

## Quarterly Report on Bank Trading and Derivatives Activities

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Fourth Quarter 2015

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### Executive Summary

- Insured U.S. commercial banks and savings associations reported trading revenue of \$4.3 billion in the fourth quarter of 2015, \$1.0 billion lower (19.6 percent) than the previous quarter, and \$0.2 billion lower (4.3 percent) than a year earlier (see page 4).
- Credit exposure from derivatives decreased in the fourth quarter of 2015. Net current credit exposure (NCCE) decreased \$49.7 billion, or 11.2 percent, to \$395.0 billion (see page 11).
- Trading risk, as measured by Value-at-Risk (VaR), declined in the fourth quarter of 2015. Average VaR across the top five dealer banking companies decreased \$28 million, or 7.8 percent, to \$329 million (see page 14).
- Credit derivatives, which represented 3.9 percent of total derivatives notionals, declined 14.8 percent from the previous quarter to \$7.0 trillion (see page 16).
- Notional derivatives fell \$11.1 trillion, or 5.8 percent, to \$181.0 trillion, the lowest level since the first quarter of 2008. Notionals have declined in each of the past five quarters (see page 17).
- Derivative contracts remained concentrated in interest rate products, which represented 76.5 percent of total derivative notional amounts (see page 18).

The Office of the Comptroller of the Currency's (OCC) quarterly report on bank trading and derivatives activities is based on call report information provided by all insured U.S. commercial banks, savings associations and trust companies (collectively, banks), reports filed by U.S. financial holding companies, and other published data. Beginning in the first quarter of 2012, savings associations reported their financial results in the call reports. As a result, their trading and derivatives activity is now included in the OCC's quarterly derivatives report.

A total of 1,410 insured U.S. commercial banks and savings associations reported derivatives activities at the end of the fourth quarter of 2015, five fewer than the previous quarter. A small group of large financial institutions continues to dominate derivatives activity in the U.S. commercial banking system. During the fourth quarter of 2015, four large commercial banks represented 90.8 percent of the total banking industry notional amounts and 83.2 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 derivatives 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 derivatives 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 \$4.3 billion in trading revenue in the fourth quarter of 2015, \$1.0 billion lower (19.6 percent) than the previous quarter, and \$0.2 billion lower (4.3 percent) than a year earlier (see table 1).

Relative to the third quarter of 2015, the \$1.0 billion decline in trading revenue primarily reflects a decline in combined interest rate and foreign exchange (FX) revenue, which fell \$0.9 billion to \$3.6 billion during the quarter. Declines in revenue from commodity and credit contracts negated gains in equity contracts.

**Table 1. Quarterly Bank Trading Revenue, in \$ Millions**

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	\$155	\$2,578	(\$2,423)	-94.0%	\$664	(\$509)	-76.7%
Foreign Exchange	\$3,401	\$1,931	\$1,470	76.1%	\$2,902	\$499	17.2%
Equity	\$747	\$56	\$692	1244.3%	\$650	\$97	15.0%
Commodity & Other	\$198	\$402	(\$204)	-50.8%	\$335	(\$137)	-40.9%
Credit	(\$222)	\$357	(\$578)	-162.2%	(\$79)	(\$142)	-179.4%
<b>Total Trading Revenue</b>	<b>\$4,279</b>	<b>\$5,323</b>	<b>(\$1,044)</b>	<b>-19.6%</b>	<b>\$4,471</b>	<b>(\$192)</b>	<b>-4.3%</b>

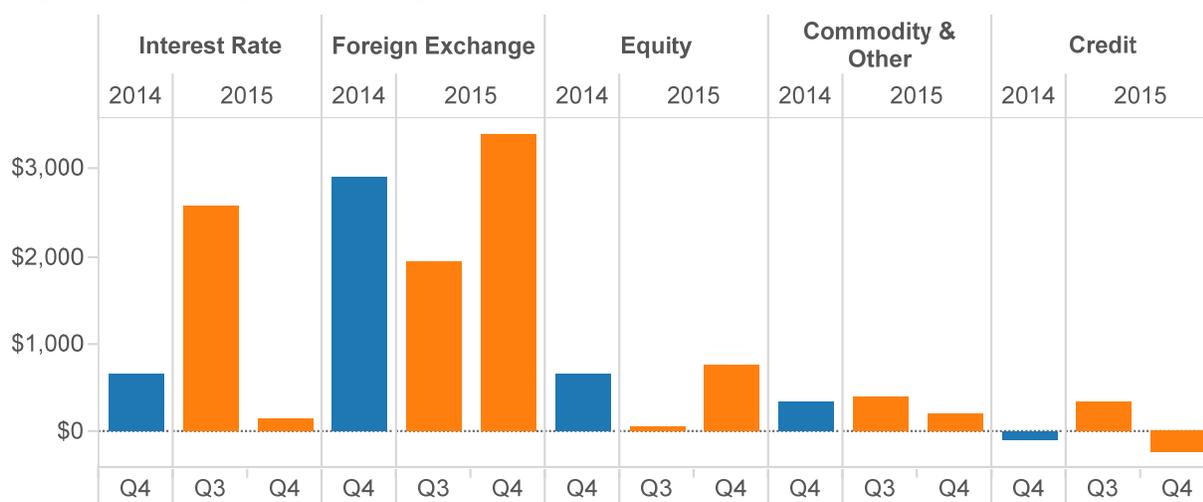
Source: Call Report, Schedule RI

Trading revenue in the fourth quarter was the third highest fourth quarter since 2000 (see table 2). It was \$3.1 billion higher than the average past twelve fourth quarters.

**Table 2. Quarterly Bank Trading Revenue, Historic Comparisons, in \$ Millions**

	4Q2015	Average Past 12 Q4's	Past 8 Quarter Average	Past 8 Quarter Hi	Past 8 Quarter Low	Since 2000 Average	Max All	Min All
Interest Rate	\$155	\$302	\$1,356	\$3,406	(\$819)	\$1,623	\$9,291	(\$5,282)
Foreign Exchange	\$3,401	\$1,945	\$2,704	\$4,830	\$855	\$1,775	\$4,830	(\$1,069)
Equity	\$747	\$331	\$592	\$797	\$56	\$540	\$1,830	(\$1,059)
Commodity & Other	\$198	\$125	\$366	\$672	\$129	\$222	\$789	(\$307)
Credit	(\$222)	(\$1,517)	\$361	\$756	(\$222)	(\$226)	\$2,727	(\$10,237)
<b>Total Trading Revenue</b>	<b>\$4,279</b>	<b>\$1,185</b>	<b>\$5,378</b>	<b>\$7,669</b>	<b>\$2,911</b>	<b>\$3,934</b>	<b>\$10,217</b>	<b>(\$10,580)</b>

Source: Call Report, Schedule RI

**Figure 1. Quarterly Bank Trading Revenue, in \$ Millions**


Source: Call Report, Schedule RI

For the full year, insured U.S. commercial banks and savings associations reported \$22.8 billion in trading revenue, relatively unchanged from 2014 (see table 3). Increases in revenue from interest rate and FX contracts, which increased by a combined \$1.3 billion in 2015, offset declines in all other asset classes.

**Table 3. Year-to-Date Bank Trading Revenue, in \$ Millions**

	4Q2015	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	\$7,087	\$4,744	\$2,343	49.4%
Foreign Exchange	\$10,887	\$11,895	(\$1,008)	-8.5%
Equity	\$2,198	\$2,642	(\$444)	-16.8%
Commodity & Other	\$1,316	\$1,710	(\$394)	-23.1%
Credit	\$1,289	\$1,712	(\$423)	-24.7%
<b>Total Trading Revenue</b>	<b>\$22,776</b>	<b>\$22,702</b>	<b>\$74</b>	<b>0.3%</b>

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 4, consolidated holding company trading revenue of \$8.0 billion in the fourth quarter of 2015 was \$1.6 billion (16.8 percent) lower than the previous quarter, and \$1.2 billion (18.0 percent) higher than a year earlier. A \$1.7 billion decline in commodity & other revenue drove the \$1.6 billion decline in trading revenue from the previous quarter.

Compared with a year earlier, a \$1.3 billion increase in combined interest rate and FX revenue led the \$1.2 billion increase in trading revenue. A \$0.8 billion increase in equity trading revenue negated a \$0.9 billion loss in commodity and credit trading revenue.

**Table 4. Quarterly Holding Company Trading Revenue, in \$ Millions**

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	(\$220)	\$2,403	(\$2,624)	-109.2%	(\$1,395)	\$1,175	84.2%
Foreign Exchange	\$4,402	\$1,393	\$3,009	215.9%	\$4,243	\$160	3.8%
Equity	\$3,702	\$3,202	\$499	15.6%	\$2,947	\$754	25.6%
Commodity & Other	\$421	\$2,146	(\$1,725)	-80.4%	\$954	(\$533)	-55.8%
Credit	(\$321)	\$452	(\$774)	-171.1%	\$14	(\$336)	-2370.0%
<b>Total HC Trading Revenue</b>	<b>\$7,983</b>	<b>\$9,598</b>	<b>(\$1,614)</b>	<b>-16.8%</b>	<b>\$6,763</b>	<b>\$1,220</b>	<b>18.0%</b>

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

For the full year, trading revenue for BHCs was \$1.5 billion lower than the same period a year ago, because of significant weakness in credit trading revenue, which was \$5.7 billion lower (58.5 percent) than in 2014 (see table 5). Trading revenue in 2015 was also \$4.8 billion lower than \$53.9 billion in 2013, again because of weaker credit trading results in 2015.

