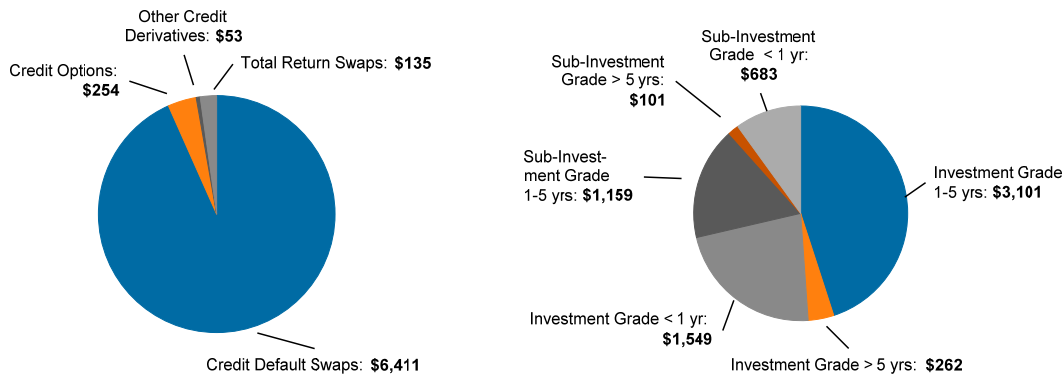
The notional outstanding of credit derivatives decreased \$0.6 trillion (7.6 percent) in the second quarter of 2016 to \$6.9 trillion. Contracts referencing sub-investment-grade firms decreased \$147.3 billion, while contracts referencing investment-grade firms decreased \$417.2 billion. Credit derivatives outstanding remained well below the peak of \$16.4 trillion in the first quarter of 2008 (see graph 14 in the appendix). As shown in figure 5, credit default swaps are the dominant product, at \$6.4 trillion or 93.5 percent of all credit derivative notionals (see also tables 11 and 12 in the appendix).

Contracts referencing investment-grade entities with maturities from one to five years, which decreased by \$299.3 billion (8.8 percent) in the quarter, represented the largest segment of the market at 45.2 percent of all credit derivative notionals. Contracts of all tenors that reference investment-grade entities are 71.7 percent of the market (see chart on right in figure 5 and graph 14 in the appendix).

**Figure 5. 2016 Q2 Credit Derivative Composition, in Billions of Dollars**

**By Product Type**

**By Maturity & Quality of Underlying Reference Entity**



Source: Call reports, Schedule RC-L

The notional amount for the 59 insured U.S. commercial banks and savings associations that sold credit protection (i.e., assumed credit risk) was \$3.4 trillion, down \$291.7 billion (8.0 percent) from the first quarter of 2016. The notional amount for the 51 banks that purchased credit protection (i.e., hedged credit risk) was \$3.5 trillion, \$272.7 billion lower (7.2 percent) than in the first quarter of 2016 (see table 12 in the appendix).

### Notionals

Changes in notional amounts are generally reasonable reflections of business activity and can provide insight into potential revenue and operational issues. The notional amount of derivative contracts, however, does not provide a useful measure of market or credit risks.

The notional amount of derivative contracts held by insured U.S. commercial banks and savings associations in the second quarter decreased by \$3.1 trillion (1.6 percent) to \$189.8 trillion from the previous quarter (see table 10). The decrease was driven by a \$3.4 trillion decrease in interest rate notionals. A \$2.9 trillion decrease in swaps contracts (2.5 percent) to \$111.9 trillion

drove the decrease in interest rate notionals (see table 11). Swap contracts remained the dominant derivatives product at 58.9 percent of all notionals.

**Table 10. Derivative Notionals by Underlying Risk Exposure Quarter-Over-Quarter, in Billions of Dollars**

	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change	2015 Q2	Y/Y Change	Y/Y % Change
Interest Rate	\$143,794	\$147,218	-\$3,424	-2.3%	\$154,350	-\$10,556	-6.8%
Foreign Exchange	\$35,185	\$34,568	\$617	1.8%	\$31,880	\$3,305	10.4%
Equity	\$2,672	\$2,534	\$138	5.5%	\$2,373	\$299	12.6%
Commodities	\$1,328	\$1,210	\$119	9.8%	\$1,433	-\$104	-7.3%
Credit	\$6,853	\$7,418	-\$565	-7.6%	\$8,488	-\$1,634	-19.3%
Total Notional	\$189,833	\$192,947	-\$3,115	-1.6%	\$198,523	-\$8,690	-4.4%

Source: Call reports, Schedule RC-L

**Table 11. Derivative Notionals by Contract Type Quarter-Over-Quarter, in Billions of Dollars**

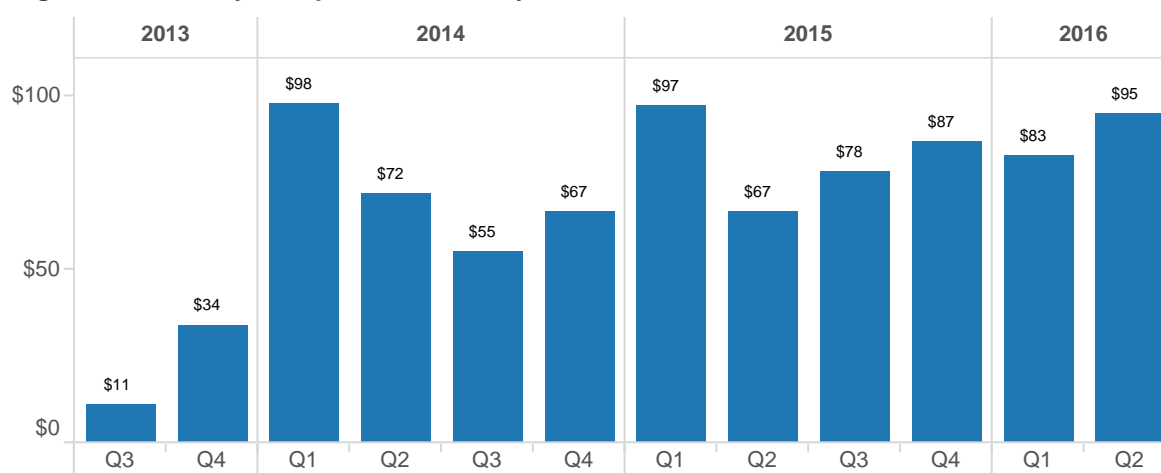
	2016 Q2	2016 Q1	Q/Q Change	Q/Q % Change	2015 Q2	Y/Y Change	Y/Y % Change
Futures & Forwards	\$38,790	\$37,151	\$1,639	4.4%	\$40,360	-\$1,570	-3.9%
Swaps	\$111,901	\$114,814	-\$2,914	-2.5%	\$117,508	-\$5,608	-4.8%
Options	\$32,289	\$33,564	-\$1,276	-3.8%	\$32,167	\$122	0.4%
Credit Derivatives	\$6,853	\$7,418	-\$565	-7.6%	\$8,488	-\$1,634	-19.3%
Total Notional	\$189,833	\$192,947	-\$3,115	-1.6%	\$198,523	-\$8,690	-4.4%

Source: Call reports, Schedule RC-L

The four banks with the most derivative activity hold 90.4 percent of all derivatives, while the largest 25 banks account for nearly 100 percent of all contracts (see tables 3 and 5 and graph 4 in the appendix).

Interest rate contracts continued to represent the majority of the derivative market at \$143.8 trillion or 75.7 percent of total derivatives during the second quarter of 2016 (see table 10). FX and credit derivatives were 18.5 percent and 3.6 percent of total notionals, respectively. Commodity and equity derivatives collectively were only 2.1 percent of total notional derivatives.

Notionals have generally declined since 2011 due to trade compression efforts, as well as the lower volatility environment, which has led to less need for risk management products. Trade compression continues to be a significant factor in reducing the amount of notional derivatives outstanding. Trade compression aggregates a large number of swap contracts with similar factors, such as risk or cash flows, into fewer trades. Compression removes economic redundancy in a derivative book and reduces operational risks and capital costs for large banks. Trade compression activities increased in the second quarter of 2016, as shown in figure 6.

**Figure 6. Quarterly Compression Activity, in Trillions of Dollars**


Source: LCH.Clearnet

In the first quarter of 2015, banks began reporting their volumes of cleared and non-cleared derivative transactions, as well as risk weights for counterparties in each of these categories. In the second quarter of 2016, 39.1 percent of the derivative market was centrally cleared (see table 12). From a market factor perspective, 49.1 percent of interest rate derivative contracts notional outstanding were centrally cleared, while very little of the FX derivative market was centrally cleared. The credit derivative market remained largely uncleared, as 19.5 percent of investment grade and 15.4 percent of non-investment-grade transactions were centrally cleared.

Centrally cleared derivative transactions were heavily concentrated at qualified central counterparties, with 92.1 percent of notional reflecting the 2 percent risk weight applicable to such counterparties.

**Table 12. Centrally Cleared Derivative Contracts as a Percentage of Total Derivative Contracts**

	Interest Rate	Foreign Exchange	Equity	Precious Metals	Credit	Other	Total
2016 Q2	49.1%	0.5%	22.1%	5.5%	18.3%	13.7%	39.1%
2016 Q1	45.4%	0.5%	21.4%	4.4%	19.4%	13.6%	36.5%
2015 Q4	46.2%	0.5%	20.0%	3.7%	16.8%	14.0%	36.9%
2015 Q3	44.7%	0.5%	14.2%	5.0%	20.4%	12.6%	36.0%
2015 Q2	43.1%	0.3%	13.4%	2.6%	19.6%	10.9%	35.0%
2015 Q1	44.7%	0.2%	13.4%	1.6%	19.7%	16.3%	36.5%

Source: Call reports, Schedule RC-R

## **Glossary of Terms**

**Bilateral netting:** A legally enforceable arrangement between a bank and a counterparty that creates a single legal obligation covering all included individual contracts. This means that a bank's receivables or payables, in the event of the default or insolvency of one of the parties, would be the net sum of all positive and negative fair values of contracts included in the bilateral netting arrangement.

**Centrally cleared derivative contract:** A standardized derivative contract that is transacted bilaterally but submitted for clearing to a central counterparty, with the central counterparty becoming the ultimate counterparty to both the buyer and the seller.

**Credit derivative:** A financial contract that allows a party to take, or reduce, credit exposure (generally on a bond, loan, or index). The OCC's derivatives survey includes OTC credit derivatives, such as credit default swaps, total return swaps, and credit spread options.

**Derivative:** A financial contract whose value is derived from the performance of underlying market factors, such as interest rates, currency exchange rates, and commodity, credit, and equity prices. Derivative transactions include a wide assortment of financial contracts, such as structured debt obligations and deposits, swaps, futures, options, caps, floors, collars, forwards, and various combinations thereof.

**Gross negative fair value (GNFV):** The sum total of the fair values of contracts where the bank owes money to its counterparties, without taking into account netting. This amount represents the maximum losses the bank's counterparties would incur if the bank defaulted and there was no netting of contracts, and the counterparties held no bank collateral. GNFVs associated with credit derivatives are included.

**Gross positive fair value (GPFV):** The sum total of the fair values of contracts when the bank is owed money by its counterparties, without taking into account netting. This amount represents the maximum losses a bank would incur if all its counterparties defaulted and there was no netting of contracts, and the bank held no counterparty collateral. GPFVs associated with credit derivatives are included.

**Net current credit exposure (NCCE):** For a portfolio of derivative contracts, NCCE is the GPFV of contracts less the dollar amount of netting benefits. On any individual contract, current credit exposure (CCE) is the fair value of the contract if positive, and zero when the fair value is negative or zero. NCCE is also the net amount owed to banks if all contracts were immediately liquidated.

**Notional amount:** The nominal or face amount that is used to calculate payments made on swaps and other risk management products. This amount generally does not change hands and is thus referred to as notional.

**OTC derivative contracts:** Privately negotiated derivative contracts that are transacted off organized exchanges.

**Potential future exposure (PFE):** An estimate of what the CCE could be over time, based on a supervisory formula in the agencies' risk-based capital rules. PFE is generally determined by multiplying the notional amount of the contract by a credit conversion factor that is based on the underlying market factor (e.g., interest rates, commodity prices, or equity prices) and the contract's remaining maturity. The risk-based capital rules, however, permit banks to adjust the



formulaic PFE measure by the “net-to-gross ratio,” which proxies the risk-reduction benefits attributable to a valid bilateral netting contract. PFE data in this report uses the amounts on which banks hold risk-based capital.

**Total credit exposure (TCE):** The sum total of NCCE and PFE.

**Total risk-based capital:** The sum of tier 1 plus tier 2 capital. Tier 1 capital generally consists of common shareholders’ equity, perpetual preferred shareholders’ equity with noncumulative dividends, retained earnings, and tier 1 capital of consolidated subsidiaries that is not owned by the bank (minority interest) less regulatory adjustments and deductions. Tier 2 capital generally consists of subordinated debt, intermediate-term preferred stock, cumulative and long-term preferred stock, tier 2 capital of consolidated subsidiaries that is not owned by the bank (minority interest), and a portion of a bank’s allowance for loan and lease losses less regulatory adjustments and deductions.

**Trade compression:** A significant factor in reducing the amount of notional derivatives outstanding. Trade compression aggregates a large number of swap contracts with similar factors, such as risk or cash flows, into fewer trades. Compression removes economic redundancy in a derivative book and reduces operational risks and capital costs for large banks.

**Volatility index (VIX):** Measures the market’s expectation of stock market volatility of S&P 500 index options over the next 30-day period.