**Table 5. Year-to-Date Holding Company Trading Revenue Year-Over-Year, in \$ Millions**

	4Q2015	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	\$9,726	\$5,999	\$3,727	62.1%
Foreign Exchange	\$12,647	\$15,220	(\$2,573)	-16.9%
Equity	\$17,412	\$13,875	\$3,537	25.5%
Commodity & Other	\$5,270	\$5,738	(\$468)	-8.2%
Credit	\$4,028	\$9,711	(\$5,683)	-58.5%
<b>Total HC Trading Revenue</b>	<b>\$49,083</b>	<b>\$50,543</b>	<b>(\$1,460)</b>	<b>-2.9%</b>

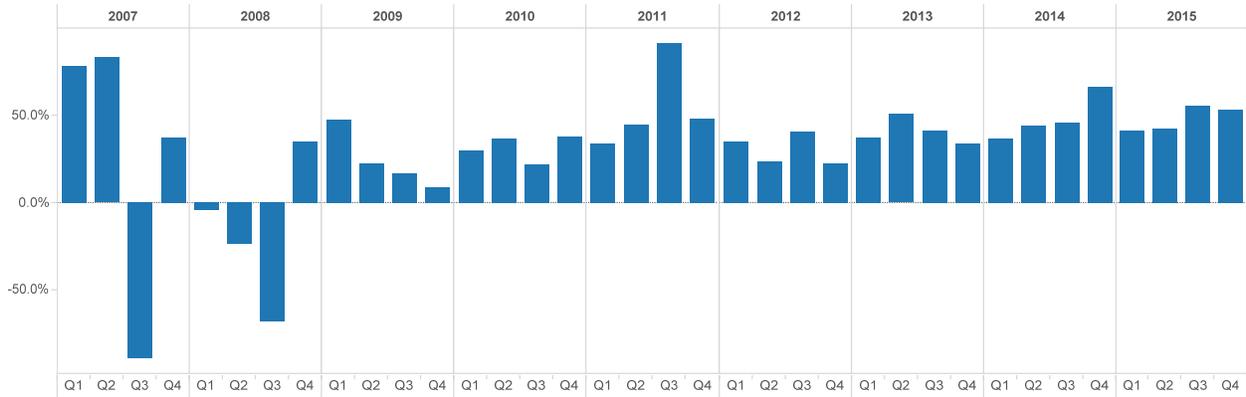
Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

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

Prior to 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 trading revenue at banks to consolidated company revenue has fallen generally into a range of 30 percent to 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 bank. More generally, insured U.S. commercial banks and savings associations have more limited legal authorities than their holding companies, particularly in commodity and equity products.

In the fourth quarter of 2015, banks generated 53.6 percent of consolidated company trading revenue, down from 55.5 percent in the previous quarter (see figure 2). During the fourth quarter of 2015, bank trading revenue made up a greater portion of BHC activity than seen normally.

**Figure 2. 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 derivatives 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. With a funded loan, the amount at risk is the amount advanced to the borrower. The credit risk is unilateral. The bank faces the credit exposure of the borrower. However, the credit exposure is bilateral in most derivatives 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 points in time over the contract's life. Moreover, 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.

Measuring credit exposure in derivative contracts involves identifying those contracts where a bank would lose value if the counterparty to a contract defaulted on that day. The total of all contracts with positive value (i.e., derivatives 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., derivatives 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 decreased by \$0.4 trillion (12.1 percent) in the fourth quarter to \$3.0 trillion, driven by a 12.4 percent decrease in receivables from interest rate and foreign exchange contracts (See table 6). Because interest rate contracts make up 72.4 percent of total notional derivatives contracts, changes in interest rates drive credit exposure in derivatives 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. For example, in the fourth quarter of 2015, interest rate contracts with maturities greater than five years were 24.0 percent of all interest rate notionals, compared with 16.8 percent at the end of 2013 (see table 8 in the appendix). Yields on 10-year interest rate swaps increased 17 basis points to 2.18 percent.

Because banks hedge the market risk of their derivatives portfolios, a similar decrease in GNFVs matched the change in GPFV. Derivatives payables decreased \$0.4 trillion (12.2 percent) to \$2.9 trillion during the quarter, driven by decreases in payables on interest rate and FX contracts.

**Table 6. Gross Positive Fair Values and Gross Negative Fair Values, in \$ Billions**

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	\$2,146	\$2,491	(\$345)	-13.8%	\$3,002	(\$856)	-28.5%
Foreign Exchange	\$535	\$569	(\$34)	-6.0%	\$649	(\$113)	-17.5%
Equity	\$97	\$118	(\$21)	-18.0%	\$91	\$6	6.5%
Commodities	\$62	\$63	(\$1)	-1.1%	\$66	(\$4)	-6.0%
Credit	\$123	\$131	(\$8)	-6.3%	\$180	(\$57)	-31.9%
<b>Gross Positive Fair Value</b>	<b>\$2,963</b>	<b>\$3,372</b>	<b>(\$409)</b>	<b>-12.1%</b>	<b>\$3,988</b>	<b>(\$1,025)</b>	<b>-25.7%</b>

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	\$2,079	\$2,414	(\$335)	-13.9%	\$2,942	(\$863)	-29.3%
Foreign Exchange	\$548	\$585	(\$37)	-6.3%	\$654	(\$106)	-16.2%
Equity	\$91	\$110	(\$19)	-16.9%	\$87	\$4	5.0%
Commodities	\$65	\$69	(\$4)	-5.9%	\$69	(\$4)	-5.4%
Credit	\$118	\$126	(\$8)	-6.6%	\$169	(\$51)	-30.1%
<b>Gross Negative Fair Value</b>	<b>\$2,902</b>	<b>\$3,305</b>	<b>(\$403)</b>	<b>-12.2%</b>	<b>\$3,921</b>	<b>(\$1,020)</b>	<b>-26.0%</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 a NCCE as shown in table 7.

**Table 7. 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	Net Current Credit Exposure (NCCE) to Bank A from Counterparty B

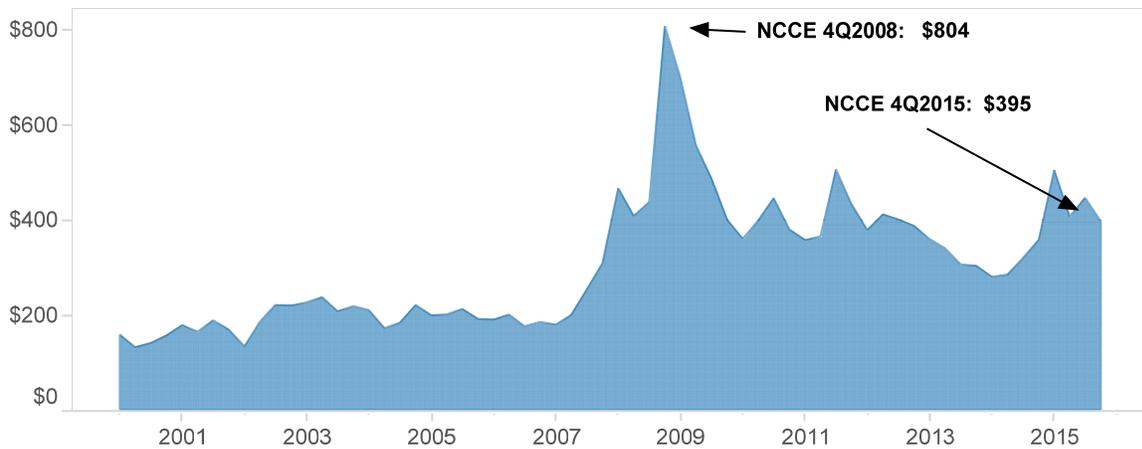
Most, but not necessarily all, derivatives transactions a bank has with an individual counterparty are typically subject to a legally enforceable netting agreement. Some transactions may be subject to the laws of a jurisdiction that does not provide legal certainty of netting agreements, in which case banks must regard such transactions as separate from the netting set. Other transactions may involve non-standard 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 derivatives activities. NCCE for insured U.S. commercial banks and saving associations decreased \$49.7 billion (11.2 percent) to \$395.0 billion in the fourth quarter of 2015 (see figure 3).<sup>1</sup>

<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 derivatives transactions; it excludes exchange-traded transactions. RC-R excludes transactions not subject to capital requirements. The recent change to reflect central counterparty exposures

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. While interest rates are still very low, they have remained low for a long period, during which substantial growth in notionals has occurred, and longer-tenor contracts have aged to become shorter-tenor contracts. Each of these factors has narrowed the difference between very low current market swap rates and prevailing swap rates in dealers' interest rate books. The significant decline in NCCE since 2008 largely results 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 \$2.1 trillion at the end of the fourth quarter of 2015. The yield on the 10-year Treasury note has been generally below 3 percent since the fourth quarter of 2008. At December 31, 2015, exposure from credit contracts of \$122.5 billion was \$1.0 trillion lower (89.0 percent) than \$1.1 trillion at December 31, 2008. New regulations and a decrease in client demand have led to the reduction in credit derivatives notional amounts.

**Figure 3. Net Current Credit Exposure, in \$ Billions**



Source: Call Report, Schedule RC-R

Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 86.7 percent (\$2.6 trillion) in the fourth quarter 2015 (see table 8).

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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.

**Table 8. Net Current Credit Exposure, Quarter-Over-Quarter Comparison, in \$ Billions**

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change
Gross Positive Fair Value	\$2,963	3,372	-409	-12.1%
NCCE RC-R	\$395	445	-50	-11.2%
Netting Benefit RC-R	\$2,568	2,927	-359	-12.3%
Netting % RC-R	86.7%	87%	0	-0.2%
10-Year Interest Rate Swap	2.18%	2.01%	0.17%	
Dollar Index Spot	99	96	2	2
Credit Derivative Index - North America IG (bps)	89	92	-3	-3
Credit Derivative Index - High Volatility (bps)	292	248	44	18

Source: Call Report, Schedules RC-L & RC-R, Bloomberg

The bulk of NCCE in the banking system is concentrated in banks and securities firms (53.3 percent) and corporations and other counterparties (38.4 percent) (see table 9). In the fourth quarter of 2015, there was a shift in credit exposure with an increase in the percentage of exposures to banks and securities firms, (52.6 percent to 53.3 percent of the total), and lower exposure to corporates and other counterparties (from 39.1 percent to 38.4 percent of the total).

Exposure to hedge funds, sovereign governments, and monoline financial firms was very small (8.2 percent in total). However, the sheer size of aggregate counterparty exposures 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. Because banks have taken credit charges (via credit valuation adjustments) to write down their monoline exposures completely, current credit exposures to monolines were virtually 0 percent of total NCCE at the end of the fourth quarter of 2015. Sovereign credit exposures were also a small component (6.0 percent) of NCCE during the quarter and, like monoline exposures before the financial crisis, are largely unsecured.

**Table 9. Net Current Credit Exposure by Counterparty Type as a Percentage of Total Net Current Credit Exposure**

		Banks & Securities Firms	Monoline Financial Firms	Hedge Funds	Sovereign Governments	Corp & All Other Counterparties
2015	Q4	53.3%	0.1%	2.1%	6.0%	38.4%
	Q3	52.6%	0.1%	2.2%	6.0%	39.1%
2014	Q4	53.2%	0.1%	1.9%	6.4%	38.4%
2013	Q4	56.7%	0.1%	2.1%	6.6%	34.5%

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 89.7 percent of their total NCCE at the end of the fourth quarter of 2015, up from 86.6 percent in the third quarter, because of stronger collateral coverage of exposures to banks and securities firms, which increased from 99.8 percent to 101.7 percent (see table 10). Collateral held against hedge fund exposures increased in the fourth quarter and coverage remains very high at 439.6 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 10. Fair Value Collateral to Net Current Credit Exposure**

		FV Banks & Securities Firms	FV Monoline Financial Firms	FV Hedge Funds	FV Sovereign Governments	FV Corp and All Other Counterparties	FV/NCCE%
2015	Q4	101.7%	5.2%	439.6%	15.6%	66.2%	89.7%
	Q3	99.8%	0.0%	391.2%	15.3%	63.1%	86.6%
2014	Q4	94.4%	0.0%	361.6%	11.0%	61.1%	81.2%
2013	Q4	95.3%	6.8%	344.5%	13.5%	52.2%	80.2%

Source: Call Report, Schedule RC-L

Collateral quality held by banks was very high and liquid during the quarter, with 75.3 percent held in cash (both U.S. dollar and non-dollar), and an additional 6.2 percent held in U.S. Treasuries and government agencies (see table 11). 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 derivatives dealers as a regular part of their ongoing supervision activities.

**Table 11. Fair Value Composition**

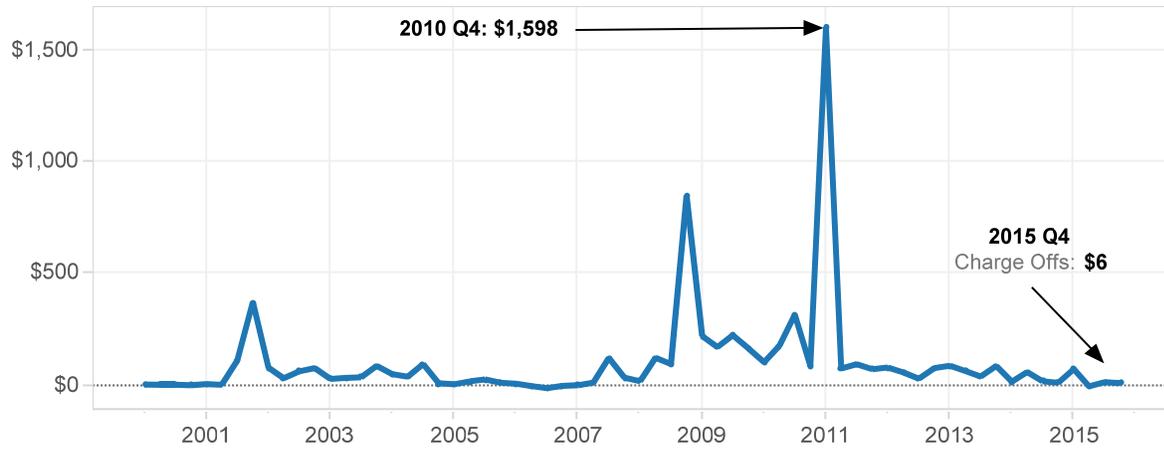
		Cash U.S. Dollar	Cash Other Currencies	U.S. Treasury Securities	U.S. Gov't Agency	Corp Bonds	Equity Securities	All Other Collateral
2015	Q4	43.6%	31.7%	4.6%	1.6%	1.4%	5.3%	11.8%
	Q3	45.0%	30.7%	3.3%	3.5%	0.8%	4.4%	12.4%
2014	Q4	43.5%	31.7%	2.8%	2.9%	1.0%	1.6%	16.4%
2013	Q4	46.4%	30.3%	3.2%	3.3%	1.1%	2.0%	13.7%

Source: Call Report, Schedule RC-L

Credit quality metrics for derivatives exposures improved in the fourth quarter of 2015, as banks reported net charge-offs of \$6.4 million, compared to net charge-offs of \$10.5 million in the third quarter (see figure 4). The number of banks reporting charge-offs, increased from 21 to 22 banks. Net charge-offs in the fourth quarter of 2015 represented 0.002 percent of the NCCE from derivative contracts. For comparison purposes, Commercial and Industrial (C&I) loan net charge-offs increased \$549.8 million, or 48.1 percent, to \$1.7 billion during the quarter, and were 0.09 percent of total C&I loans. Charge-offs of derivatives exposures typically are associated

with problem commercial lending exposures, where the borrower has an associated swap transaction.

**Figure 4. Derivatives Net Charge-Offs, in \$ Millions**



Source: Call Report, Schedule RI-B

## **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 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 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 12, market risk reported by the five largest banking companies, as measured by VaR, are small as a percentage of their capital. Because of mergers and VaR measurement systems incorporating higher volatility price changes throughout the credit crisis (compared to the very low volatility environment prior to the crisis), bank VaR measures had increased generally throughout the credit crisis. After the peak of the financial crisis in 2008 volatility declined and bank VaR measures have trended lower generally.

**Table 12. Value-at-Risk at Major Bank Holding Companies, in \$ Millions**

<i>in \$ millions</i>	JPMORGAN	CITIGROUP	BANK OF AMERICA	GOLDMAN	MORGAN STANLEY	TOTAL
4Q2015	\$47	\$108	\$52	\$72	\$50	\$329
3Q2015	\$54	\$116	\$60	\$74	\$53	\$357
Q/Q Change	(\$7)	(\$8)	(\$8)	(\$2)	(\$3)	(\$28)
Q/Q % Change	-13.0%	-6.9%	-13.3%	-2.7%	-5.7%	-7.8%
Equity Capital	\$247,573	\$221,857	\$256,205	\$86,728	\$75,182	\$887,545
2015 Net Income	\$61,568	\$45,535	\$41,107	\$18,137	\$17,941	\$184,288
Avg VaR/Equity	0.02%	0.05%	0.02%	0.08%	0.07%	0.04%
Avg VaR/Net Income	0.08%	0.24%	0.13%	0.40%	0.28%	0.18%

Source: 10K & 10Q Securities and Exchange Commission (SEC) Reports

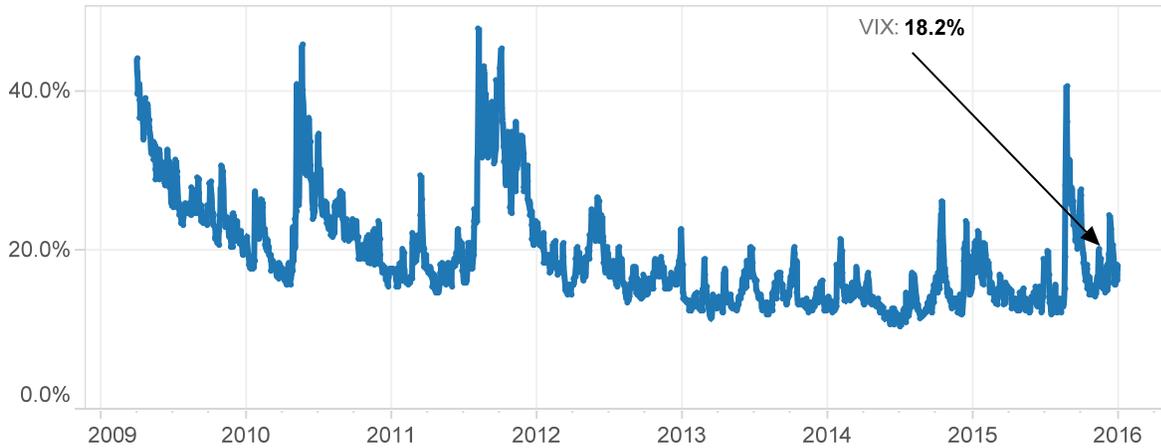
VaR measures are not comparable across firms, because of methodological differences in calculating VaR, as well as differences in the scope of coverage. These differences can result in materially different VaR estimates across firms, even for the same portfolios. When assessing trading risk in the banking 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 does Bank of America and Citigroup, 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.

Figure 5 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.

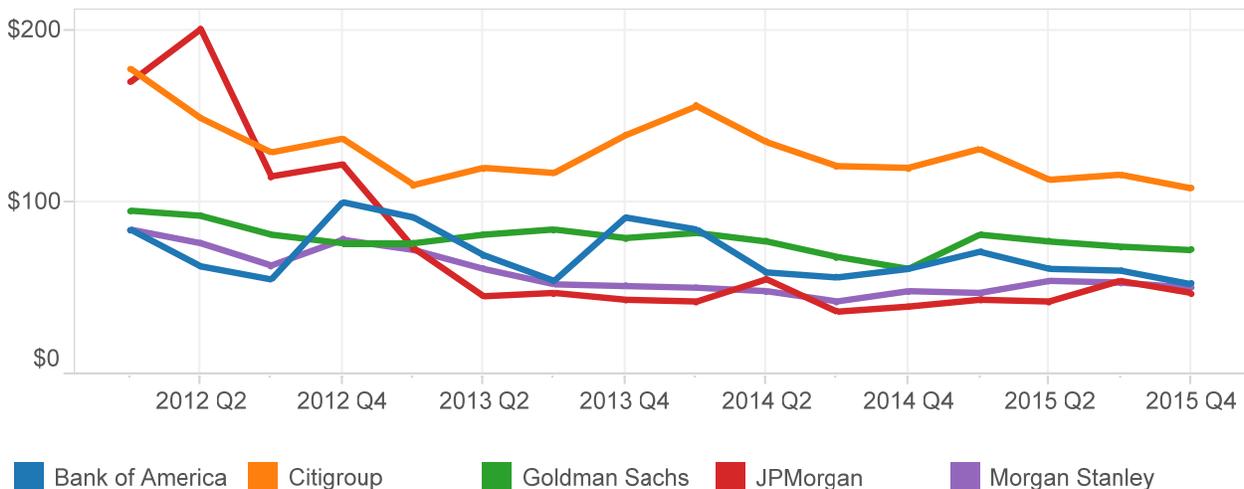
**Figure 5. Volatility Index (VIX)**



Source: Bloomberg

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. Figure 6 illustrates the trend over the past three years in average VaR at each of the large trading companies.