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Table 7. Trading Revenue From Cash Instruments and Derivatives

Table 8. Notional Amounts of Derivative Contracts by Contract Type and Maturity (interest rate, FX, gold)

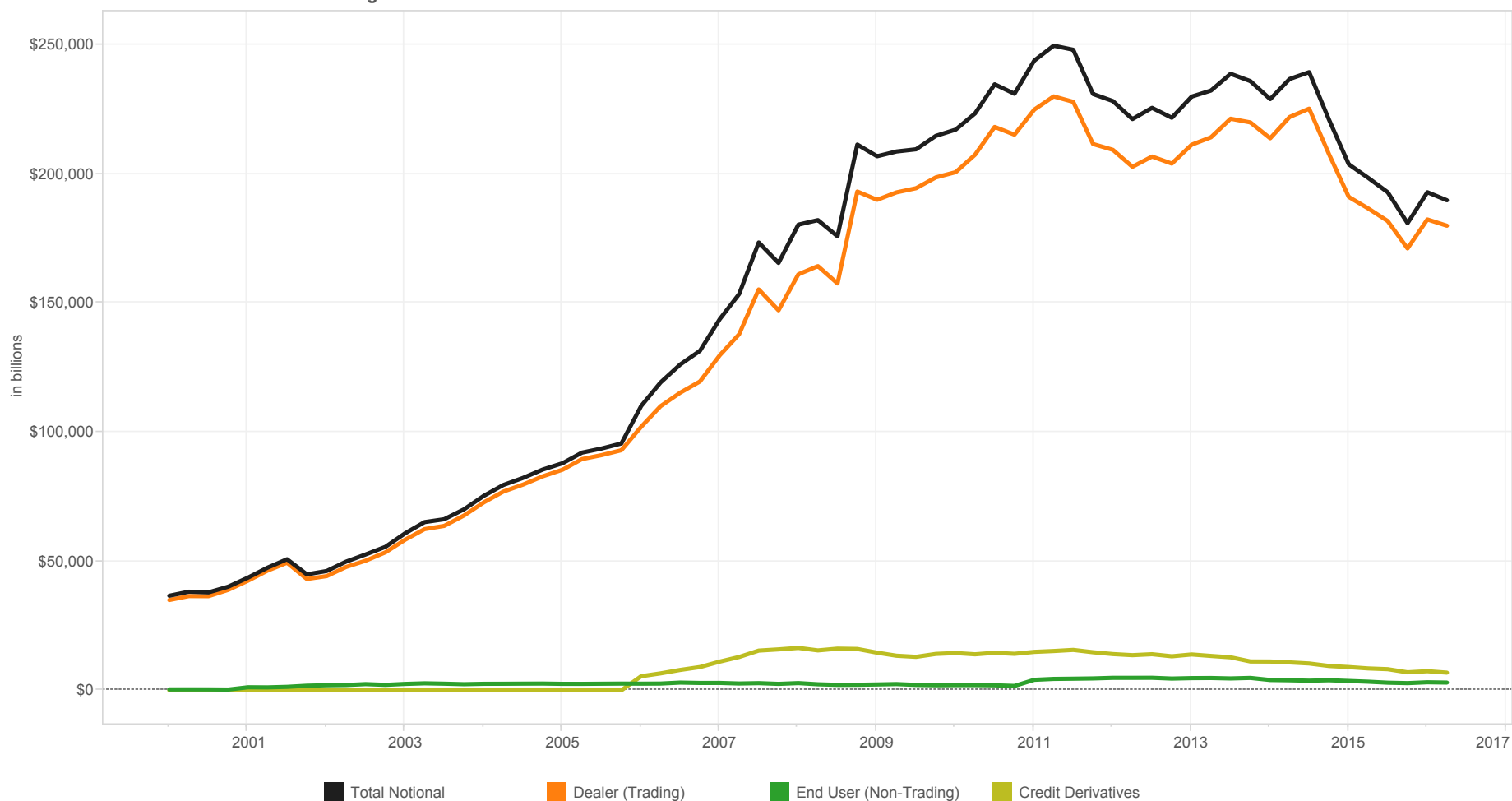
Table 9. Notional Amounts of Derivative Contracts by Contract Type and Maturity (precious metals)

Table 10. Notional Amounts of Derivative Contracts by Contract Type and Maturity (other, equity)

Table 11. Notional Amounts of Derivative Contracts by Contract Type and Maturity (credit)

Table 12. Distribution of Credit Derivative Contracts Held for Trading

**Graph 1**  
**Derivative Notionals by Type**  
**Insured U.S. Commerical Banks and Savings Associations**

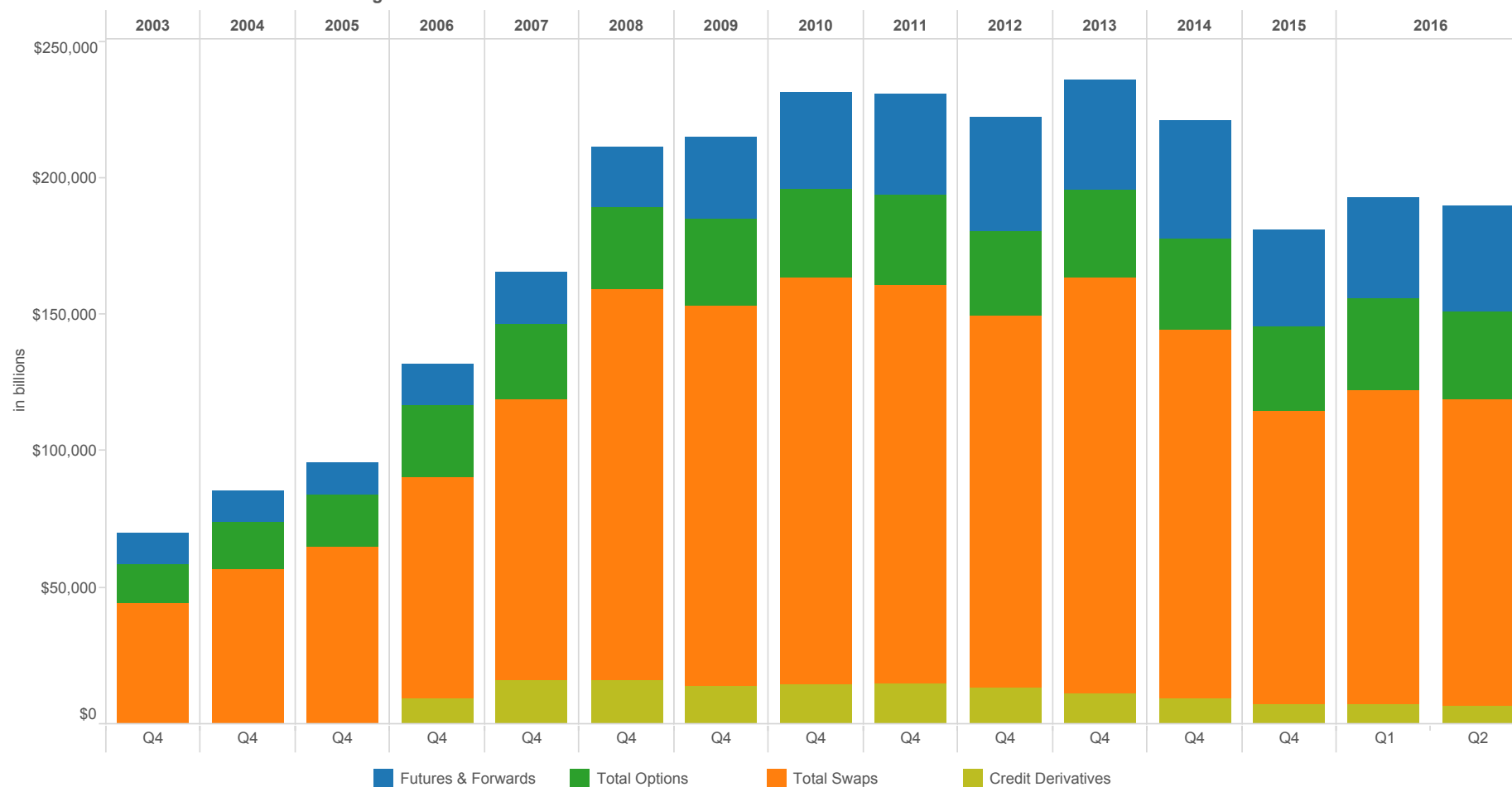


In billions of dollars

	2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Total Notional	\$228,279	\$221,272	\$225,637	\$221,794	\$229,987	\$232,342	\$238,827	\$235,992	\$229,011	\$236,808	\$239,459	\$221,078	\$203,771	\$198,523	\$192,936	\$180,952	\$192,947	\$189,833
Dealer (Trading)	209,383	202,805	206,772	204,044	211,353	214,240	221,425	219,990	213,838	222,078	225,318	207,711	191,123	186,686	181,776	171,172	182,404	179,970
End User (Non-Trading)	4,845	4,843	4,867	4,560	4,733	4,776	4,610	4,812	4,008	3,903	3,732	3,918	3,632	3,349	2,963	2,794	3,125	3,009
Credit Derivatives	14,051	13,624	13,998	13,190	13,901	13,327	12,793	11,191	11,165	10,827	10,408	9,449	9,017	8,488	8,198	6,986	7,418	6,853

Note: Numbers may not total due to rounding. Total derivative notionals are now reported including credit derivatives, for which regulatory reporting does not differentiate between trading and non-trading.  
Source: Call reports

**Graph 2**  
**Derivative Contracts by Product\***  
**Insured U.S. Commercial Banks and Savings Associations**



In billions of dollars

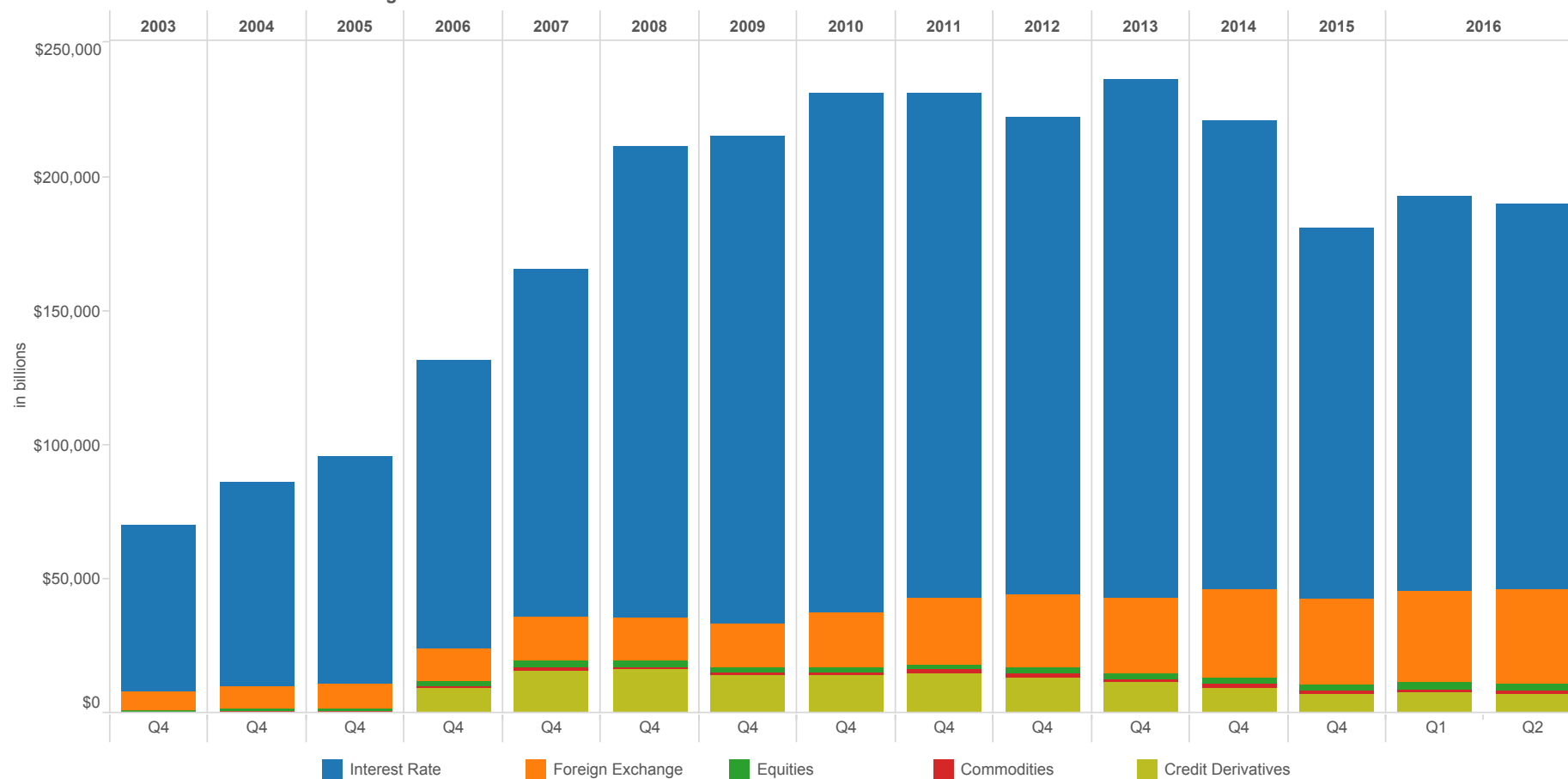
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
<b>Futures &amp; Forwards</b>	\$11,406	\$11,370	\$12,057	\$14,882	\$18,867	\$22,529	\$29,652	\$35,539	\$37,469	\$41,621	\$40,027	\$43,380	\$35,685	\$37,151	\$38,790
<b>Total Options</b>	14,616	17,754	18,858	26,277	27,727	29,747	31,884	32,078	32,505	30,375	32,305	33,081	30,889	33,564	32,289
<b>Total Swaps</b>	44,090	56,411	64,712	81,340	103,102	143,111	139,138	149,331	146,266	136,608	152,469	135,169	107,392	114,814	111,901
<b>Credit Derivatives</b>	0	0	0	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	7,418	6,853
<b>Total Notional</b>	70,112	85,536	95,627	131,519	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,952	192,947	189,833

\*Notional amount of total: futures, exchange traded options, over the counter options, forwards and swaps.

Note: Numbers may not add due to rounding

Source: Call reports

**Graph 3**  
**Derivative Contracts by Type\***  
**Insured U.S. Commercial Banks and Savings Associations**

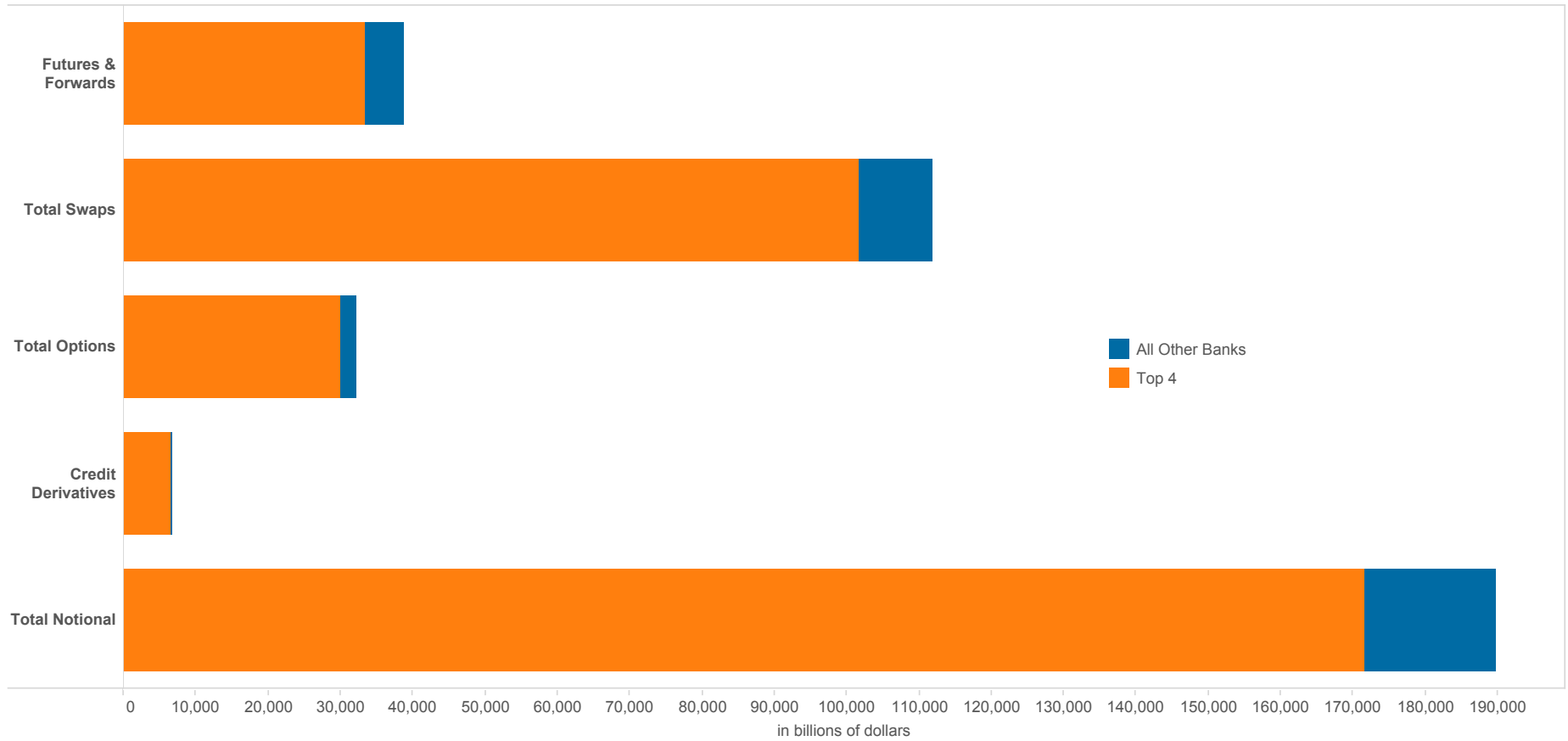


**In billions of dollars**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
<b>Interest Rate</b>	\$61,876	\$75,533	\$84,530	\$107,435	\$129,491	\$175,895	\$181,454	\$193,399	\$187,866	\$177,650	\$193,084	\$174,687	\$138,363	\$147,218	\$143,794
<b>Foreign Exchange</b>	7,185	8,607	9,289	11,900	16,614	16,224	16,555	20,990	25,436	27,587	28,480	33,183	32,100	34,568	35,185
<b>Equities</b>	829	1,112	1,255	2,271	2,524	2,207	1,685	1,364	1,606	1,970	2,028	2,537	2,395	2,534	2,672
<b>Commodities</b>	223	284	552	893	1,067	1,061	979	1,195	1,330	1,397	1,209	1,222	1,108	1,210	1,328
<b>Credit Derivatives</b>	0	0	0	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	7,418	6,853
<b>Total Notional</b>	<b>70,112</b>	<b>85,536</b>	<b>95,627</b>	<b>131,519</b>	<b>165,559</b>	<b>211,416</b>	<b>214,786</b>	<b>231,099</b>	<b>230,998</b>	<b>221,794</b>	<b>235,992</b>	<b>221,078</b>	<b>180,952</b>	<b>192,947</b>	<b>189,833</b>