**Figure 6. Quarterly VaR by Major Bank Holding Companies, in \$ Millions**



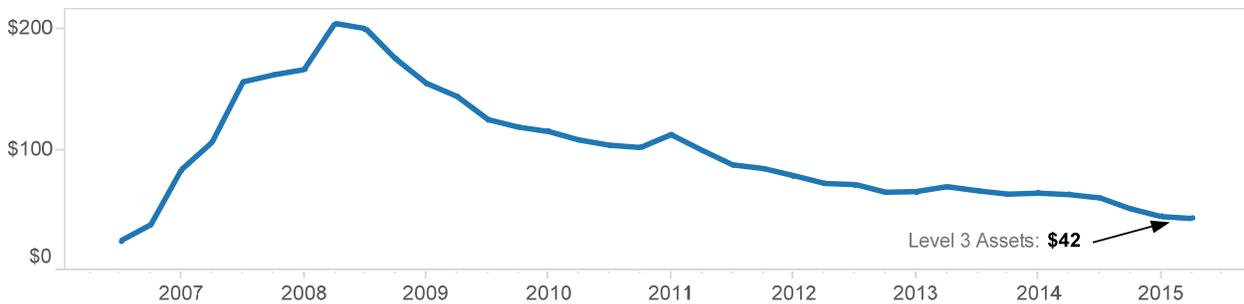
Source: 10K & 10Q Securities and Exchange Commission Reports

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

### Level 3 Trading Assets

Another measure used to assess market risk is the volume of, and changes in, level 3 trading assets. Level 3 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 7). At the end of the fourth quarter of 2015, banks held \$42.3 billion of level 3 assets, down 3.7 percent from the previous quarter, and 31.9 percent lower than a year ago. Level 3 assets are \$161.8 billion lower (79.3 percent) than the peak level from 2008.

Figure 7. Level 3 Trading Assets, in \$ Billions



	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
TRADING ASSET LEVEL 3 FV MEASURE	\$42	\$44	(\$2)	-3.7%	\$62	(\$20)	-31.9%

Source: Call Reports, Schedule RC-Q

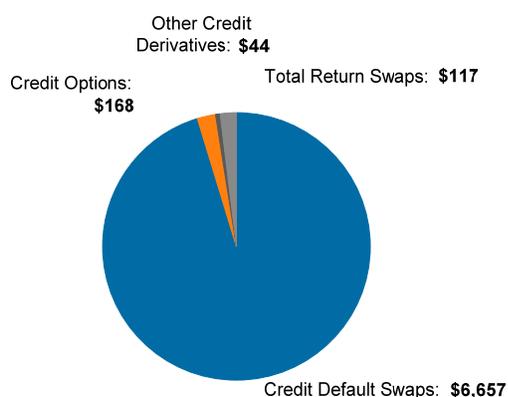
### Credit Derivatives

The trend toward declining notional amounts of credit derivatives outstanding continued in the fourth quarter of 2015, with notionals falling \$1.2 trillion (14.8 percent) to \$7.0 trillion. Contracts referencing non-investment grade firms fell \$302.8 billion while contracts referencing investment grade firms declined \$908.4 billion. The decline in total credit derivatives in the fourth quarter of 2015 is the 15<sup>th</sup> in the past 17 quarters. Credit derivatives outstanding remained well below the peak of \$16.4 trillion in the first quarter of 2008. Industry efforts to eliminate offsetting trades (referred to as trade compression), as well as reduced demand for structured products, has led to a decline in credit derivative notionals. As shown in figure 8, credit default swaps are the dominant product at \$6.7 trillion or 95.3 percent of all credit derivatives notionals (see also tables 11 and 12, in the appendix).

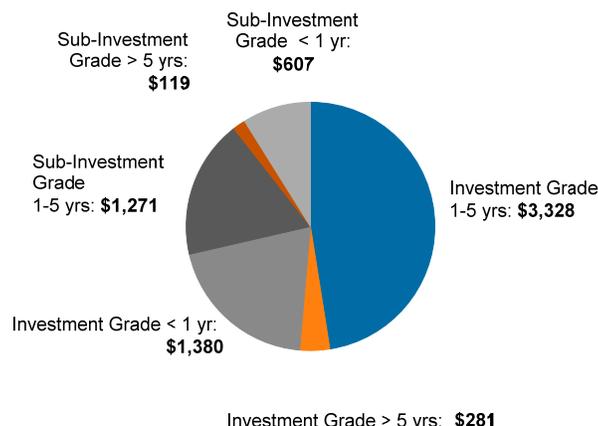
Contracts referring to investment grade entities with maturities from one to five years, which fell by \$779.8 billion (19.0 percent) in the quarter, represented the largest segment of the market at 47.6 percent of all credit derivatives notionals, down 2.5 percent from the previous quarter. Contracts of all tenors that reference investment grade entities are 71.4 percent of the market (see chart on right in figure 8 and graph 14 in the appendix).

**Figure 8. 4Q2015 Credit Derivatives Composition, in \$ Billions**

**By Product Type**



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



Source: Call Reports, Schedule RC-L

The notional amount for the 53 insured U.S. commercial banks and savings associations that sold credit protection (i.e., assumed credit risk) was \$3.4 trillion, down \$604.0 billion (14.9 percent) from the third quarter of 2015. The notional amount for the 47 banks that purchased credit protection (i.e., hedged credit risk) was \$3.5 trillion, \$607.2 billion lower (14.6 percent) than in the third quarter of 2015 (see table 12 in the appendix).

**Notionals**

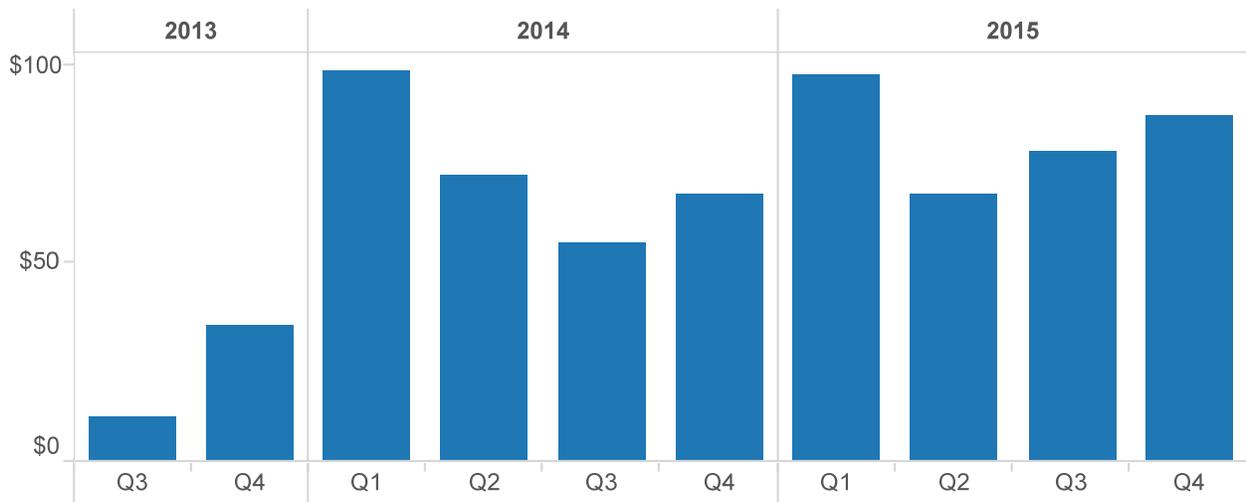
Changes in notional amounts are generally reasonable reflections of business activity and can provide insight into potential revenue and operational issues. However, the notional amount of derivative contracts does not provide a useful measure of market or credit risks.

The notional amount of derivative contracts held by insured U.S. commercial banks and savings associations in the third quarter fell by \$11.1 trillion (5.8 percent) to \$181.0 trillion from the previous quarter, because of a \$9.4 trillion decline in interest rate notionals. A \$5.3 trillion decline in swaps contracts (4.7 percent) to \$107.4 trillion drove the decline in interest rate notionals. Notional derivatives have fallen in each of the past five quarters, and by \$68.8 trillion (27.5 percent) since peaking at \$249.7 trillion in the second quarter of 2011.

The general decline in notionals since 2011 has resulted from 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 derivatives book and reduces operational risks and capital costs for large banks.

Trade compression activities accelerated in the fourth quarter of 2015, as shown in figure 9.

**Figure 9. Quarterly Compression Activity, in \$ Trillions**

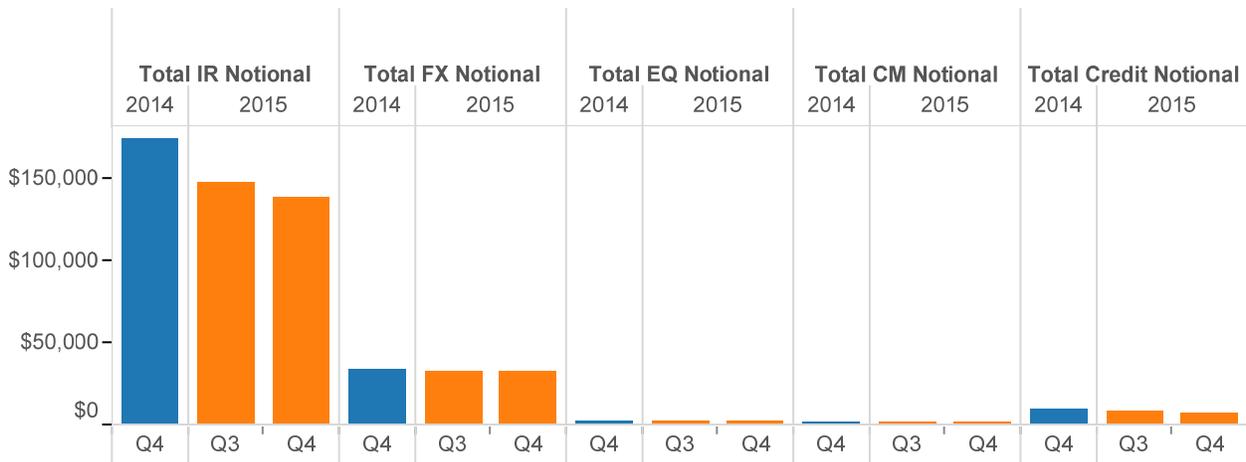


Source: LCH.Clearnet

The four banks with the most derivatives activity hold 90.8 percent of all derivatives, while the largest 25 banks account for nearly 100 percent of all contracts (see tables 3, 5 and graph 4 in the appendices).

Interest rate contracts continued to represent the majority of the derivatives market at \$138.4 trillion or 76.5 percent of total derivatives during the fourth quarter of 2015 (see table 13 and figure 10). FX and credit derivatives were 17.7 percent and 3.9 percent of total notionals, respectively. Commodity and equity derivatives collectively were only 1.9 percent of total notional derivatives.

**Figure 10. Derivative Notional Volume, in \$ Billions**



Source: Call Reports, Schedule RC-L

**Table 13. Derivative Notionals Quarter-Over-Quarter Comparison, in \$ Billions**

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
Interest Rate	\$138,402	\$147,846	(\$9,445)	-6.4%	\$174,010	(\$35,609)	-20.5%
Foreign Exchange	\$32,100	\$32,174	(\$75)	-0.2%	\$33,183	(\$1,084)	-3.3%
Equity	\$2,378	\$2,495	(\$117)	-4.7%	\$2,537	(\$159)	-6.3%
Commodity	\$1,108	\$1,393	(\$286)	-20.5%	\$1,222	(\$114)	-9.4%
Credit Derivatives	\$6,986	\$8,198	(\$1,211)	-14.8%	\$9,449	(\$2,463)	-26.1%
<b>Total Notional</b>	<b>\$180,973</b>	<b>\$192,106</b>	<b>(\$11,133)</b>	<b>-5.8%</b>	<b>\$220,402</b>	<b>(\$39,428)</b>	<b>-17.9%</b>

Source: Call Reports, Schedule RC-L

Swap contracts remained the dominant derivatives product at \$107.4 trillion, or 59.3 percent of all notionals (see table 14).

**Table 14. Derivative Notional, in \$ Billions**

	4Q2015	3Q2015	Q/Q Change	Q/Q % Change	4Q2014	Y/Y Change	Y/Y % Change
Futures & Forwards	\$35,685	\$38,988	(\$3,303)	-8.5%	\$43,380	(\$7,695)	-17.7%
Swaps	\$107,393	\$112,698	(\$5,305)	-4.7%	\$135,170	(\$27,777)	-20.5%
Options	\$30,909	\$32,223	(\$1,314)	-4.1%	\$32,403	(\$1,494)	-4.6%
Credit Derivatives	\$6,986	\$8,198	(\$1,211)	-14.8%	\$9,449	(\$2,463)	-26.1%
<b>Total Notional</b>	<b>\$180,973</b>	<b>\$192,106</b>	<b>(\$11,133)</b>	<b>-5.8%</b>	<b>\$220,402</b>	<b>(\$39,428)</b>	<b>-17.9%</b>

Source: Call Reports, Schedule RC-L

In the first quarter of 2015, banks began reporting their volumes of cleared and non-cleared derivatives transactions, as well as risk weights for counterparties in each of these categories. In the fourth quarter of 2015, 36.9 percent of the derivatives market was centrally cleared (see table 15). From a market factor perspective, 46.2 percent of interest rate derivatives contracts notionals outstanding were centrally cleared, while virtually none of the FX derivatives market were centrally cleared. The credit derivatives market remained largely uncleared, as 17.9 percent of investment grade and 14.2 percent of non-investment grade transactions were centrally cleared.

Centrally cleared derivatives transactions were heavily concentrated at qualified central counterparties, with 85.2 percent of notionals reflecting the 2 percent risk weight applicable to such counterparties.

**Table 15. Centrally Cleared Derivative Contracts as Percent of Total Derivative Contracts**

		Interest Rate	Foreign Exchange	Equity	Precious Metals	Credit	Other	Total
<b>2015</b>	Q4	46.2%	0.5%	19.2%	3.7%	16.8%	14.0%	36.9%
	Q3	46.9%	0.5%	14.2%	5.0%	20.8%	12.6%	38.0%
	Q2	43.0%	0.3%	13.4%	2.6%	19.6%	10.9%	34.9%
	Q1	44.6%	0.2%	13.4%	1.6%	19.7%	16.3%	36.4%

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 receivable or payable, 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 derivatives 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). Our derivatives survey includes over-the-counter (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, commodity, credit, and equity prices. Derivative transactions include a wide assortment of financial contracts including 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 represents the maximum losses the bank's counterparties would incur if the bank defaults and there is no netting of contracts, and no bank collateral was held by the counterparties. Gross negative fair values associated with credit derivatives are included.

**Gross Positive Fair Value (GPFV)** – The sum total of the fair values of contracts where the bank is owed money by its counterparties, without taking into account netting. This represents the maximum losses a bank could incur if all its counterparties default and there is no netting of contracts, and the bank holds no counterparty collateral. Gross positive fair values associated with credit derivatives are included.

**Net Current Credit Exposure (NCCE)** – For a portfolio of derivative contracts, NCCE is the gross positive fair value 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 upon 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 upon the underlying market factor (e.g., interest rates, commodity prices, equity prices,

etc.) and the contract's remaining maturity. However, the risk-based capital rules 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 upon 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 derivatives book and reduces operational risks and capital costs for large banks.

**VIX or Volatility Index** – 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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Graph 11. Notional Amounts of Interest Rate and Foreign Exchange + Gold Contracts by Maturity

Graph 12. Notional Amounts of Precious Metals Contracts by Maturity

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Table 5. Notional Amounts of Derivative Contracts Held for Trading

Table 6. Gross Fair Values of Derivative Contracts

Table 7. Trading Revenue from Cash Instruments and Derivatives

Table 8. Notional Amounts of Derivative Contracts by Contract Type and Maturity (IR, FX, Gold)

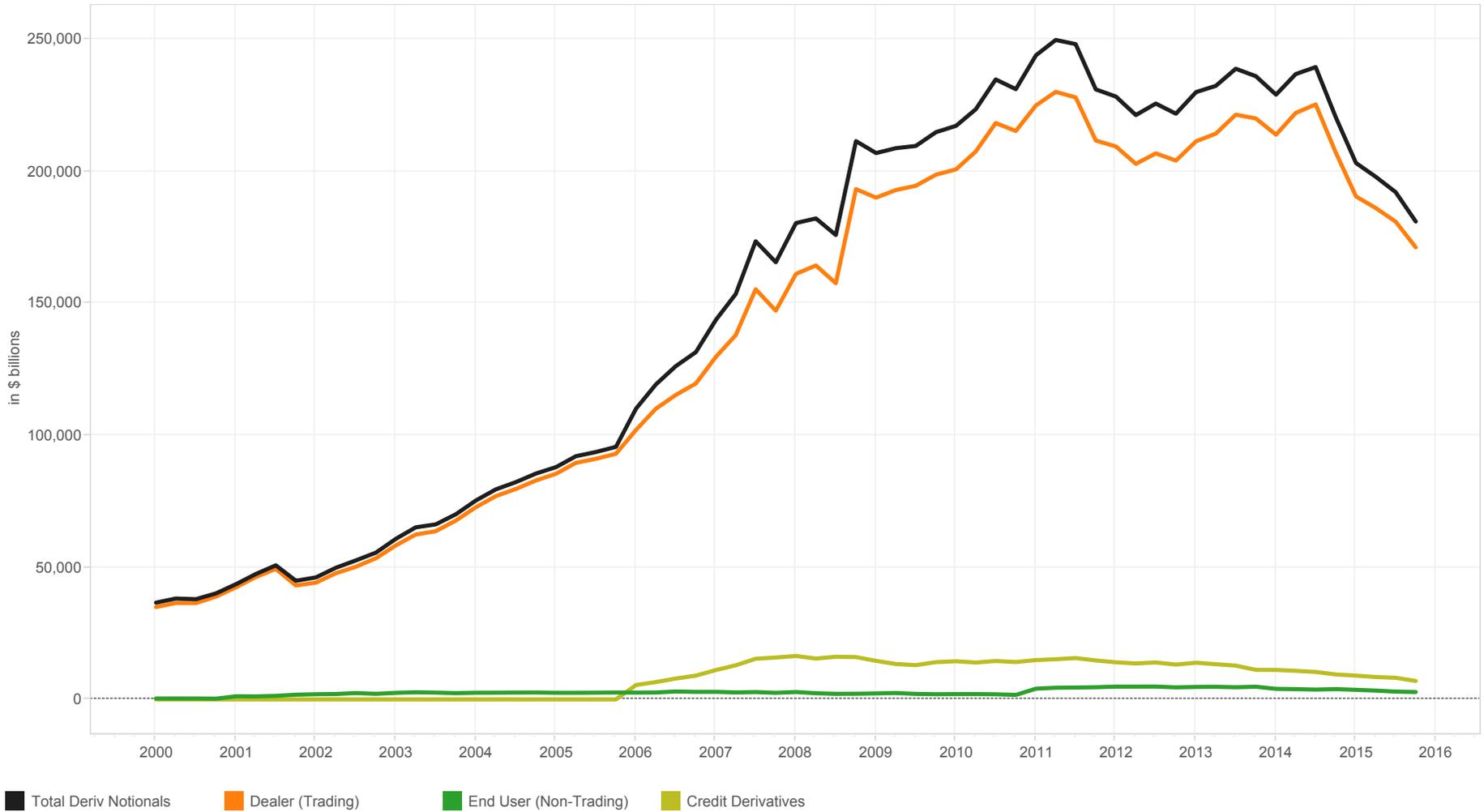
Table 9. Notional Amounts of Derivative Contracts by Contract Type & Maturity (Prec Metals)

Table 10. Notional Amounts of Derivative Contracts by Contract Type & Maturity (Oth, 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**