\*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.  
 Note: As of 2006 Q2 equities and commodities types are shown as separate categories. They were previously shown as "Other Derivs."  
 Numbers may not total due to rounding.  
 Source: Call Reports

**Graph 4**  
**Four Banks Dominate in Derivatives\***  
*Insured U.S. Commercial Banks and Savings Associations*

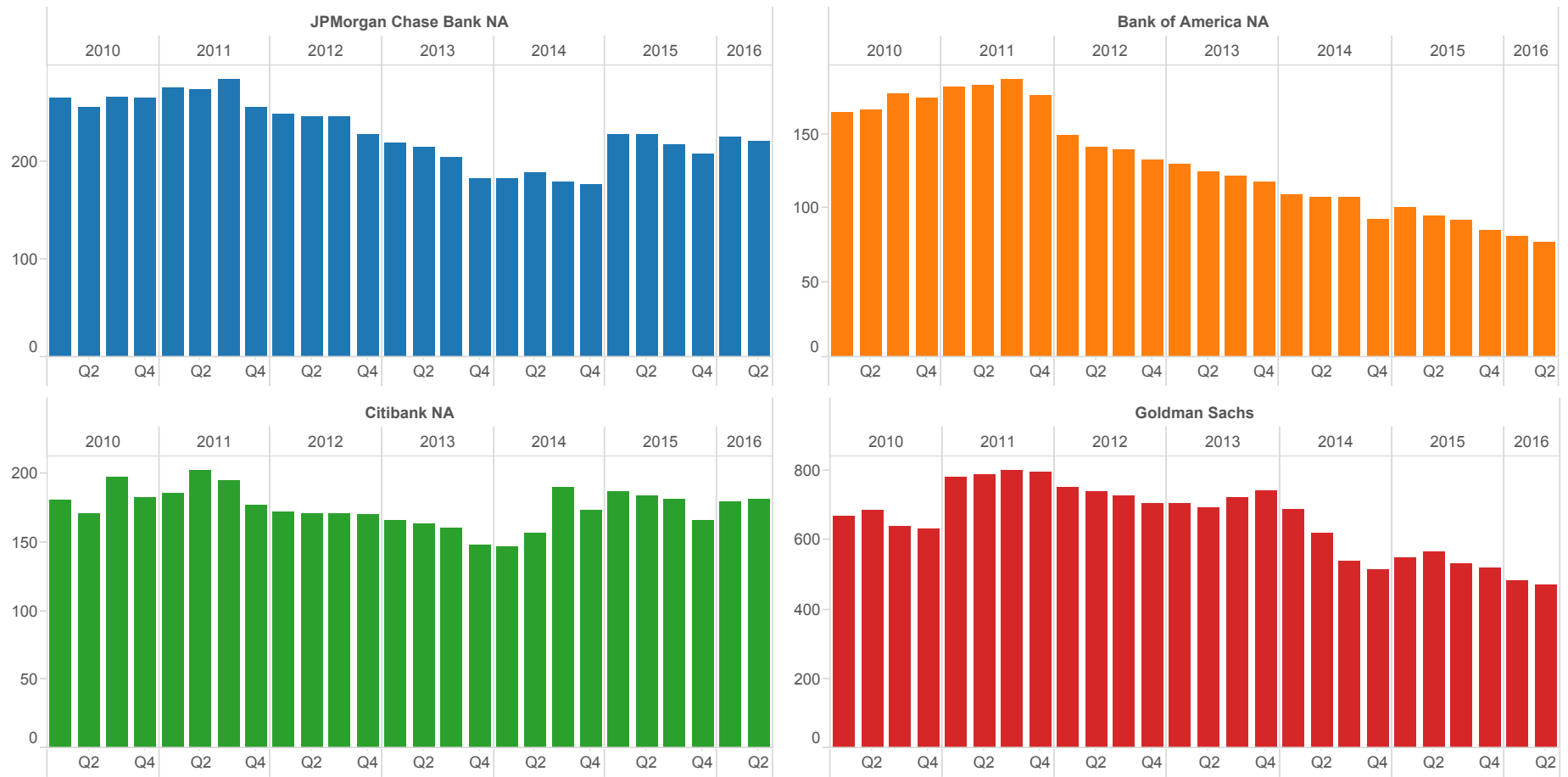


In billions of dollars

	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$33,322	\$5,468	\$38,790
Total Swaps	101,666	10,234	111,901
Total Options	30,071	2,218	32,289
Credit Derivatives	6,617	236	6,853
Total Notional	171,676	18,156	189,833

\*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.  
 Source: Call reports

**Graph 5**  
**Credit Exposure to Risk-Based Capital (in Percentage)**  
**Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings**



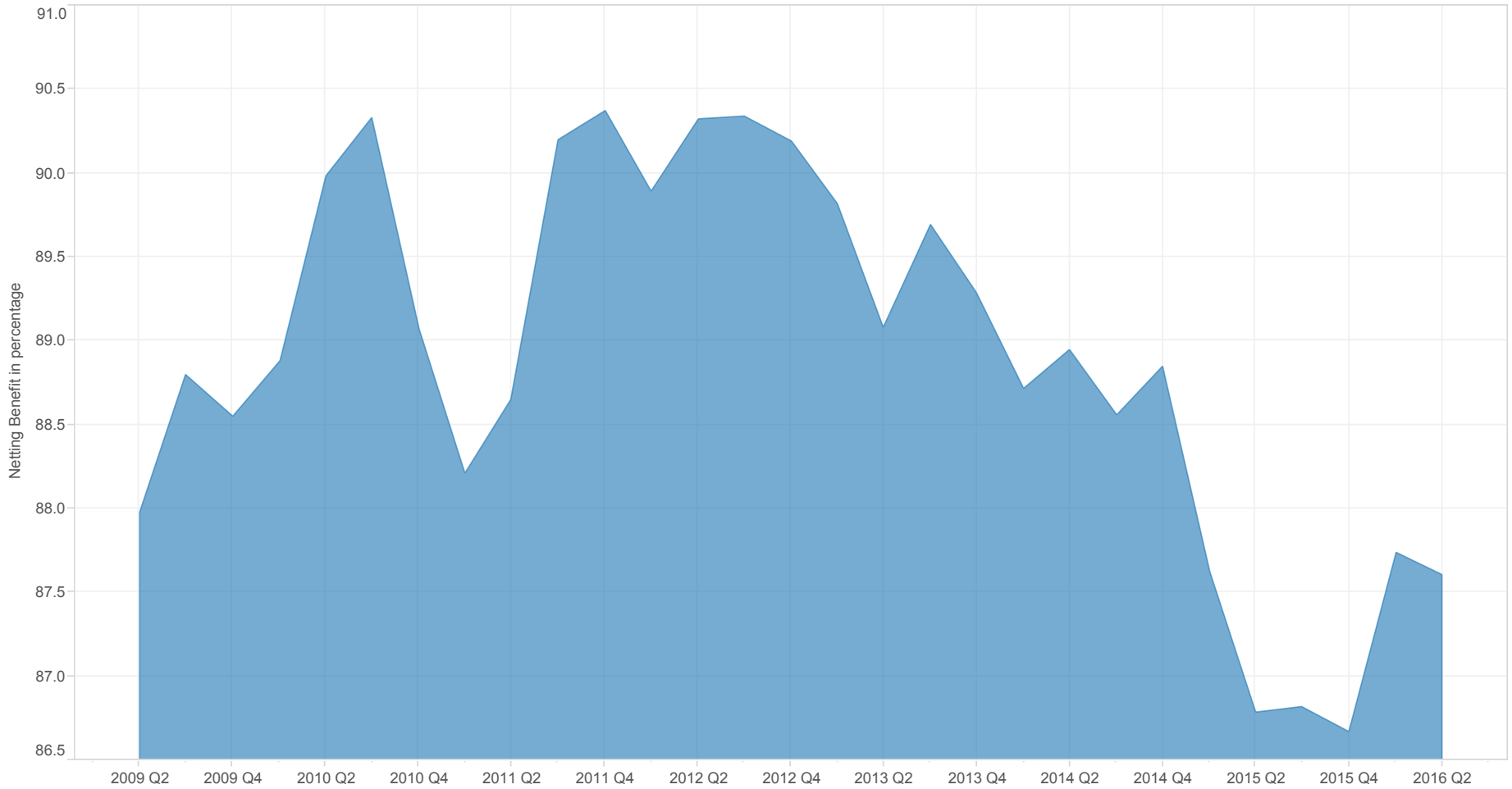
	2010				2011				2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>JPMorgan Chase Bank NA</b>	266	257	267	265	275	274	285	256	250	246	247	229	219	216	205	183	183	189	181	177	229	228	219	209	225	221
<b>Bank of America NA</b>	164	166	177	174	182	182	187	176	149	141	139	132	129	125	121	117	109	107	107	93	100	95	91	85	81	77
<b>Citibank NA</b>	180	171	197	182	185	203	195	177	172	171	170	170	165	164	161	148	147	156	190	173	187	184	181	166	180	181
<b>Goldman Sachs</b>	666	685	638	628	781	788	801	794	751	738	727	705	703	693	719	741	689	620	539	516	547	563	530	516	482	467
<b>TOTAL</b>	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	285	287	282	278	304	310	313	297	284	282	281	271	261	258	262	262	248	240	224	211	238	242	232	223	226	222

Note: The methodology to calculate the credit risk exposure to capital ratio for the Top 4 category uses a weighted average of total current credit exposure.  
 Source: Call reports



**Graph 6**

**Netting Benefit\*: Amount of Gross Credit Exposure Eliminated Through Bilateral Netting Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings**



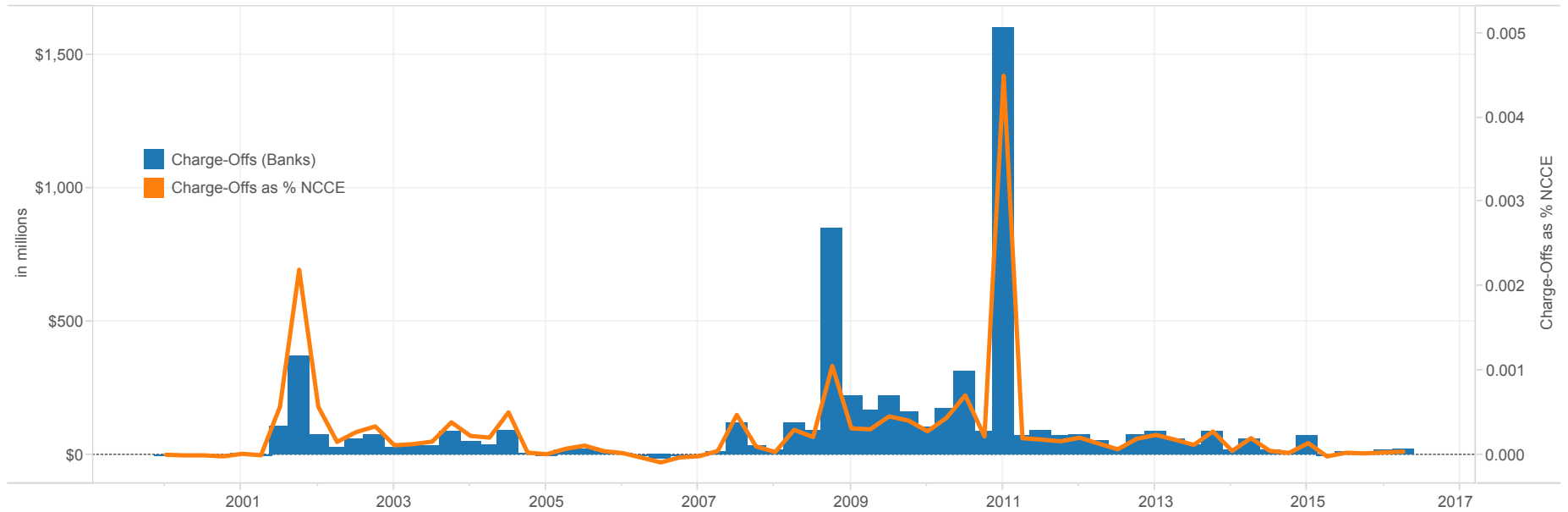
**Netting Benefit (in percentage)**

2009			2010				2011				2012				2013				2014				2015				2016	
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
88.0	88.8	88.5	88.9	90.0	90.3	89.1	88.2	88.6	90.2	90.4	89.9	90.3	90.3	90.2	89.8	89.1	89.7	89.3	88.7	88.9	88.6	88.8	87.6	86.8	86.8	86.7	87.7	87.6

\*The netting benefit is defined as: \$ amount of netting benefits/gross positive fair value.  
Source: Call reports, beginning the first quarter of 2015 RC-R; otherwise RC-L

**Graph 7**

**Quarterly Charge-Offs/(Recoveries) From Derivatives**  
**Insured U.S. Commercial Banks and Savings Associations with Derivatives**