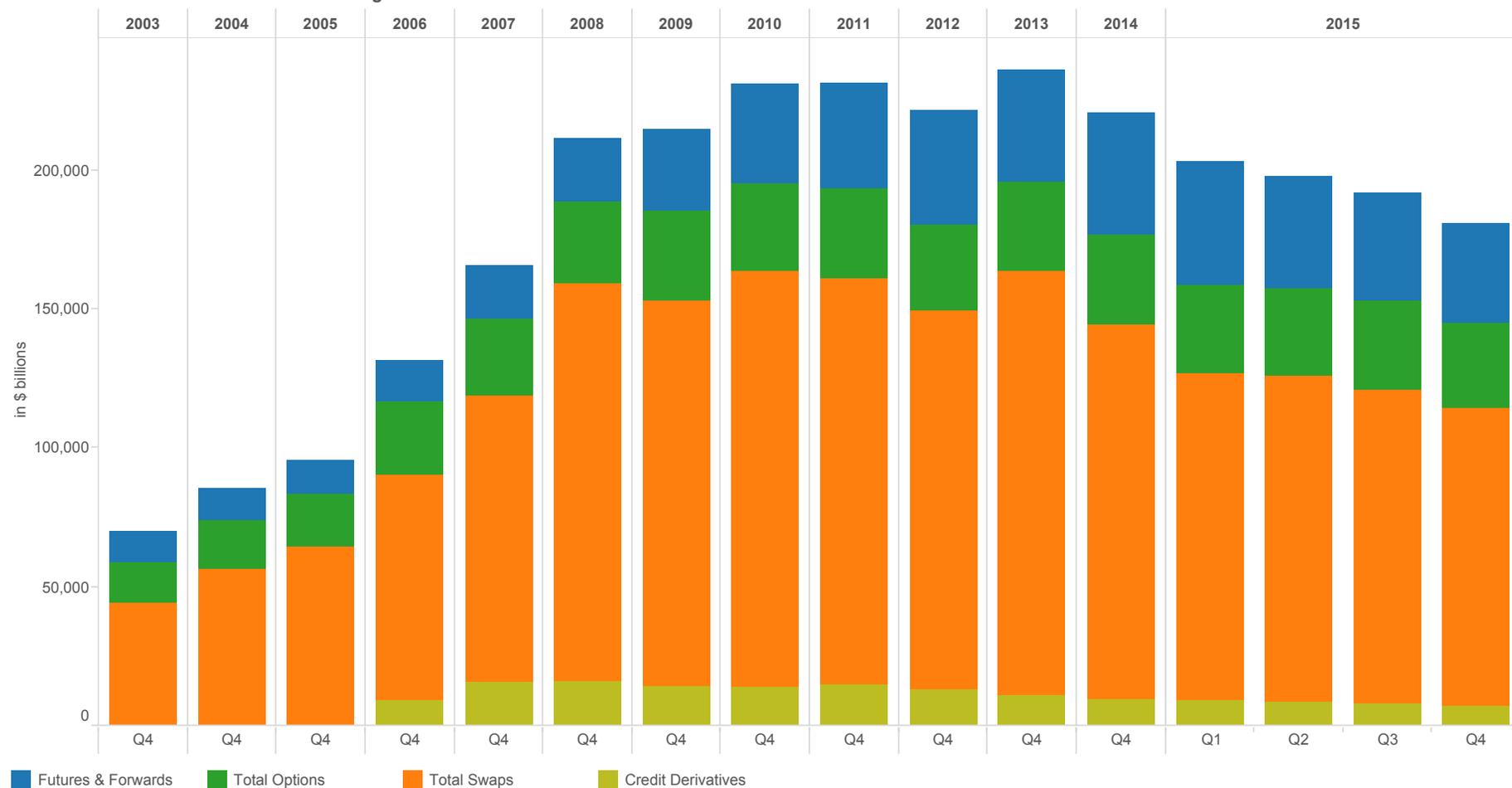


in \$ billions

	2011				2012				2013				2014				2015			
	Q1	Q2	Q3	Q4																
<b>Total Deriv Notionals</b>	243,932	249,723	248,146	230,998	228,279	221,272	225,637	221,794	229,987	232,342	238,827	235,992	229,011	236,808	239,459	220,402	203,128	197,922	192,106	180,973
<b>Dealer (Trading)</b>	224,950	230,067	227,975	211,626	209,383	202,805	206,772	204,044	211,353	214,240	221,425	219,990	213,838	222,078	225,318	207,034	190,480	186,086	180,946	171,193
<b>End User (Non-Trading)</b>	4,081	4,427	4,510	4,613	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
<b>Credit Derivatives</b>	14,900	15,229	15,661	14,759	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

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

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



in \$ billions

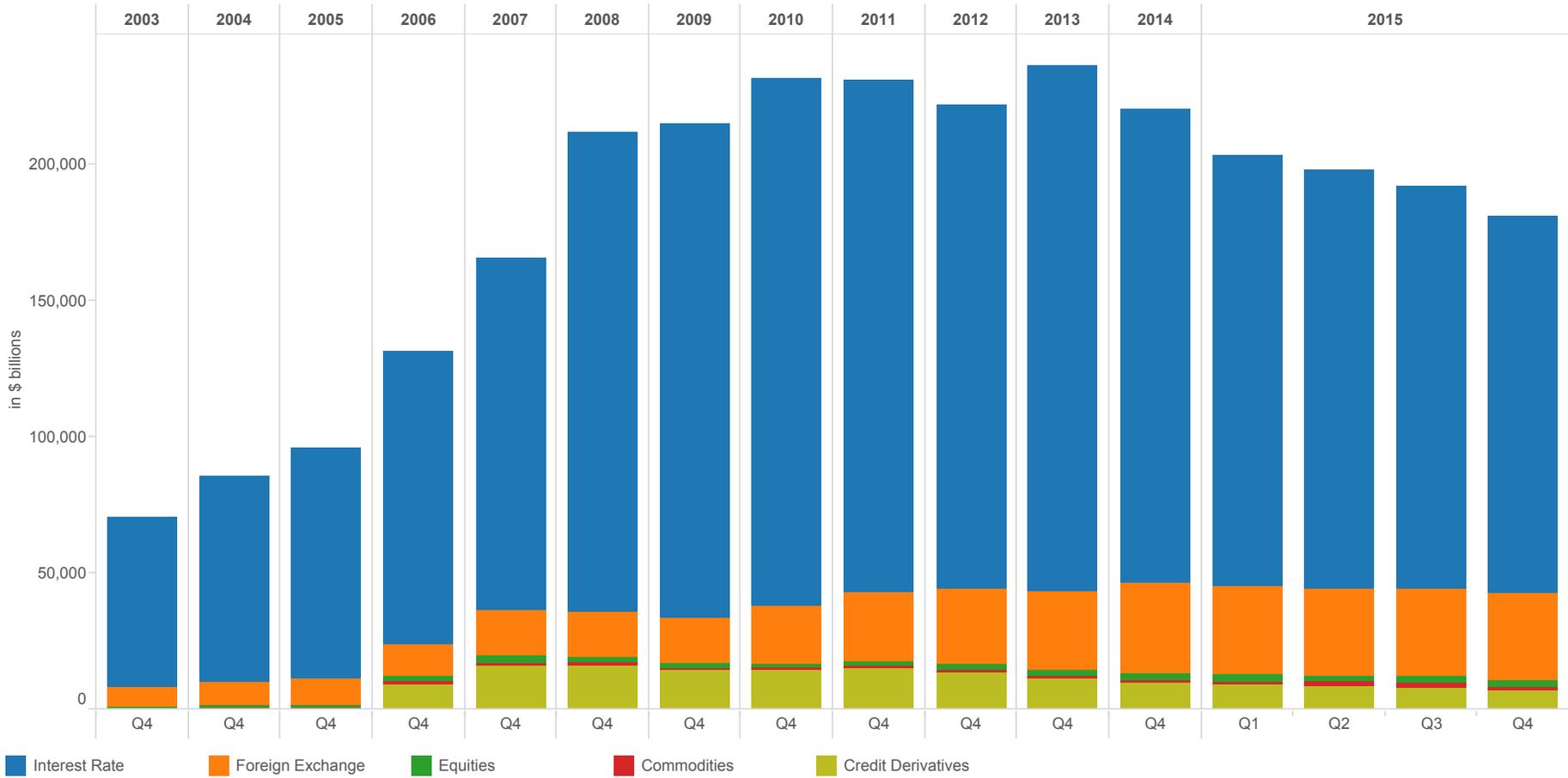
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4
<b>Futures &amp; Forwards</b>	11,406	11,370	12,057	14,882	18,867	22,529	29,652	35,539	37,469	41,621	40,027	43,380	44,545	40,360	38,988	35,685
<b>Total Options</b>	14,616	17,754	18,858	26,277	27,727	29,747	31,884	32,078	32,505	30,375	32,305	32,403	31,855	31,566	32,223	30,909
<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	135,170	117,711	117,509	112,698	107,393
<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	9,017	8,488	8,198	6,986
<b>Total Deriv Notionals</b>	70,112	85,536	95,627	131,519	165,559	211,416	214,786	231,099	230,998	221,794	235,992	220,402	203,128	197,922	192,106	180,973

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

Note: Numbers may not add due to rounding

Data Source: Call Reports

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

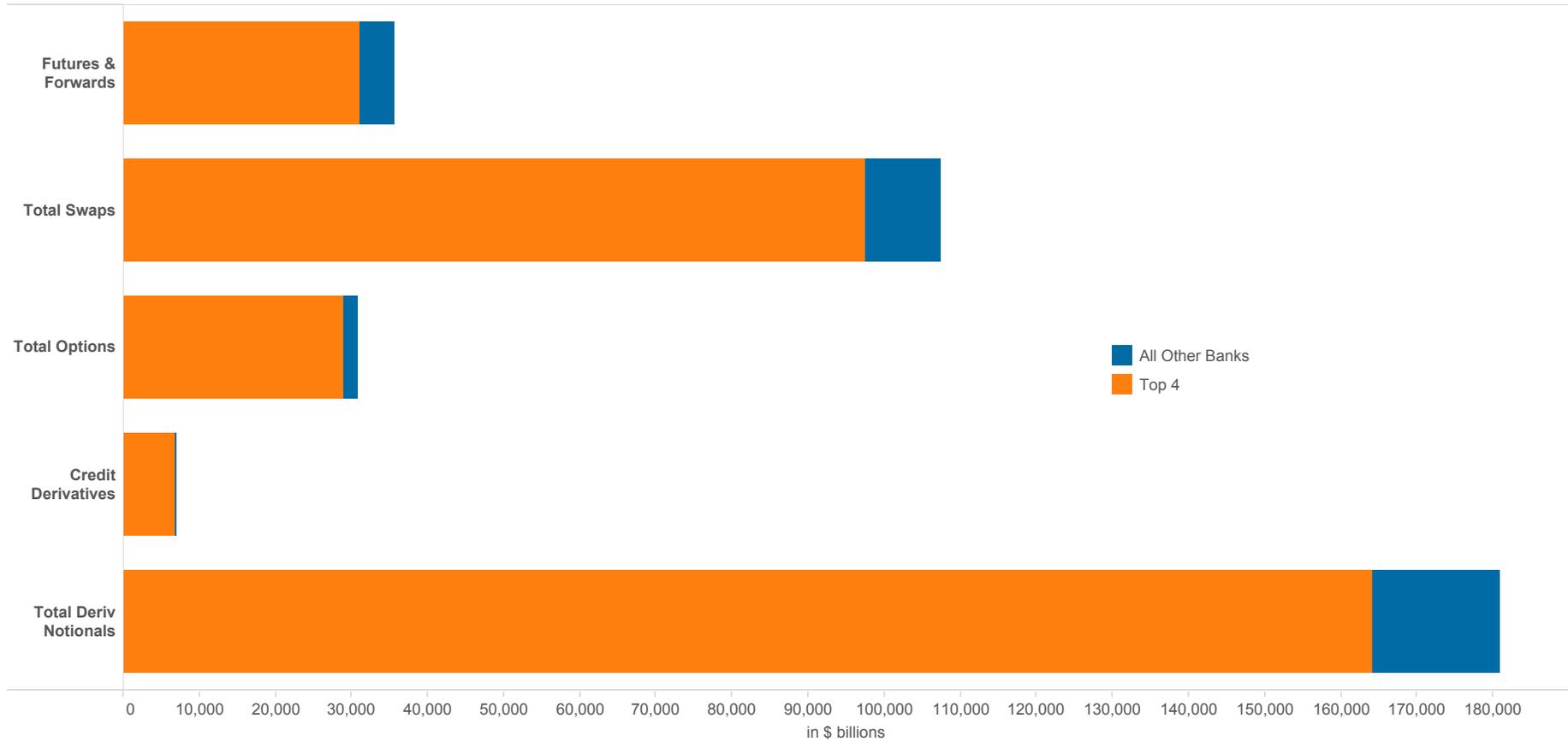


in \$ billions

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4
<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	174,010	157,728	153,754	147,846	138,402
<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	32,783	31,880	32,174	32,100
<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	2,360	2,364	2,495	2,378
<b>Commodities</b>	223	284	552	893	1,067	1,061	979	1,195	1,330	1,397	1,209	1,222	1,241	1,436	1,393	1,108
<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	9,017	8,488	8,198	6,986
<b>Total Deriv Notionals</b>	70,112	85,536	95,627	131,519	165,559	211,416	214,786	231,099	230,998	221,794	235,992	220,402	203,128	197,922	192,106	180,973

\*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.  
 Note: As of 2Q06 equities and commodities types are shown as separate categories. They were previously shown as "Other Derivs."  
 Numbers may not add due to rounding.  
 Data Source: Call Reports

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

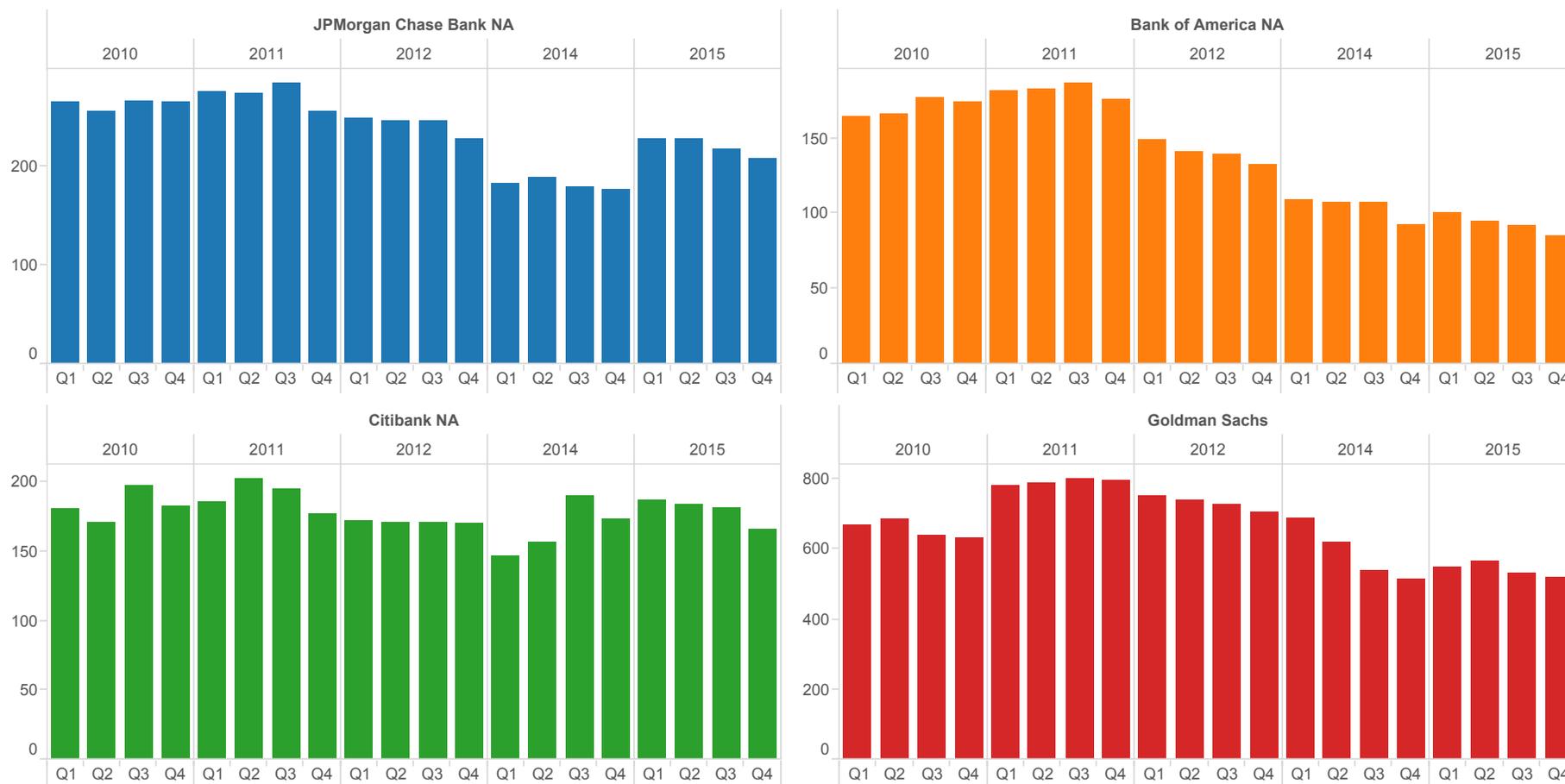


in \$ billions

	Top 4	All Other Banks	Grand Total
Futures & Forwards	31,031	4,653	35,685
Total Swaps	97,552	9,841	107,393
Total Options	28,932	1,977	30,909
Credit Derivatives	6,735	252	6,986
Total Deriv Notionals	164,251	16,723	180,973

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

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

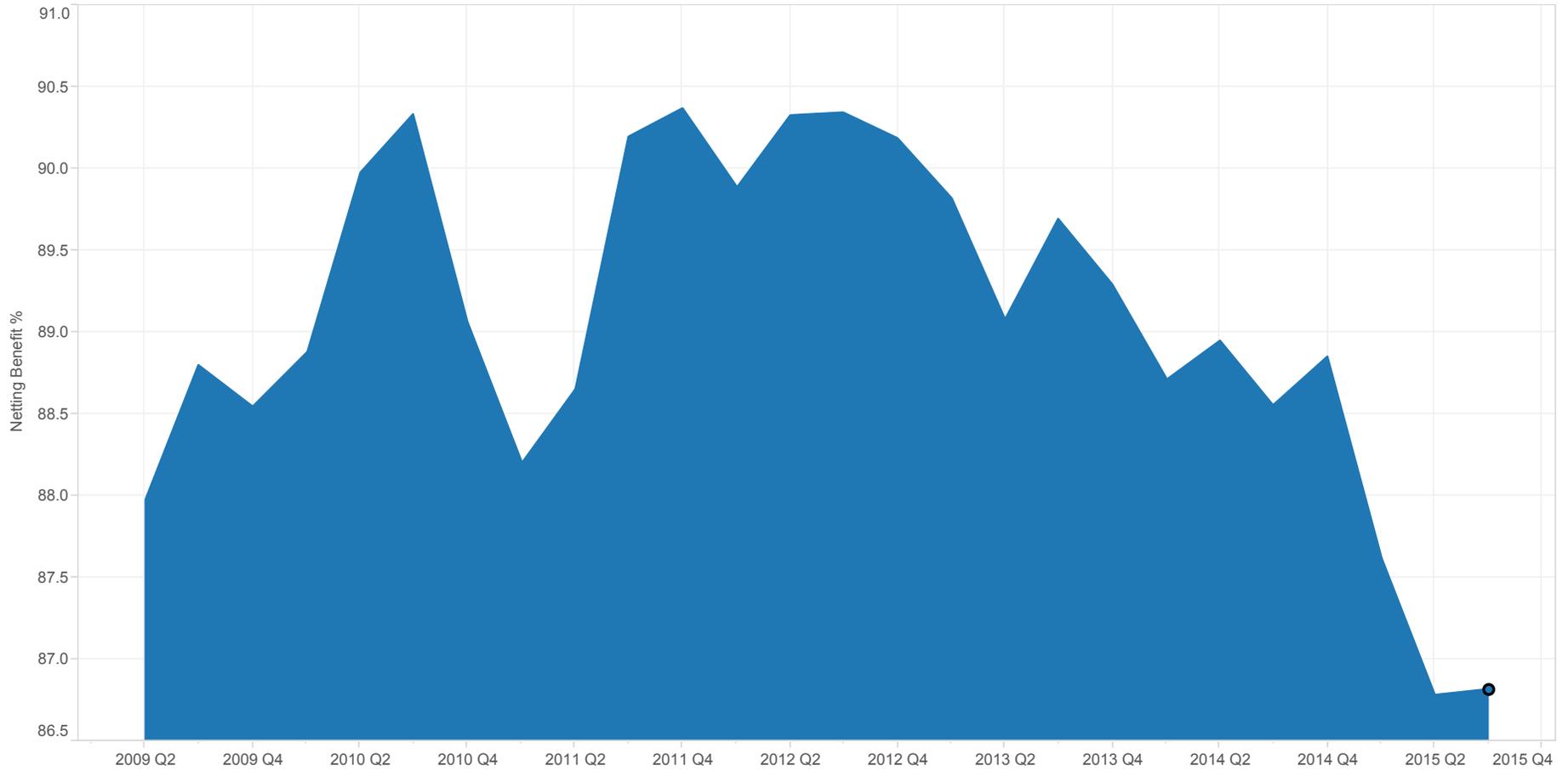


	2010				2011				2012				2014				2015			
	Q1	Q2	Q3	Q4																
<b>JPMorgan Chase Bank NA</b>	266	257	267	265	275	274	285	256	250	246	247	229	183	189	181	177	229	228	219	209
<b>Bank of America NA</b>	164	166	177	174	182	182	187	176	149	141	139	132	109	107	107	93	100	95	91	85
<b>Citibank NA</b>	180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

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.  
 Data 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**