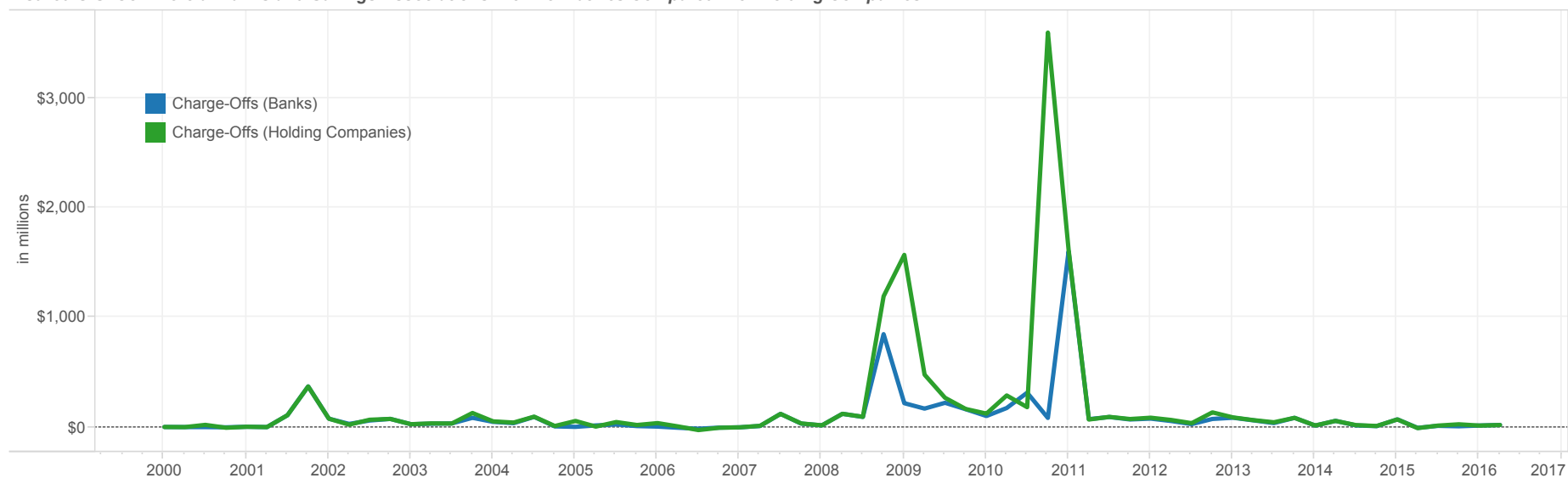


In millions of dollars

	2000				2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	0.0	-1.0	-1.0	-3.0	2.0	-1.0	107.3	370.0	75.8	28.2	59.0	73.7	25.3	29.9	32.3	83.7
	2004				2005				2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	46.7	34.9	92.2	5.4	1.3	14.2	23.0	8.3	3.6	-7.0	-16.0	-5.8	-3.1	9.1	119.5	30.7
	2008				2009				2010				2011			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	15	120	92	847	217	168	221	162	100	173	313	83	1,601	72	91	69
	2012				2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	76.35	54.34	26.12	73.44	84.28	60.72	35.77	83.45	12.78	55.90	14.53	7.91	69.31	-7.93	10.44	6.40
	2016															
	Q1	Q2														
Charge-Offs (Banks)	13.302	18.555														

Note: The figures are for each quarter alone, not year-to-date.  
 NCCE: Pre 2009 Q2 (RC-R); 2009 Q2 - 2014 Q4 (RC-L); 2015 Q1 onward (RC-R)  
 Source: Call reports

**Graph 8**  
**Quarterly Charge-Offs**  
**Insured U.S. Commercial Banks and Savings Associations with Derivatives Compared with Holding Companies**

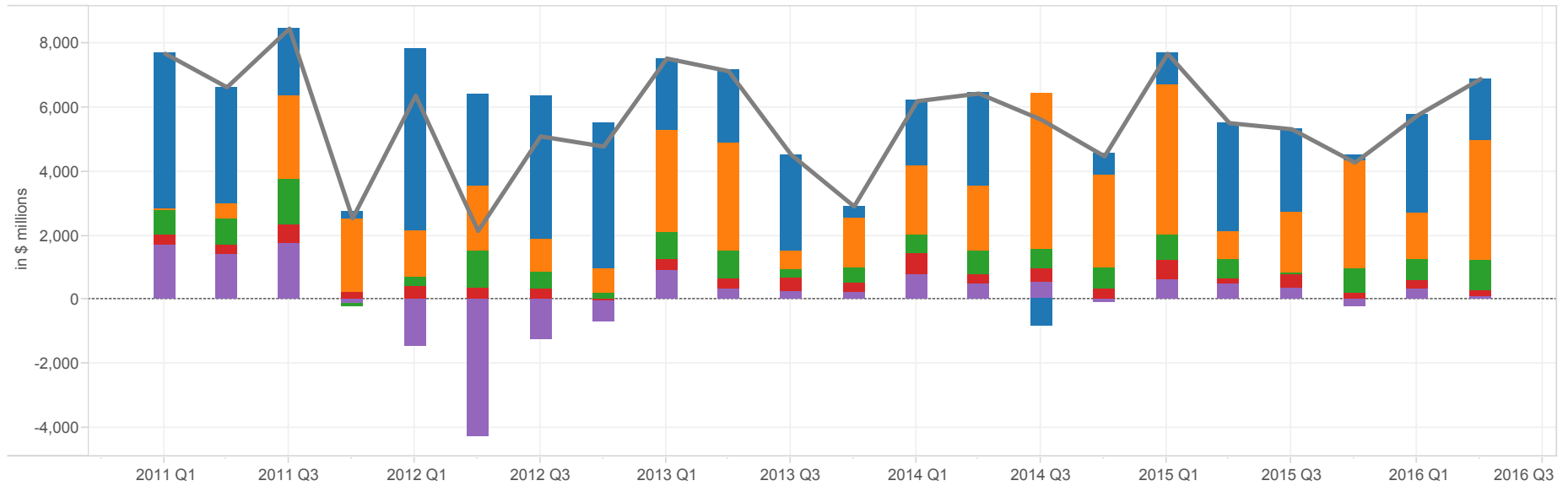


In millions of dollars

	2000				2001				2002				2003					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Charge-Offs (Banks)	0.0	-1.0	-1.0	-3.0	2.0	-1.0	107.3	370.0	75.8	28.2	59.0	73.7	25.3	29.9	32.3	83.7		
Charge-Offs (Holding Companies)	0.1	-1.0	19.3	-7.0	2.0	-1.0	107.3	369.6	75.8	21.2	66.0	73.7	25.3	32.9	31.4	127.8		
	2004				2005				2006				2007					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Charge-Offs (Banks)	46.7	34.9	92.2	5.4	1.3	14.2	23.0	8.3	3.6	-7.0	-16.0	-5.8	-3.1	9.1	119.5	30.7		
Charge-Offs (Holding Companies)	51.2	40.4	94.2	9.0	54.9	3.6	45.1	18.1	35.4	5.4	-28.1	-7.2	-3.1	10.4	119.4	32.2		
	2008				2009				2010				2011					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Charge-Offs (Banks)	15	120	92	847	217	168	221	162	100	173	313	83	1,601	72	91	69		
Charge-Offs (Holding Companies)	15	120	93	1,192	1,570	477	266	164	122	288	181	3,598	1,617	68	92	73		
	2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Charge-Offs (Banks)	76.3	54.3	26.1	73.4	84.3	60.7	35.8	83.5	12.8	55.9	14.5	7.9	69.3	-7.9	10.4	6.4	13.3	18.6
Charge-Offs (Holding Companies)	84.6	64.0	34.9	133.4	87.2	62.6	42.9	83.4	13.6	55.6	17.2	9.1	69.0	-10.2	12.9	24.5	12.8	18.0

Note: The figures are for each quarter alone, not year-to-date.  
Source: Call reports and Y-9

**Graph 9**  
**Quarterly Trading Revenue (Cash and Derivative Positions)\***  
**Insured U.S. Commercial Banks and Savings Associations**



- Interest Rate
- Foreign Exchange
- Equity
- Commodity & Other
- Credit
- Total Trading Revenue

In millions of dollars

	2016 Q2	Average Past 12 Q2's	Past 8 Quarter Average	Past 8 Quarter High	Past 8 Quarter Low	Since 2000 Average	Max Since 2000	Min Since 2000
Interest Rate	1,904	2,615	1,644	3,406	-5,282	1,649	9,291	-819
Foreign Exchange	3,736	2,480	2,866	4,830	-1,069	1,799	4,830	855
Equity	972	802	650	972	-1,059	549	1,830	49
Commodity & Other	161	219	310	587	-307	222	789	129
Credit	108	369	299	624	-10,237	-213	2,727	-222
<b>Total Trading Revenue</b>	<b>6,881</b>	<b>6,485</b>	<b>5,768</b>	<b>7,669</b>	<b>-10,580</b>	<b>4,006</b>	<b>10,217</b>	<b>4,274</b>

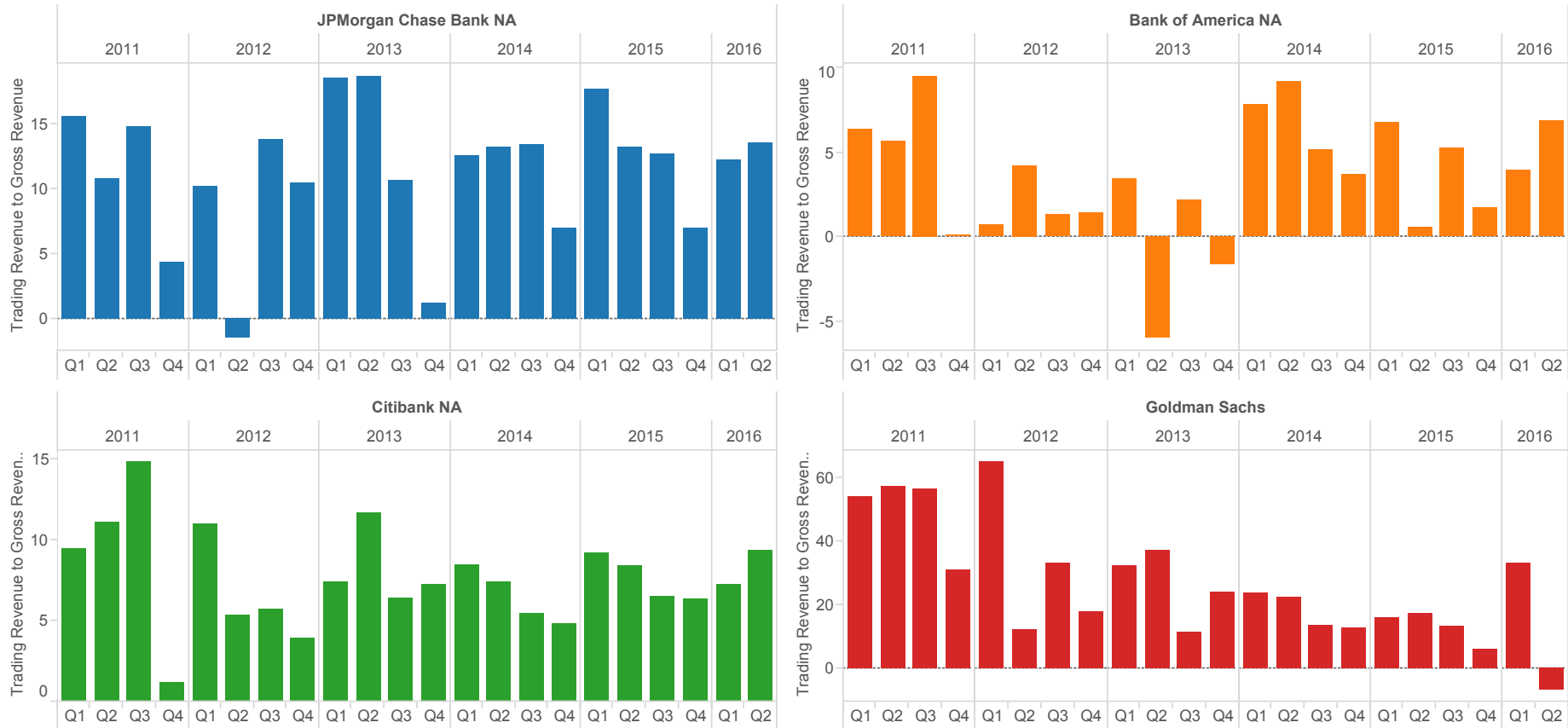
In millions of dollars

	2011				2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Interest Rate	4,855	3,611	2,093	257	5,627	2,870	4,457	4,521	2,243	2,268	3,002	360	2,015	2,883	-819	664	958	3,406	2,578	155	3,070	1,904
Foreign Exchange	35	491	2,595	2,235	1,505	1,990	1,020	753	3,185	3,303	588	1,550	2,137	2,026	4,830	2,902	4,703	855	1,931	3,401	1,407	3,736
Equity	762	808	1,442	-111	260	1,140	508	187	838	924	233	491	612	726	654	650	797	587	49	742	674	972
Commodity & Other	319	307	558	259	412	390	350	30	364	292	481	265	672	293	411	335	587	129	402	198	271	161
Credit	1,699	1,406	1,764	-102	-1,444	-4,243	-1,242	-713	890	339	222	245	756	500	535	-79	624	530	357	-222	334	108
<b>Total Trading Revenue</b>	<b>7,671</b>	<b>6,624</b>	<b>8,451</b>	<b>2,539</b>	<b>6,359</b>	<b>2,147</b>	<b>5,093</b>	<b>4,778</b>	<b>7,520</b>	<b>7,125</b>	<b>4,527</b>	<b>2,911</b>	<b>6,192</b>	<b>6,428</b>	<b>5,612</b>	<b>4,471</b>	<b>7,669</b>	<b>5,507</b>	<b>5,316</b>	<b>4,274</b>	<b>5,757</b>	<b>6,881</b>

\*The trading revenue figures are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date.  
 Note: Numbers may not total due to rounding.  
 Source: Call reports

**Graph 10**

**Quarterly Trading Revenue (Cash and Derivative Positions) as a Percentage of Gross Revenue (in Percentage)**  
**Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings**



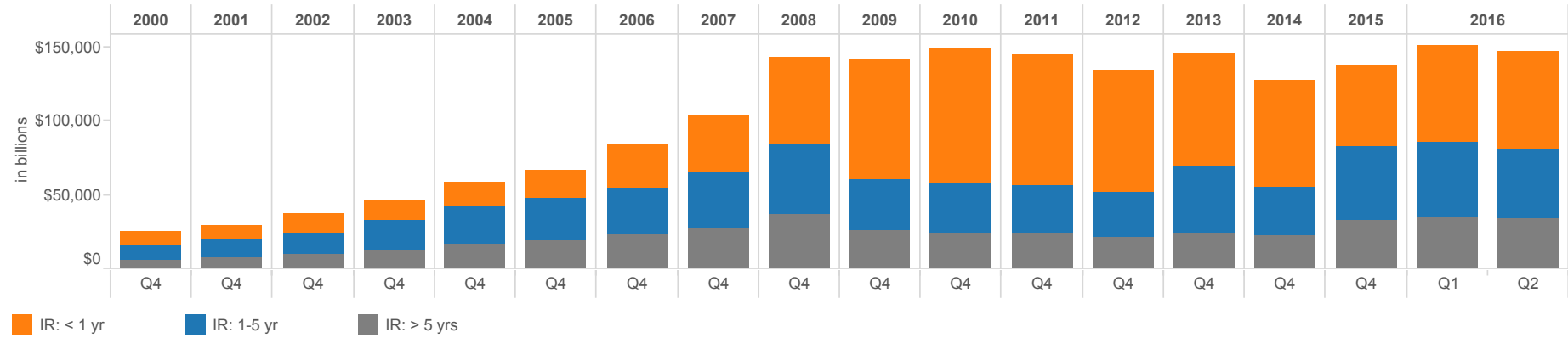
**Trading Revenue to Gross Revenue (in percentage)\***

	2011				2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
JPMorgan Chase Bank NA	15.64	10.84	14.82	4.33	10.24	-1.48	13.79	10.50	18.65	18.73	10.67	1.24	12.63	13.31	13.47	6.97	17.73	13.25	12.65	7.03	12.26	13.55
Bank of America NA	6.34	5.60	9.48	0.07	0.67	4.16	1.28	1.35	3.39	-5.97	2.14	-1.58	7.80	9.11	5.11	3.68	6.78	0.49	5.19	1.72	3.90	6.87
Citibank NA	9.44	11.11	14.79	1.18	10.95	5.36	5.74	3.94	7.45	11.71	6.39	7.20	8.51	7.43	5.48	4.78	9.17	8.41	6.54	6.30	7.19	9.41
Goldman Sachs	54.26	57.61	56.57	30.93	65.27	12.48	33.26	17.68	32.65	37.30	11.54	24.45	23.67	22.21	13.74	13.06	15.85	17.32	13.32	6.16	33.42	-6.75
<b>TOTAL</b>	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	11.67	10.32	14.16	2.36	8.70	2.78	7.86	5.72	10.42	9.56	6.72	2.77	10.06	10.45	8.53	5.35	11.68	7.62	8.41	5.03	8.65	9.87

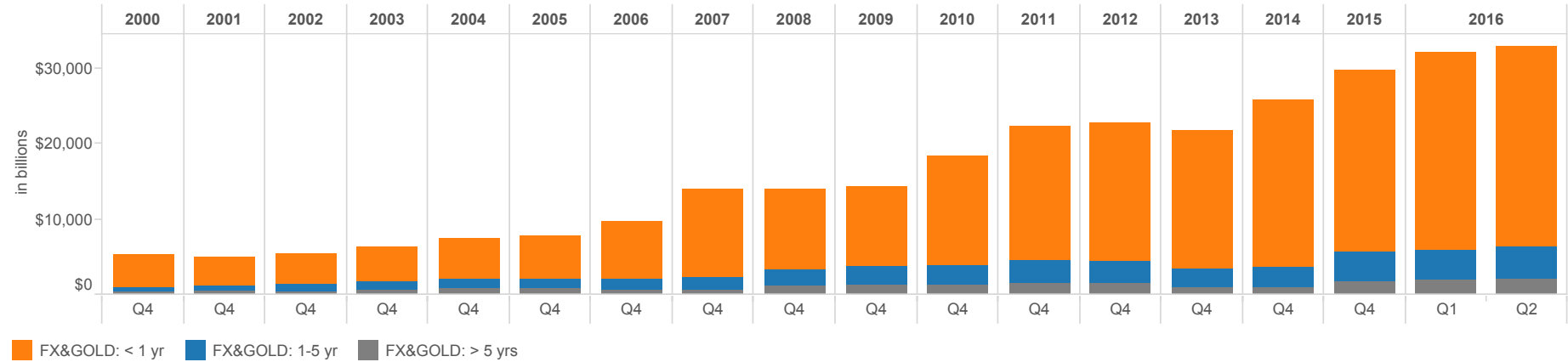
\*The trading revenue figures are for cash and derivative activities. Revenue figures are quarterly, not year-to-date numbers.  
 Note: Gross revenue equals interest income plus non-interest income.  
 Source: Call reports

**Graph 11**  
**Notional Amounts of Interest Rate and Foreign Exchange + Gold Contracts by Maturity**  
**Insured U.S. Commercial Banks and Savings Associations**

**Interest Rate**



**FX & Gold**



**In billions of dollars**

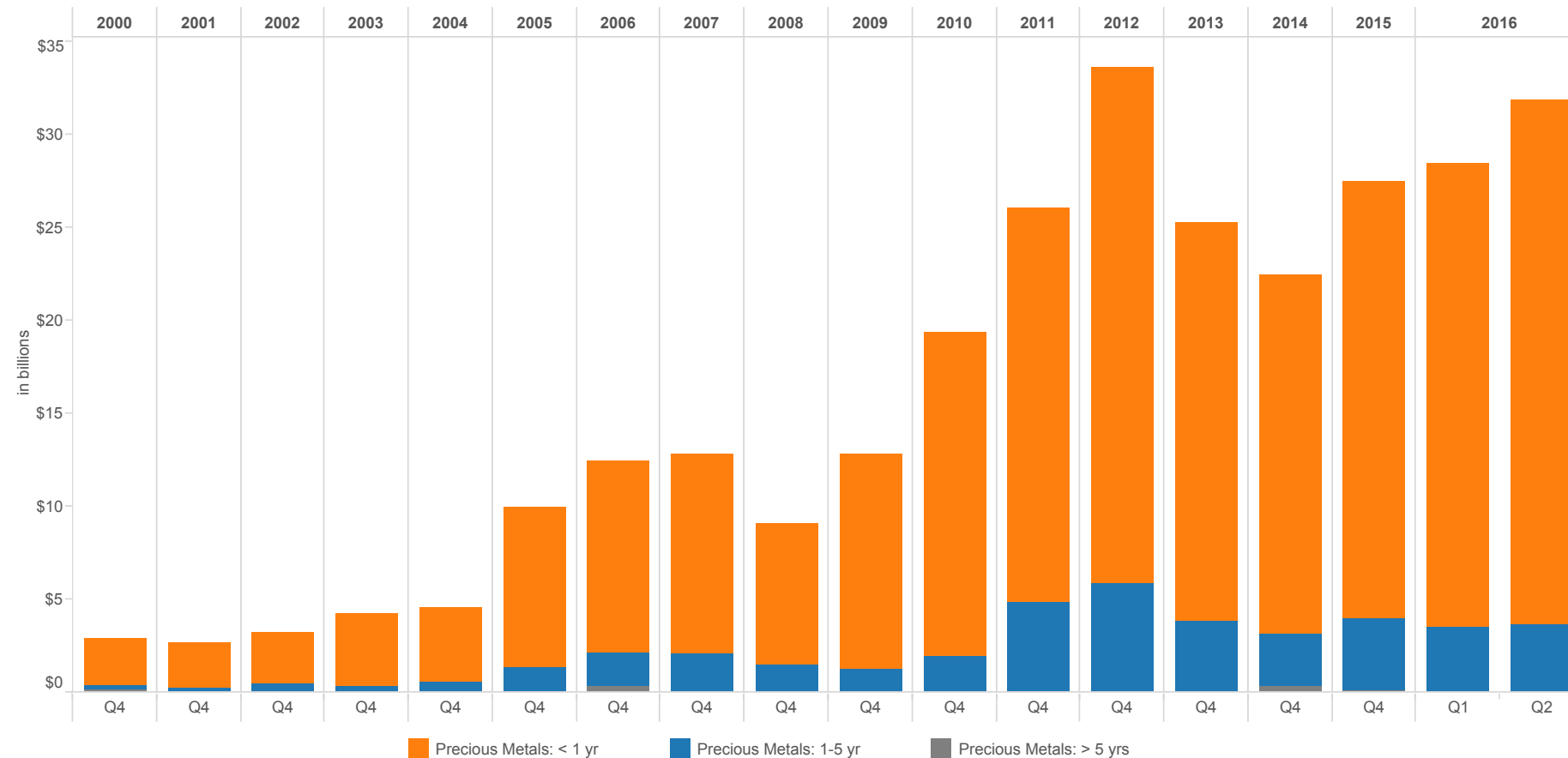
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
IR: < 1 yr	\$9,708	\$10,379	\$12,982	\$13,581	\$15,921	\$18,483	\$29,552	\$39,085	\$58,618	\$81,236	\$90,843	\$87,812	\$82,948	\$77,758	\$71,808	\$55,047	\$65,651	\$66,423
IR: 1-5 yr	9,925	11,709	14,328	20,404	25,893	27,683	31,386	37,222	47,456	33,970	33,497	32,750	30,191	44,157	33,727	49,407	50,715	47,002
IR: > 5 yrs	5,843	7,451	9,735	13,117	16,492	19,825	23,273	27,724	36,868	26,374	24,307	24,168	21,175	24,630	22,214	32,981	34,846	33,930
FX&GOLD: < 1 yr	4,397	3,816	4,078	4,510	5,384	5,728	7,730	11,660	10,640	10,490	14,629	17,632	18,386	18,372	22,145	24,129	26,231	26,622
FX&GOLD: 1-5 yr	626	686	857	1,146	1,317	1,381	1,452	1,639	2,195	2,473	2,462	3,117	2,910	2,341	2,587	3,986	4,082	4,112
FX&GOLD: > 5 yrs	361	499	439	582	762	689	594	622	1,082	1,347	1,290	1,503	1,480	1,029	969	1,648	1,819	2,151

Note: Figures above exclude FX contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements. Effective Q1 2015, the reporting form and call report instructions changed. Schedule RC-R now requires banks to report gold and FX notionals in aggregate, rather than separately. Source: Call reports

**Graph 12**

**Notional Amounts of Precious Metal Contracts by Maturity  
Insured U.S. Commercial Banks and Savings Associations**

**Precious Metals**



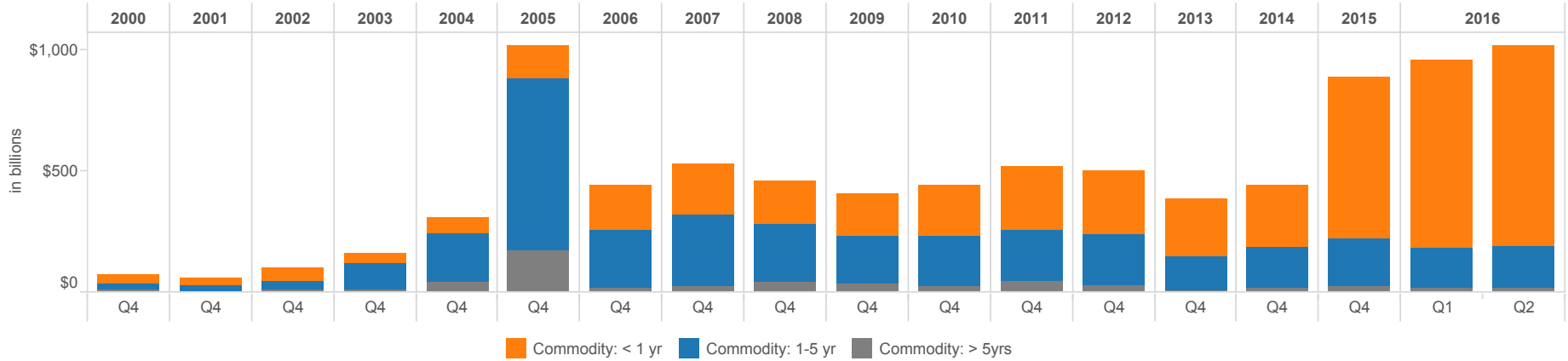
**In billions of dollars**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Precious Metals: < 1 yr	2.51	2.44	2.72	3.87	4.04	8.59	10.35	10.72	7.55	11.55	17.47	21.12	27.68	21.41	19.29	23.51	24.88	28.19
Precious Metals: 1-5 yr	0.25	0.23	0.46	0.33	0.51	1.29	1.75	2.10	1.51	1.24	1.89	4.74	5.82	3.80	2.84	3.92	3.53	3.68
Precious Metals: > 5 yrs	0.16	0.00	0.00	0.00	0.00	0.06	0.33	0.01	0.00	0.00	0.03	0.10	0.03	0.00	0.29	0.07	0.01	0.02

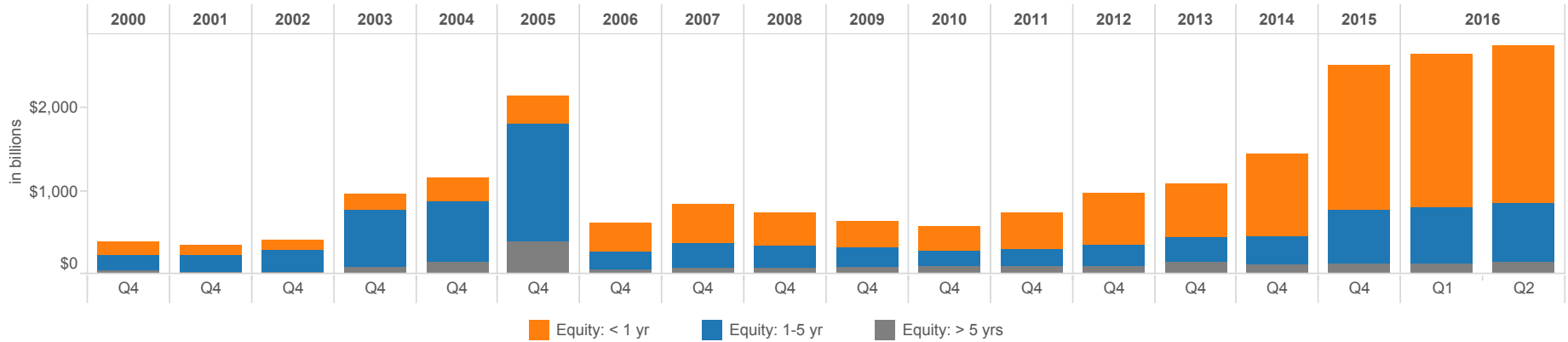
Note: Figures exclude FX contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.  
Source: Call reports

**Graph 13**  
**Notional Amounts of Commodity and Equity Contracts by Maturity**  
*Insured U.S. Commercial Banks and Savings Associations*

**Commodity**



**Equity**



**In billions of dollars**

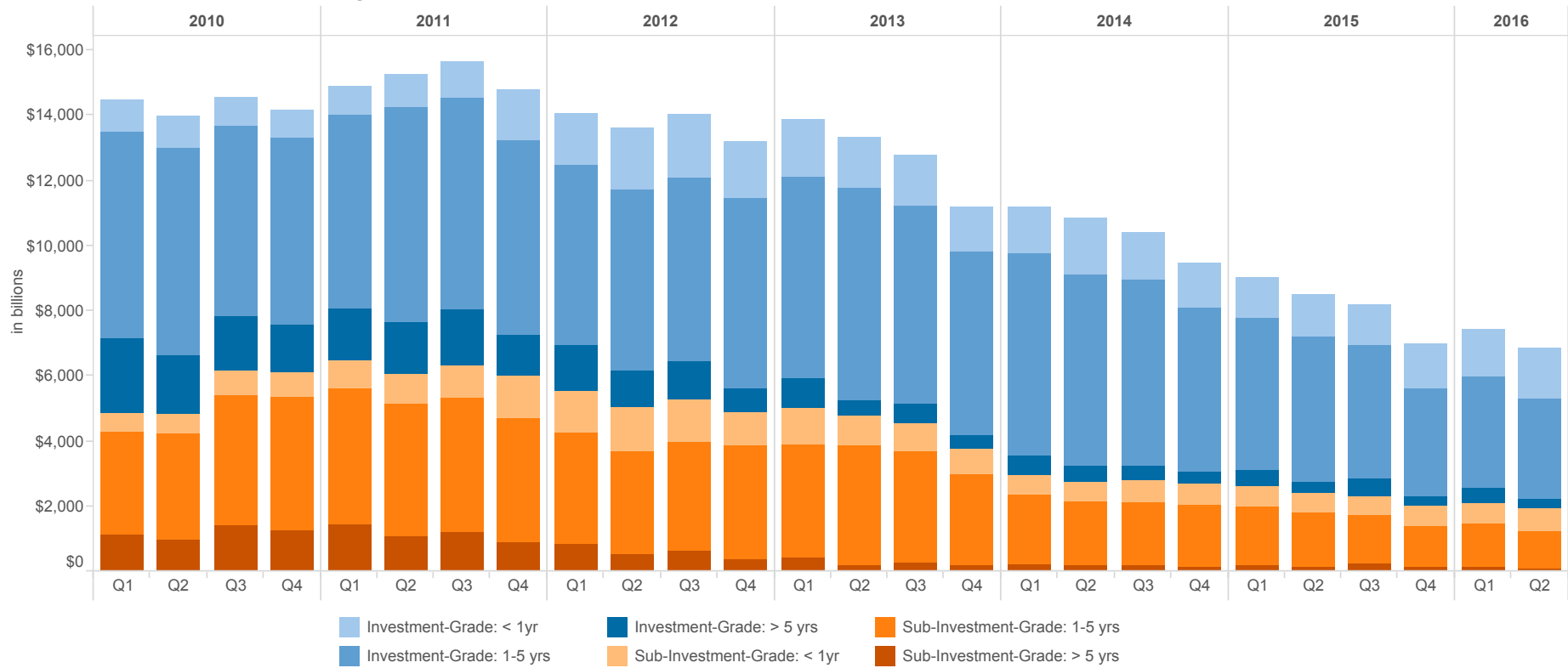
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Commodity: < 1 yr	\$36	\$31	\$55	\$43	\$64	\$133	\$185	\$206	\$179	\$176	\$203	\$261	\$261	\$235	\$257	\$668	\$773	\$827
Commodity: 1-5 yr	27	25	35	103	205	707	235	297	233	198	209	209	208	144	164	197	166	173
Commodity: > 5yrs	11	2	9	14	40	175	20	25	43	33	25	46	28	6	20	22	17	20
Equity: < 1 yr	162	121	127	197	273	321	341	473	409	312	296	427	627	645	996	1,743	1,841	1,907
Equity: 1-5 yr	180	209	249	674	736	1,428	221	297	256	228	191	210	262	291	352	628	675	710
Equity: > 5 yrs	38	18	25	84	140	383	45	70	72	82	85	94	82	136	101	130	129	134

Note: Figures above exclude foreign exchange contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.  
 Data Source: Call Reports



**Graph 14**

**Notional Amounts of Credit Derivative Contracts by Credit Quality and Maturity  
Insured U.S. Commercial Banks and Savings Associations**



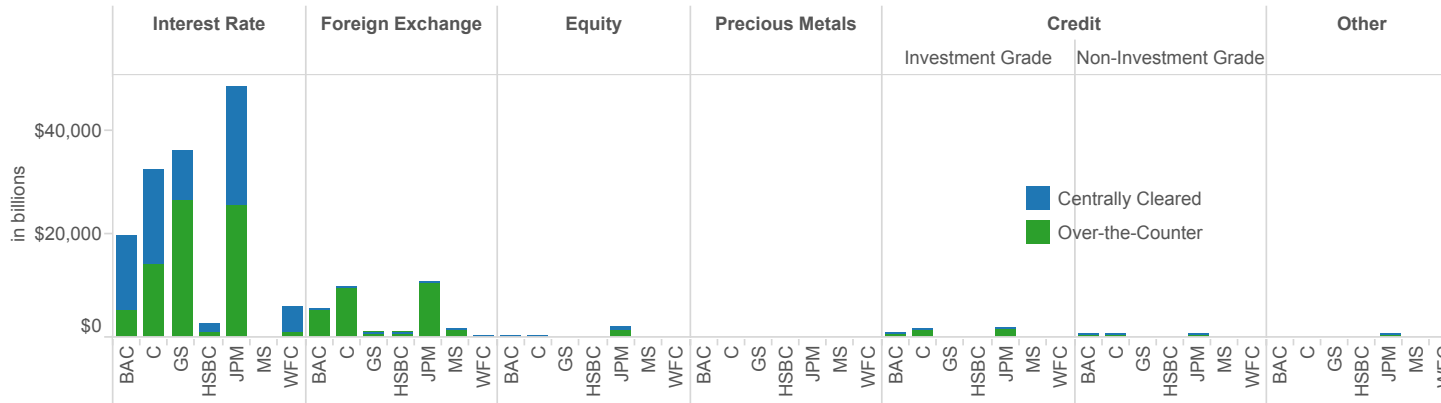
In billions of dollars

	2011				2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Investment-Grade: &lt; 1yr</b>	\$905	\$1,002	\$1,119	\$1,559	\$1,607	\$1,921	\$1,943	\$1,757	\$1,790	\$1,550	\$1,548	\$1,384	\$1,414	\$1,707	\$1,478	\$1,375	\$1,256	\$1,292	\$1,270	\$1,380	\$1,471	\$1,549
<b>Investment-Grade: 1-5 yrs</b>	5,928	6,564	6,508	5,963	5,519	5,567	5,580	5,832	6,168	6,536	6,127	5,661	6,227	5,909	5,722	5,007	4,649	4,450	4,108	3,328	3,400	3,101
<b>Investment-Grade: &gt; 5 yrs</b>	1,614	1,586	1,699	1,220	1,386	1,104	1,200	736	948	455	552	409	577	448	433	382	508	359	520	281	457	262
<b>Total Investment Grade</b>	\$8,447	\$9,151	\$9,326	\$8,742	\$8,513	\$8,592	\$8,723	\$8,326	\$8,906	\$8,541	\$8,228	\$7,455	\$8,218	\$8,064	\$7,633	\$6,764	\$6,413	\$6,101	\$5,898	\$4,990	\$5,328	\$4,911
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Sub-Investment-Grade: &lt; 1yr</b>	833	939	1,024	1,335	1,290	1,353	1,303	1,040	1,090	933	879	765	619	642	671	658	596	562	569	607	622	683
<b>Sub-Investment-Grade: 1-5 yrs</b>	4,217	4,056	4,131	3,797	3,413	3,139	3,349	3,473	3,491	3,656	3,424	2,792	2,127	1,960	1,948	1,887	1,813	1,673	1,518	1,271	1,313	1,159
<b>Sub-Investment-Grade: &gt; 5 yrs</b>	1,403	1,083	1,180	885	835	541	623	352	414	197	262	179	200	160	157	140	194	152	213	119	155	101
<b>Total Sub-Investment Grade</b>	\$6,453	\$6,078	\$6,336	\$6,017	\$5,538	\$5,032	\$5,275	\$4,865	\$4,995	\$4,786	\$4,565	\$3,736	\$2,946	\$2,763	\$2,775	\$2,685	\$2,604	\$2,387	\$2,299	\$1,997	\$2,090	\$1,943

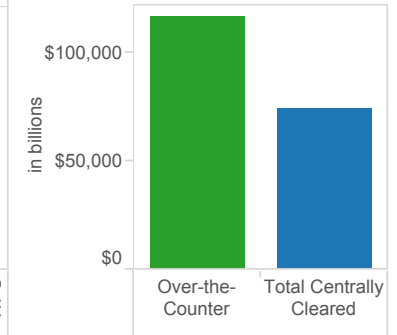
Note: Figures exclude FX contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.  
Source: Call reports

**Graph 15**

**Notional Amounts of Over-The-Counter and Centrally Cleared Derivative Contracts  
Insured U.S. Commercial Banks and Savings Associations**



**ALL BANKS**



**In billions of dollars**

Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other	
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter		
<b>JPM</b>	22,764	25,713	49	10,924	493	1,346	0	17	428	1,562	116	571	61	707
<b>C</b>	18,364	14,032	73	9,939	30	332	2	7	168	1,594	61	482	55	81
<b>BAC</b>	14,412	5,258	50	5,513	55	276	0	0	334	584	102	431	0	19
<b>GS</b>	9,410	26,619	0	825	0	63	0	0	0	85	0	64	0	12
<b>HSBC</b>	1,581	975	0	1,069	0	38	0	6	5	26	10	38	0	0
<b>WFC</b>	4,773	1,091	0	381	29	51	0	1	0	1	4	16	23	21
<b>MS</b>	0	0	4	1,745	0	0	0	0	0	6	0	2	0	0
<b>Grand Total</b>	<b>71,305</b>	<b>73,688</b>	<b>175</b>	<b>30,395</b>	<b>607</b>	<b>2,106</b>	<b>2</b>	<b>30</b>	<b>935</b>	<b>3,858</b>	<b>293</b>	<b>1,604</b>	<b>139</b>	<b>841</b>

Total Centrally Cleared	Over-the-Counter	Total Notional
23,913	40,840	64,753
18,753	26,466	45,219
14,952	12,081	27,034
9,410	27,667	37,078
1,596	2,151	3,748
4,828	1,562	6,390
4	1,753	1,757
<b>73,456</b>	<b>112,521</b>	<b>185,978</b>

**ALL OTHER**

1,086	1,277	2	2,313	0	38	0	0	0	8	0	6	1	39
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1,088	3,681	4,769
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**TOTAL**

72,391	74,965	177	32,708	607	2,144	2	30	935	3,866	293	1,610	140	879
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74,545	116,202	190,747
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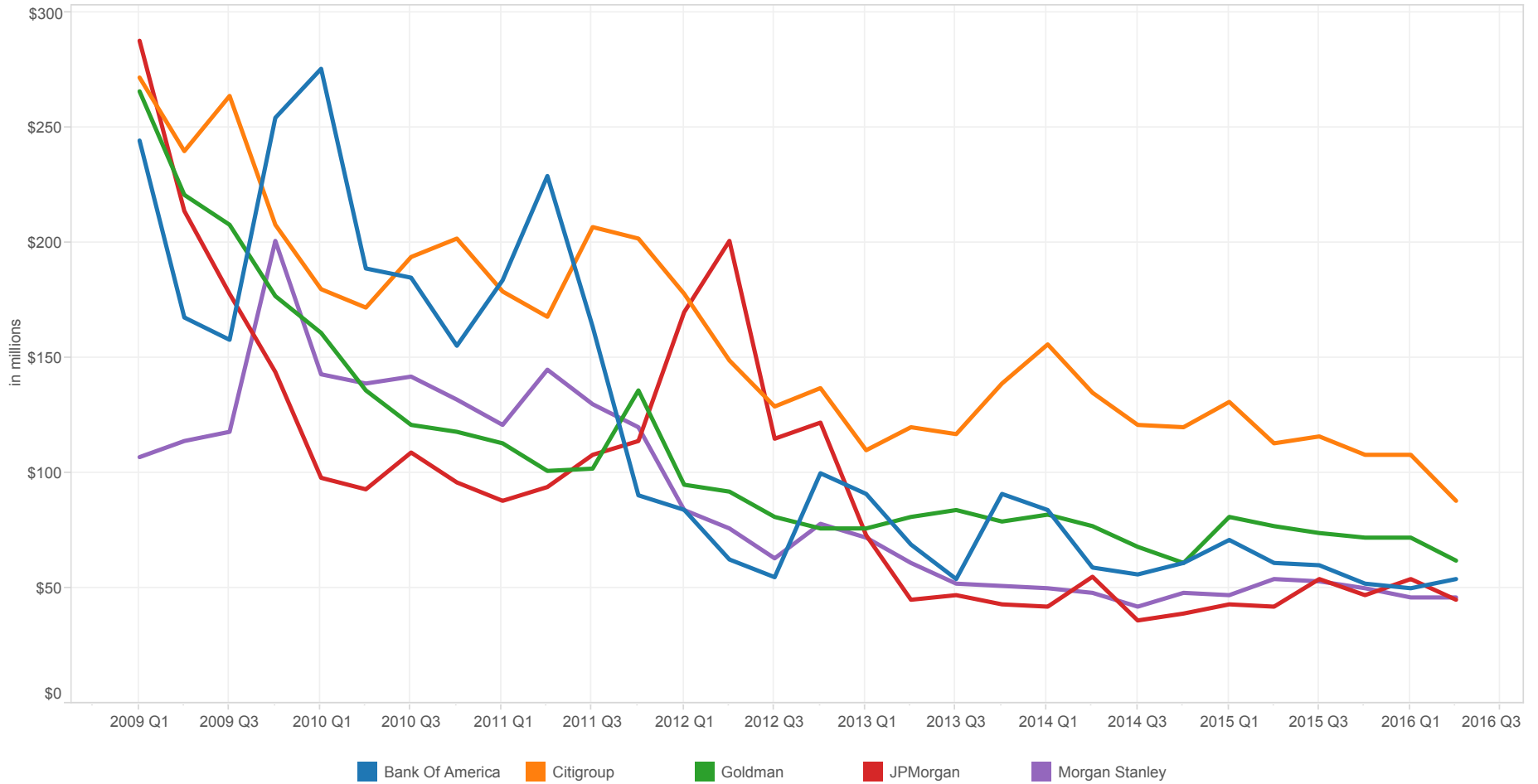
**% of Total**

Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other	
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter		
<b>JPM</b>	47%	53%	0%	100%	27%	73%	0%	100%	22%	78%	17%	83%	8%	92%
<b>C</b>	57%	43%	1%	99%	8%	92%	21%	79%	10%	90%	11%	89%	41%	59%
<b>BAC</b>	73%	27%	1%	99%	17%	83%			36%	64%	19%	81%	0%	100%
<b>GS</b>	26%	74%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%
<b>HSBC</b>	62%	38%	0%	100%	0%	100%	0%	100%	16%	84%	21%	79%	0%	100%
<b>WFC</b>	81%	19%	0%	100%	36%	64%	0%	100%	1%	99%	20%	80%	52%	48%
<b>MS</b>	0%	100%	0%	100%	0%	100%			0%	100%	0%	100%		

Total Centrally Cleared as a % of Total Notional	Total Over-the-Counter as a % of Total Notional
37%	63%
41%	59%
55%	45%
25%	75%
43%	57%
76%	24%
0%	100%

Source: Call reports, Schedule RC-R.

**Graph 16**  
**Value-at-Risk (VaR)**  
**Insured U.S. Commercial Banks and Savings Associations**



In millions of dollars

	2010				2011				2012				2013				2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Bank Of America</b>	\$276	\$189	\$185	\$155	\$184	\$229	\$164	\$90	\$84	\$63	\$55	\$100	\$91	\$69	\$54	\$91	\$84	\$59	\$56	\$61	\$71	\$61	\$60	\$52	\$50	\$54
<b>Citigroup</b>	180	172	194	202	179	168	207	202	178	149	129	137	110	120	117	139	156	135	121	120	131	113	116	108	108	88
<b>Goldman</b>	161	136	121	118	113	101	102	136	95	92	81	76	76	81	84	79	82	77	68	61	81	77	74	72	72	62
<b>JPMorgan</b>	98	93	109	96	88	94	108	114	170	201	115	122	73	45	47	43	42	55	36	39	43	42	54	47	54	45
<b>Morgan Stanley</b>	143	139	142	132	121	145	130	120	84	76	63	78	72	61	52	51	50	48	42	48	47	54	53	50	46	46
<b>Total</b>	858	729	751	703	685	737	711	662	611	581	443	513	422	376	354	403	414	374	323	329	373	347	357	329	330	295

Data Source: 10Q, 10k U.S. Securities and Exchange Commission Reports

TABLE 1

**NOTIONAL AMOUNT OF DERIVATIVE CONTRACTS  
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL FUTURES (EXCH TR)	TOTAL OPTIONS (EXCH TR)	TOTAL FORWARDS (OTC)	TOTAL SWAPS (OTC)	TOTAL OPTIONS (OTC)	TOTAL CREDIT DERIVATIVES (OTC)	SPOT FX
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$1,073,154	\$1,557,081	\$9,606,442	\$29,986,580	\$8,385,209	\$2,673,767	\$785,211
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	1,744,618	1,363,701	5,672,004	30,800,530	8,247,046	2,331,441	922,843
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	1,524,560	2,568,209	4,759,495	26,299,069	6,067,117	153,788	8,282
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	2,012,935	134,502	6,928,682	14,580,309	1,747,726	1,458,483	539,758
5	Wells Fargo Bank NA	SD	1,699,435	6,835,435	135,634	131,637	1,517,762	4,307,722	710,958	31,722	6,066
6	HSBC NA	VA	206,206	4,175,694	89,953	46,478	552,569	2,952,885	370,690	163,119	29,982
7	MORGAN STANLEY BANK NA	UT	135,608	2,122,485	39,506	8,715	479,567	1,008,120	578,235	8,342	62,783
8	STATE STREET BANK&TRUST CO	MA	251,261	1,389,582	10,882	0	1,347,622	5,006	26,072	0	74,192
9	BANK OF NEW YORK MELLON	NY	298,719	1,017,825	26,707	62	556,249	383,430	51,061	316	60,290
10	PNC BANK NATIONAL ASSN	DE	350,224	359,823	19,461	14,000	22,226	270,975	26,819	6,343	1,081
11	SUNTRUST BANK	GA	194,679	275,572	29,734	14,291	21,310	142,513	62,838	4,885	225
12	NORTHERN TRUST CO	IL	121,145	265,237	0	0	250,017	14,082	1,089	49	20,596
13	U S BANK NATIONAL ASSN	OH	433,463	261,106	6,482	3,580	60,155	161,350	24,669	4,870	2,030
14	TD BANK NATIONAL ASSN	DE	255,727	174,778	0	0	8,256	165,135	736	652	6
15	MUFG UNION BANK NA	CA	115,975	145,615	4,074	0	67,874	65,082	8,575	10	351
16	REGIONS BANK	AL	125,256	86,432	4,151	0	19,324	56,239	4,424	2,295	64
17	CAPITAL ONE NATIONAL ASSN	VA	278,661	79,038	86	0	2,350	74,398	117	2,088	15
18	KEYBANK NATIONAL ASSN	OH	99,138	71,872	6,283	0	6,355	52,457	6,301	477	674
19	FIFTH THIRD BANK	OH	141,112	66,227	371	61	6,240	43,780	13,208	2,567	256
20	BRANCH BANKING&TRUST CO	NC	217,159	62,750	376	0	11,471	44,154	6,748	0	24
21	CITIZENS BANK NATIONAL ASSN	RI	112,992	60,060	0	0	10,909	41,668	5,071	2,413	65
22	BOKF NATIONAL ASSN	OK	31,817	47,083	180	476	40,651	2,946	2,830	0	24
23	COMPASS BANK	AL	86,738	36,226	221	0	1,615	26,149	8,241	0	23
24	HUNTINGTON NATIONAL BANK	OH	73,864	31,397	83	0	2,664	26,314	1,079	1,257	7
25	CAPITAL ONE BANK USA NA	VA	103,537	31,218	0	0	8,249	22,969	0	0	93
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,567,923	\$189,271,906	\$6,729,452	\$5,842,793	\$31,960,057	\$111,533,862	\$26,356,860	\$6,848,883	\$2,514,942
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,461,491	560,605	9,862	1,901	90,419	366,778	87,214	4,432	1,859
TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	6,739,314	5,844,694	32,050,476	111,900,639	26,444,074	6,853,314	2,516,800

Note: Credit derivatives have been included in the sum of total derivatives. Credit derivatives have been included as an "over the counter" category, although the Call report does not differentiate by market currently.

Note: Before the first quarter of 1995 total derivatives included spot FX. Beginning in that quarter, spot FX has been reported separately.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-L

TABLE 2

**NOTIONAL AMOUNT OF DERIVATIVE CONTRACTS (HOLDING COMPANIES)  
TOP 25 HOLDING COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	HOLDING COMPANY	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	FUTURES (EXCH TR)	OPTIONS (EXCH TR)	FORWARDS (OTC)	SWAPS (OTC)	OPTIONS (OTC)	CREDIT DERIVATIVES (OTC)	SPOT FX
1	CITIGROUP INC.	NY	\$1,818,771	\$53,593,097	\$1,881,387	\$6,083,240	\$6,589,893	\$28,879,167	\$7,952,712	\$2,206,698	\$915,163
2	JPMORGAN CHASE & CO.	NY	2,466,096	52,702,313	1,108,673	1,661,080	9,929,274	29,288,488	8,026,371	2,688,427	770,586
3	GOLDMAN SACHS GROUP, INC., THE	NY	896,870	51,918,707	1,870,604	3,728,967	7,585,456	29,010,669	7,984,421	1,738,590	294,620
4	BANK OF AMERICA CORPORATION	NC	2,189,811	42,314,712	2,320,571	803,076	9,942,091	23,756,973	3,712,477	1,779,524	447,614
5	MORGAN STANLEY	NY	828,873	29,653,434	1,672,900	1,425,969	3,688,787	16,361,710	5,326,185	1,177,883	43,158
6	HSBC NORTH AMERICA HOLDINGS INC.	NY	295,535	10,566,970	333,736	504,568	554,805	8,633,793	376,949	163,119	29,982
7	WELLS FARGO & COMPANY	CA	1,889,235	6,747,811	146,558	156,739	1,545,151	4,161,528	706,969	30,866	6,045
8	STATE STREET CORPORATION	MA	255,397	1,398,393	11,723	0	1,347,797	12,765	26,072	37	74,192
9	BANK OF NEW YORK MELLON CORPORATION, THE	NY	372,351	1,039,186	27,419	8,897	589,541	361,952	51,061	316	60,205
10	RBC USA HOLDCO CORPORATION	NY	151,711	503,687	174,748	126,533	159,672	41,303	679	751	131
11	PNC FINANCIAL SERVICES GROUP, INC., THE	PA	361,528	355,644	19,603	14,000	22,249	264,481	28,969	6,343	1,081
12	SUNTRUST BANKS, INC.	GA	199,276	273,830	29,823	14,291	21,310	141,513	61,838	5,055	225
13	NORTHERN TRUST CORPORATION	IL	121,510	264,487	0	0	250,017	13,332	1,089	49	20,596
14	U.S. BANCORP	MN	438,463	263,871	6,482	3,580	60,363	164,157	24,669	4,620	2,030
15	TD GROUP US HOLDINGS LLC	DE	276,317	187,293	0	0	10,998	174,907	736	652	6
16	MUFG AMERICAS HOLDINGS CORPORATION	NY	117,205	145,615	4,074	0	67,874	65,082	8,575	10	351
17	CAPITAL ONE FINANCIAL CORPORATION	VA	339,248	119,705	86	0	10,764	106,650	117	2,088	108
18	REGIONS FINANCIAL CORPORATION	AL	126,378	84,647	4,151	0	19,324	54,454	4,424	2,295	64
19	BB&T CORPORATION	NC	221,859	79,061	376	0	20,373	51,563	6,748	0	24
20	KEYCORP	OH	101,407	75,475	6,283	0	6,355	55,148	7,222	467	674
21	CITIZENS FINANCIAL GROUP, INC.	RI	145,568	68,857	0	0	10,911	49,440	5,672	2,834	65
22	FIFTH THIRD BANCORP	OH	143,625	67,921	371	61	6,240	45,474	13,208	2,567	256
23	SANTANDER HOLDINGS USA, INC.	MA	126,502	56,399	0	0	1,224	35,227	19,936	12	10
24	AMERICAN EXPRESS COMPANY	NY	159,632	49,259	0	0	29,003	20,250	6	0	287
25	BOK FINANCIAL CORPORATION	OK	32,050	47,083	180	476	40,651	2,946	2,830	0	24
TOP 25 HOLDING COMPANIES WITH DERIVATIVES			\$14,075,219	\$252,577,457	\$9,619,749	\$14,531,477	\$42,510,123	\$141,752,971	\$34,349,935	\$9,813,202	\$2,667,496

Note: Currently, the Y-9 report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total derivatives.

Note: Before to the first quarter of 2005, total derivatives included spot FX. Beginning in that quarter, spot FX has been reported separately.

Note: Numbers may not total due to rounding.

Source: Consolidated Financial Statements for Bank Holding Companies, FR Y- 9, Schedule HC-L

TABLE 3

**DISTRIBUTION OF DERIVATIVE CONTRACTS**  
**TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	PERCENT EXCH TRADED CONTRACTS	PERCENT OTC CONTRACTS	PERCENT INT RATE CONTRACTS	PERCENT FOREIGN EXCH CONTRACTS	PERCENT OTHER CONTRACTS	PERCENT CREDIT DERIVATIVES
					(%)	(%)	(%)	(%)	(%)	(%)
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	4.9	95.1	71.7	18.9	4.3	5.0
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	6.2	93.8	70.9	22.7	1.7	4.6
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	9.9	90.1	94.1	5.4	0.2	0.4
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	8.0	92.0	72.7	20.6	1.3	5.4
5	Wells Fargo Bank NA	SD	1,699,435	6,835,435	3.9	96.1	90.8	5.7	3.0	0.5
6	HSBC NA	VA	206,206	4,175,694	3.3	96.7	66.3	27.6	2.2	3.9
7	MORGAN STANLEY BANK NA	UT	135,608	2,122,485	2.3	97.7	1.8	97.8	0.0	0.4
8	STATE STREET BANK&TRUST CO	MA	251,261	1,389,582	0.8	99.2	1.0	97.2	1.9	0.0
9	BANK OF NEW YORK MELLON	NY	298,719	1,017,825	2.6	97.4	46.6	53.3	0.1	0.0
10	PNC BANK NATIONAL ASSN	DE	350,224	359,823	9.3	90.7	93.2	4.1	0.9	1.8
11	SUNTRUST BANK	GA	194,679	275,572	16.0	84.0	77.2	2.8	18.3	1.8
12	NORTHERN TRUST CO	IL	121,145	265,237	0.0	100.0	4.9	95.0	0.1	0.0
13	U S BANK NATIONAL ASSN	OH	433,463	261,106	3.9	96.1	79.0	18.9	0.3	1.9
14	TD BANK NATIONAL ASSN	DE	255,727	174,778	0.0	100.0	92.0	7.6	0.0	0.4
15	MUFG UNION BANK NA	CA	115,975	145,615	2.8	97.2	90.7	4.9	4.4	0.0
16	REGIONS BANK	AL	125,256	86,432	4.8	95.2	94.1	2.1	1.2	2.7
17	CAPITAL ONE NATIONAL ASSN	VA	278,661	79,038	0.1	99.9	94.4	0.6	2.3	2.6
18	KEYBANK NATIONAL ASSN	OH	99,138	71,872	8.7	91.3	89.8	9.0	0.6	0.7
19	FIFTH THIRD BANK	OH	141,112	66,227	0.7	99.3	69.7	20.7	5.7	3.9
20	BRANCH BANKING&TRUST CO	NC	217,159	62,750	0.6	99.4	99.1	0.9	0.0	0.0
21	CITIZENS BANK NATIONAL ASSN	RI	112,992	60,060	0.0	100.0	80.3	15.7	0.0	4.0
22	BOKF NATIONAL ASSN	OK	31,817	47,083	1.4	98.6	93.1	3.0	3.9	0.0
23	COMPASS BANK	AL	86,738	36,226	0.6	99.4	91.6	3.8	4.6	0.0
24	HUNTINGTON NATIONAL BANK	OH	73,864	31,397	0.3	99.7	87.5	5.0	3.5	4.0
25	CAPITAL ONE BANK USA NA	VA	103,537	31,218	0.0	100.0	73.6	26.4	0.0	0.0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,567,923	\$189,271,906	\$12,572,245	\$176,699,661	\$143,277,639	\$35,154,633	\$60	\$6,848,883
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,461,491	560,605	11,763	548,842	516,334	29,925	1,360	4,432
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	12,584,008	177,248,503	143,793,973	35,184,558	1,421	6,853,314
				(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				99.7	6.6	93.1	75.5	18.5	0.0	3.6
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				0.3	0.0	0.3	0.3	0.0	0.0	0.0
TOTAL FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				100.0	6.6	93.4	75.7	18.5	0.0	3.6

Note: Currently, the call report does not differentiate credit derivatives by over the counter or exchange traded. Credit derivatives have been included in the "over the counter" category as well as in the sum of total derivatives here.

Note: "FX" does not include spot FX.

Note: "Other" is defined as the sum of commodity and equity contracts.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-L

TABLE 4

**CREDIT EQUIVALENT EXPOSURES**  
**TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL RISK-BASED CAPITAL	BILATERALLY		TOTAL CREDIT (%)	
						NETTED CURRENT CREDIT EXPOSURE	POTENTIAL FUTURE EXPOSURE	EXPOSURE FROM ALL CONTRACTS	TOTAL CREDIT EXPOSURE TO CAPITAL
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$181,145	\$182,934	\$218,187	\$401,121	221
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	151,297	103,655	170,856	274,511	181
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	26,133	72,253	49,860	122,113	467
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	165,264	50,312	77,619	127,931	77
5	Wells Fargo Bank NA	SD	1,699,435	6,835,435	143,686	28,655	19,965	48,620	34
6	HSBC NA	VA	206,206	4,175,694	27,076	10,963	14,839	25,802	95
7	MORGAN STANLEY BANK NA	UT	135,608	2,122,485	16,321	3,333	4,484	7,817	48
8	STATE STREET BANK&TRUST CO	MA	251,261	1,389,582	17,091	10,150	8,632	18,782	110
9	BANK OF NEW YORK MELLON	NY	298,719	1,017,825	18,424	7,838	5,195	13,033	71
10	PNC BANK NATIONAL ASSN	DE	350,224	359,823	36,299	4,768	540	5,308	15
11	SUNTRUST BANK	GA	194,679	275,572	21,097	2,260	2,887	5,147	24
12	NORTHERN TRUST CO	IL	121,145	265,237	9,325	2,713	1,932	4,645	50
13	U S BANK NATIONAL ASSN	OH	433,463	261,106	43,456	1,855	4,633	6,488	15
14	TD BANK NATIONAL ASSN	DE	255,727	174,778	22,286	4,277	1,404	5,681	25
15	MUFG UNION BANK NA	CA	115,975	145,615	14,275	1,723	333	2,056	14
16	REGIONS BANK	AL	125,256	86,432	14,301	953	579	1,532	11
17	CAPITAL ONE NATIONAL ASSN	VA	278,661	79,038	23,769	1,841	921	2,762	12
18	KEYBANK NATIONAL ASSN	OH	99,138	71,872	11,161	1,201	287	1,488	13
19	FIFTH THIRD BANK	OH	141,112	66,227	16,376	1,315	844	2,159	13
20	BRANCH BANKING&TRUST CO	NC	217,159	62,750	22,905	1,405	819	2,225	10
21	CITIZENS BANK NATIONAL ASSN	RI	112,992	60,060	13,428	1,242	493	1,735	13
22	BOKF NATIONAL ASSN	OK	31,817	47,083	2,746	546	157	703	26
23	COMPASS BANK	AL	86,738	36,226	8,913	794	294	1,088	12
24	HUNTINGTON NATIONAL BANK	OH	73,864	31,397	7,552	448	274	721	10
25	CAPITAL ONE BANK USA NA	VA	103,537	31,218	13,424	595	157	752	6
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,567,923	\$189,271,906	\$1,027,750	\$498,029	\$586,192	\$1,084,220	105
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,461,491	560,605	480,021	7,701	4,308	12,009	3
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	1,507,771	505,730	590,500	1,096,229	73

Note: Total credit exposure is defined as the credit equivalent amount from derivative contracts (RC-R column B lines 20 and 21), which is the sum of netted current credit exposure and PFE.

Note: The total credit exposure to capital ratio is calculated using risk based capital (tier 1 plus tier 2 capital).

Note: Currently, the Call report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total derivatives here.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-R.

TABLE 5

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

<b>RANK</b>	<b>BANK NAME</b>	<b>STATE</b>	<b>TOTAL ASSETS</b>	<b>TOTAL DERIVATIVES</b>	<b>TOTAL HELD FOR TRADING &amp; MTM</b>	<b>% HELD FOR TRADING &amp; MTM</b>	<b>TOTAL NOT FOR TRADING MTM</b>	<b>% NOT FOR TRADING MTM</b>
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$50,608,466	\$50,252,984	99.3	\$355,482	0.7
2	CITIBANK NATIONAL ASSN	SD	1,365,660	47,827,899	47,732,788	99.8	95,111	0.2
3	GOLDMAN SACHS BANK USA	NY	160,666	41,218,450	41,189,921	99.9	28,529	0.1
4	BANK OF AMERICA NA	NC	1,657,878	25,404,154	24,397,329	96.0	1,006,825	4.0
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$165,058,969	\$163,573,022	99.1	\$1,485,947	0.9
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	17,920,228	16,397,105	91.5	1,523,123	8.5
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	182,979,197	179,970,127	98.4	3,009,070	1.6

Note: Currently, the call report does not differentiate between traded and not-traded credit derivatives. Credit derivatives have been excluded from the sum of total derivatives here.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-L



TABLE 6

**GROSS FAIR VALUES OF DERIVATIVE CONTRACTS  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TRADING		NOT FOR TRADING		CREDIT DERIVATIVES	
					GROSS POSITIVE FAIR VALUE*	GROSS NEGATIVE FAIR VALUE**	GROSS POSITIVE FAIR VALUE*	GROSS NEGATIVE FAIR VALUE**	GROSS POSITIVE FAIR VALUE*	GROSS NEGATIVE FAIR VALUE**
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$1,259,324	\$1,222,088	\$3,914	\$5,915	\$39,601	\$39,463
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	811,290	796,406	1,018	2,259	35,941	35,875
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	1,089,789	1,058,858	885	4	3,173	2,609
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	413,616	410,984	42,511	47,191	18,786	18,810
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$171,676,448	\$3,574,019	\$3,488,336	\$48,328	\$55,369	\$97,501	\$96,757
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	18,156,063	323,644	322,146	32,226	22,459	3,490	3,364
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	3,897,663	3,810,482	80,554	77,828	100,991	100,121

Note: Currently, the call report does not differentiate between traded and non-traded credit derivatives. Credit derivatives have been included in the sum of total derivatives here. Numbers may not sum due to rounding.

\*Market value of contracts that have a positive fair value as of the end of the quarter.

\*\*Market value of contracts that have a negative fair value as of the end of the quarter.

Source: Call reports, Schedule RC-L

TABLE 7

**TRADING REVENUES FROM CASH INSTRUMENTS AND DERIVATIVES**  
**TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**JUNE 30, 2016, MILLIONS OF DOLLARS**  
**NOTE: REVENUE FIGURES ARE FOR THE QUARTER (NOT YEAR-TO-DATE)**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL TRADING REV FROM CASH & OFF BAL SHEET POSITIONS	TRADING REV FROM INT RATE POSITIONS	TRADING REV FROM FOREIGN EXCH POSITIONS	TRADING REV FROM EQUITY POSITIONS	TRADING REV FROM COMMOD & OTH POSITIONS	TRADING REV FROM CREDIT POSITIONS
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$2,813	\$1,164	\$561	\$655	(\$15)	\$448
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	1,448	898	659	(13)	37	(133)
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	(75)	(917)	1,198	(21)	0	(335)
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	1,163	504	322	191	44	102
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$171,676,448	\$5,349	\$1,649	\$2,740	\$812	\$66	\$82
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	18,156,063	1,532	255	996	160	95	26
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	6,881	1,904	3,736	972	161	108

Note: Effective in the first quarter of 2007, trading revenues from credit exposures are reported separately, along with the four other types of exposures. The total derivatives column includes credit exposures.

Note: Trading revenue is defined here as "trading revenue from cash instruments and off balance sheet derivative instruments."

Note: Numbers may not sum due to rounding.

Source: Call reports, Schedule RI

TABLE 8

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	INT RATE MATURITY < 1 YR	INT RATE MATURITY 1 - 5 YRS	INT RATE MATURITY > 5 YRS	INT RATE ALL MATURITIES	FX and GOLD MATURITY < 1 YR	FX and GOLD MATURITY 1 - 5 YRS	FX and GOLD MATURITY > 5 YRS	FX and GOLD ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$22,959,628	\$15,136,138	\$10,381,710	\$48,477,476	\$8,066,930	\$1,969,634	\$936,582	\$10,973,146
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	15,035,531	10,536,780	6,823,906	32,396,217	8,291,118	994,729	725,802	10,011,649
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	13,754,186	11,987,828	10,286,853	36,028,867	480,446	192,197	152,307	824,950
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	10,871,357	5,469,132	3,328,980	19,669,469	4,726,337	624,660	211,797	5,562,794
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$171,676,448	\$62,620,702	\$43,129,878	\$30,821,449	\$136,572,029	\$21,564,831	\$3,781,220	\$2,026,488	\$27,372,539
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	18,156,063	3,802,697	3,872,019	3,108,992	10,783,708	5,056,731	331,034	124,932	5,512,697
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	66,423,399	47,001,897	33,930,441	147,355,737	26,621,562	4,112,254	2,151,420	32,885,236

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as FX contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps. Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.

Note: Numbers may not add due to rounding.

Note: Effective 2015 Q1, the reporting form and call report instructions changed. Schedule RC-R now requires banks to report FX (FX) and gold notionals in aggregate, rather than separately.

Source: Call reports, Schedule RC-R

TABLE 9

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY**  
**TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**JUNE 30, 2016, MILLIONS OF DOLLARS**

<b>RANK</b>	<b>BANK NAME</b>	<b>STATE</b>	<b>TOTAL ASSETS</b>	<b>TOTAL DERIVATIVES</b>	<b>PREC METALS MATURITY &lt; 1 YR</b>	<b>PREC METALS MATURITY 1 - 5 YRS</b>	<b>PREC METALS MATURITY &gt; 5 YRS</b>	<b>PREC METALS ALL MATURITIES</b>
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$14,877	\$1,812	\$16	\$16,705
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	7,483	780	0	8,263
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	0	0	0	0
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	0	0	0	0
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$171,676,448	\$22,360	\$2,592	\$16	\$24,968
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	18,156,063	5,828	1,090	2	6,920
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	28,188	3,682	18	31,888
<p>Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as FX contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps. Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.</p> <p>Note: Numbers may not total due to rounding.</p> <p>Source: Call reports, Schedule RC-R</p>								

TABLE 10

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY**  
**TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	OTHER COMM MATURITY < 1 YR	OTHER COMM MATURITY 1 - 5 YRS	OTHER COMM MATURITY > 5 YRS	OTHER COMM ALL MATURITIES	EQUITY MATURITY < 1 YR	EQUITY MATURITY 1 - 5 YRS	EQUITY MATURITY > 5 YRS	EQUITY ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$676,131	\$78,537	\$14,309	\$768,977	\$1,252,077	\$487,471	\$99,770	\$1,839,318
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	89,782	41,785	4,531	136,098	248,212	101,104	12,593	361,909
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	10,563	1,508	0	12,071	37,947	15,260	9,317	62,524
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	13,888	4,911	63	18,862	273,969	55,968	1,380	331,317
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$171,676,448	\$790,364	\$126,741	\$18,903	\$936,008	\$1,812,205	\$659,803	\$123,060	\$2,595,068
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	18,156,063	36,323	45,790	1,247	83,360	94,891	50,144	11,003	156,038
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	826,687	172,531	20,150	1,019,368	1,907,096	709,947	134,063	2,751,106

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as FX contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps.

Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-R

TABLE 11

**NOTIONAL AMOUNTS OF CREDIT DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERIVATIVES	CREDIT DERIVATIVES INVESTMENT GRADE				CREDIT DERIVATIVES SUB-INVESTMENT GRADE			
						MATURITY < 1 YR	MATURITY 1 - 5 YRS	MATURITY > 5 YRS	ALL MATURITIES	MATURITY < 1 YR	MATURITY 1 - 5 YRS	MATURITY > 5 YRS	ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$53,282,233	\$2,673,767	\$612,036	\$1,274,396	\$99,765	\$1,986,197	\$239,519	\$419,236	\$28,815	\$687,570
2	CITIBANK NATIONAL ASSN	SD	1,365,660	50,159,340	2,331,441	570,158	1,110,739	101,115	1,782,012	163,033	361,402	24,994	549,429
3	GOLDMAN SACHS BANK USA	NY	160,666	41,372,238	153,788	24,398	47,081	13,919	85,398	24,361	34,368	9,661	68,390
4	BANK OF AMERICA NA	NC	1,657,878	26,862,637	1,458,483	316,521	604,081	38,485	959,087	214,576	262,278	22,542	499,396
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,235,208	\$171,676,448	\$6,617,479	\$1,523,113	\$3,036,297	\$253,284	\$4,812,694	\$641,489	\$1,077,284	\$86,012	\$1,804,785
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,794,206	18,156,063	235,835	25,576	64,262	8,227	98,065	41,520	81,595	14,655	137,770
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	189,832,511	6,853,314	1,548,689	3,100,559	261,511	4,910,759	683,009	1,158,879	100,667	1,942,555

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as FX contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps.

Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-L and RC-R

TABLE 12

**DISTRIBUTION OF CREDIT DERIVATIVE CONTRACTS HELD FOR TRADING  
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
JUNE 30, 2016, MILLIONS OF DOLLARS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERIVATIVES	TOTAL CREDIT DERIVATIVES				SOLD					
						BOUGHT	SOLD	CREDIT DEFAULT SWAPS	TOTAL RETURN SWAPS	CREDIT OPTIONS	OTHER CREDIT DERIVATIVES	CREDIT DEFAULT SWAPS	TOTAL RETURN SWAPS	CREDIT OPTIONS	OTHER CREDIT DERIVATIVES
1	JPMORGAN CHASE BANK NA	OH	\$2,051,004	\$50,608,466	\$2,673,767	\$1,366,422	\$1,307,345	\$1,297,577	\$15,637	\$48,357	\$4,851	\$1,259,172	\$2,369	\$45,691	\$113
2	CITIBANK NATIONAL ASSN	SD	1,365,660	47,827,899	2,331,441	1,191,080	1,140,361	1,082,289	40,864	67,927	0	1,053,520	25,086	61,755	0
3	GOLDMAN SACHS BANK USA	NY	160,666	41,218,450	153,788	85,732	68,056	81,993	3,125	534	80	65,314	2,682	60	0
4	BANK OF AMERICA NA	NC	1,657,878	25,404,154	1,458,483	727,743	730,740	703,977	15,796	7,970	0	696,211	13,225	21,304	0
5	Wells Fargo Bank NA	SD	1,699,435	6,803,713	31,722	21,233	10,489	4,651	0	0	16,582	3,870	0	33	6,586
6	HSBC NA	VA	206,206	4,012,575	163,119	85,036	78,082	76,567	8,469	0	0	74,906	3,176	0	0
7	MORGAN STANLEY BANK NA	UT	135,608	2,114,143	8,342	8,342	0	8,342	0	0	0	0	0	0	0
8	STATE STREET BANK&TRUST CO	MA	251,261	1,389,582	0	0	0	0	0	0	0	0	0	0	0
9	BANK OF NEW YORK MELLON	NY	298,719	1,017,509	316	316	0	316	0	0	0	0	0	0	0
10	PNC BANK NATIONAL ASSN	DE	350,224	353,480	6,343	2,616	3,727	59	0	0	2,558	0	0	0	3,727
11	SUNTRUST BANK	GA	194,679	270,686	4,885	2,701	2,184	520	2,175	0	6	0	2,175	0	8
12	NORTHERN TRUST CO	IL	121,145	265,188	49	49	0	49	0	0	0	0	0	0	0
13	U S BANK NATIONAL ASSN	OH	433,463	256,236	4,870	1,595	3,275	285	0	0	1,310	250	0	0	3,025
14	TD BANK NATIONAL ASSN	DE	255,727	174,126	652	647	5	647	0	0	0	5	0	0	0
15	MUFG UNION BANK NA	CA	115,975	145,605	10	10	0	10	0	0	0	0	0	0	0
16	REGIONS BANK	AL	125,256	84,138	2,295	591	1,704	25	0	0	566	0	0	0	1,704
17	CAPITAL ONE NATIONAL ASSN	VA	278,661	76,950	2,088	675	1,413	0	0	0	675	0	0	0	1,413
18	KEYBANK NATIONAL ASSN	OH	99,138	71,395	477	349	128	349	0	0	0	35	93	0	0
19	FIFTH THIRD BANK	OH	141,112	63,660	2,567	190	2,377	0	0	0	190	0	0	0	2,377
20	BRANCH BANKING&TRUST CO	NC	217,159	62,750	0	0	0	0	0	0	0	0	0	0	0
21	CITIZENS BANK NATIONAL ASSN	RI	112,992	57,648	2,413	0	2,413	0	0	0	0	0	0	0	2,413
22	BOKF NATIONAL ASSN	OK	31,817	47,083	0	0	0	0	0	0	0	0	0	0	0
23	COMPASS BANK	AL	86,738	36,226	0	0	0	0	0	0	0	0	0	0	0
24	HUNTINGTON NATIONAL BANK	OH	73,864	30,141	1,257	857	400	0	0	0	857	0	0	0	400
25	CAPITAL ONE BANK USA NA	VA	103,537	31,218	0	0	0	0	0	0	0	0	0	0	0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,567,923	\$182,423,023	\$6,848,883	\$3,496,185	\$3,352,698	\$3,257,655	\$86,067	\$124,788	\$27,675	\$3,153,283	\$48,807	\$128,843	\$21,765
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,461,491	556,173	4,432	1,675	2,757	198	78	0	1,399	255	2	0	2,500
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			15,029,414	182,979,197	6,853,314	3,497,860	3,355,455	3,257,853	86,145	124,788	29,073	3,153,538	48,809	128,843	24,265
					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					99.9	51.0	48.9	47.5	1.3	1.8	0.4	46.0	0.7	1.9	0.3
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					100.0	51.0	49.0	47.5	1.3	1.8	0.4	46.0	0.7	1.9	0.4

Note: Credit derivatives have been excluded from the sum of total derivatives here.

Note: Numbers may not total due to rounding.

Source: Call reports, Schedule RC-L