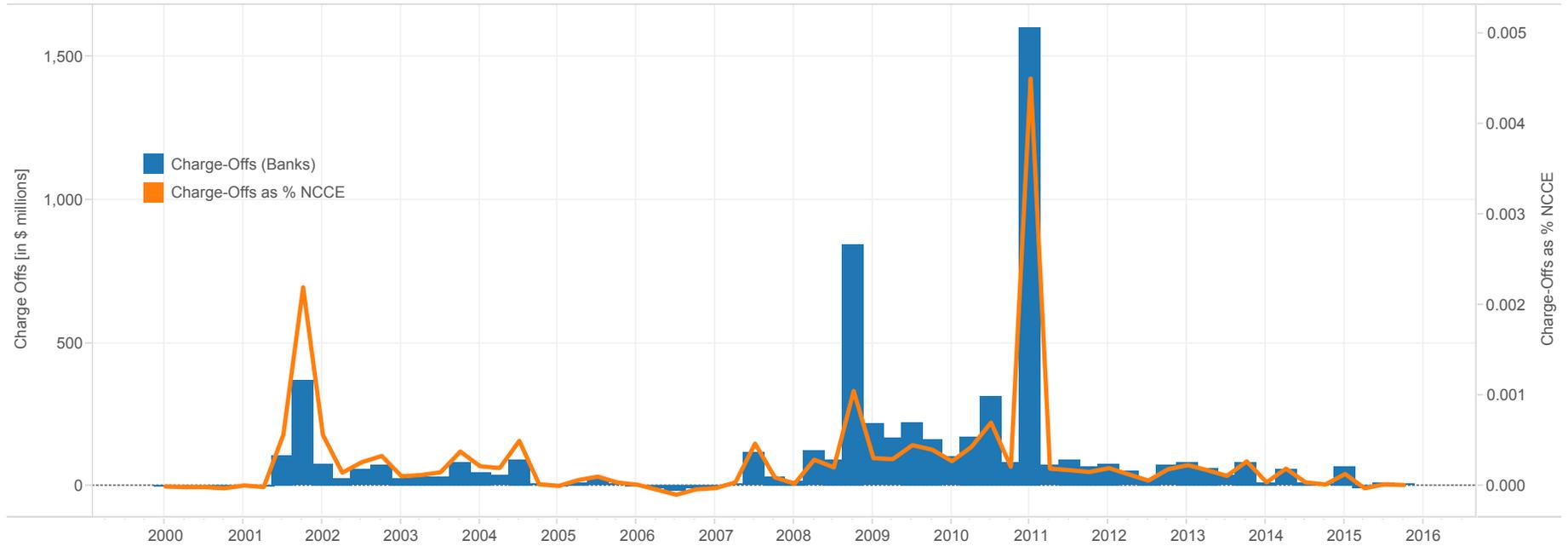


**Netting Benefit (%)**

2009			2010				2011				2012				2013				2014				2015			
Q2	Q3	Q4	Q1	Q2	Q3	Q4																				
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

\*The netting benefit is defined as: \$ amount of netting benefits/gross positive fair value.  
Data Source: Call Reports, beginning 1Q2015 RC-R otherwise RC-L

**Graph 7**  
**Quarterly Charge-Offs/(Recoveries) from Derivatives**  
**Insured U.S. Commercial Banks and Savings Associations with Derivatives**

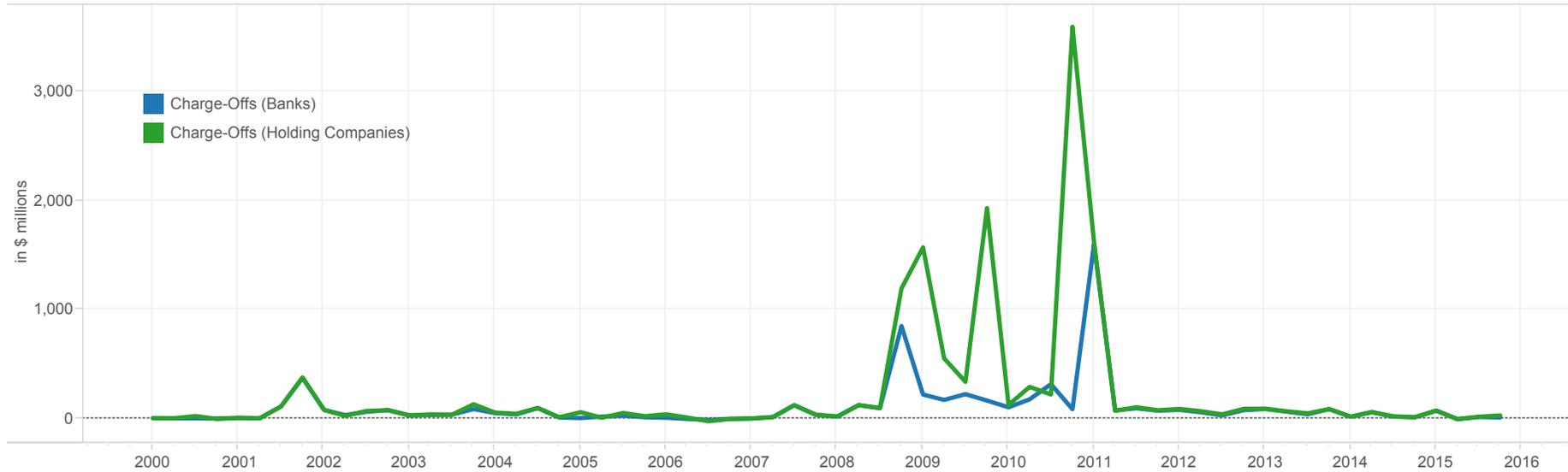


in \$ millions

	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	10.49	6.40

Note: The figures are for each quarter alone, not year-to-date.  
 NCCE: Pre 2Q09 (RC-R); 2Q09-4Q14 (RC-L); 1Q15 onward (RC-R)  
 Data Source: Call Reports

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

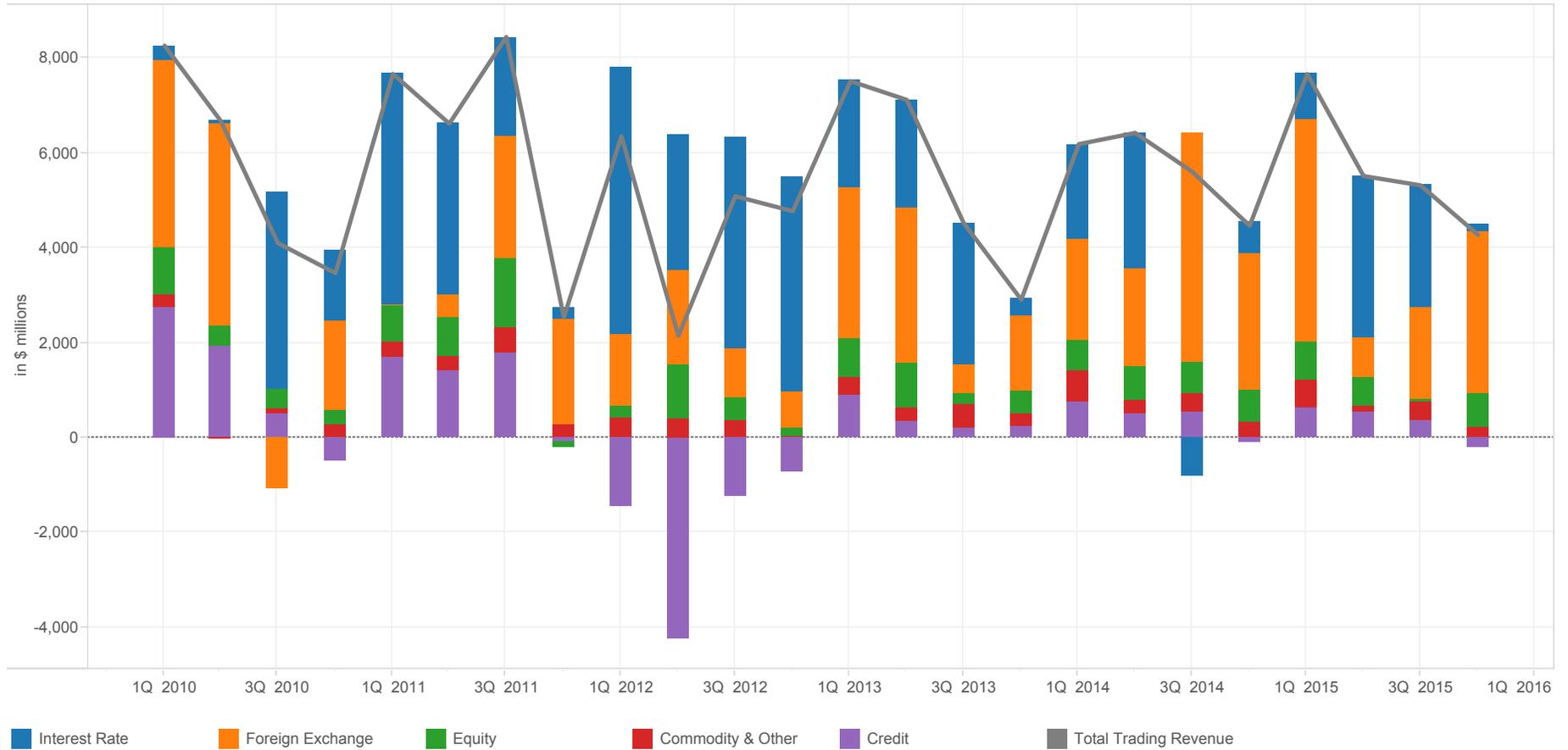


in \$ millions

	2000				2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Charge-Offs (Banks)</b>	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
<b>Charge-Offs (Holding Companies)</b>	0.1	-1.0	19.3	-7.0	2.0	-1.0	107.3	374.6	75.8	21.2	66.0	73.7	25.3	34.9	31.4	127.8
	2004				2005				2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Charge-Offs (Banks)</b>	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
<b>Charge-Offs (Holding Companies)</b>	51.2	40.4	94.2	9.0	54.9	3.6	48.1	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
<b>Charge-Offs (Banks)</b>	15	120	92	847	217	168	221	162	100	173	313	83	1,601	72	91	69
<b>Charge-Offs (Holding Companies)</b>	15	120	93	1,192	1,570	549	334	1,931	122	288	218	3,598	1,617	68	100	73
	2012				2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Charge-Offs (Banks)</b>	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	10.49	6.40
<b>Charge-Offs (Holding Companies)</b>	84.57	64.02	34.88	85.37	87.16	62.58	44.58	83.38	13.55	55.61	17.18	9.11	69.05	-10.23	12.85	25.03

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

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

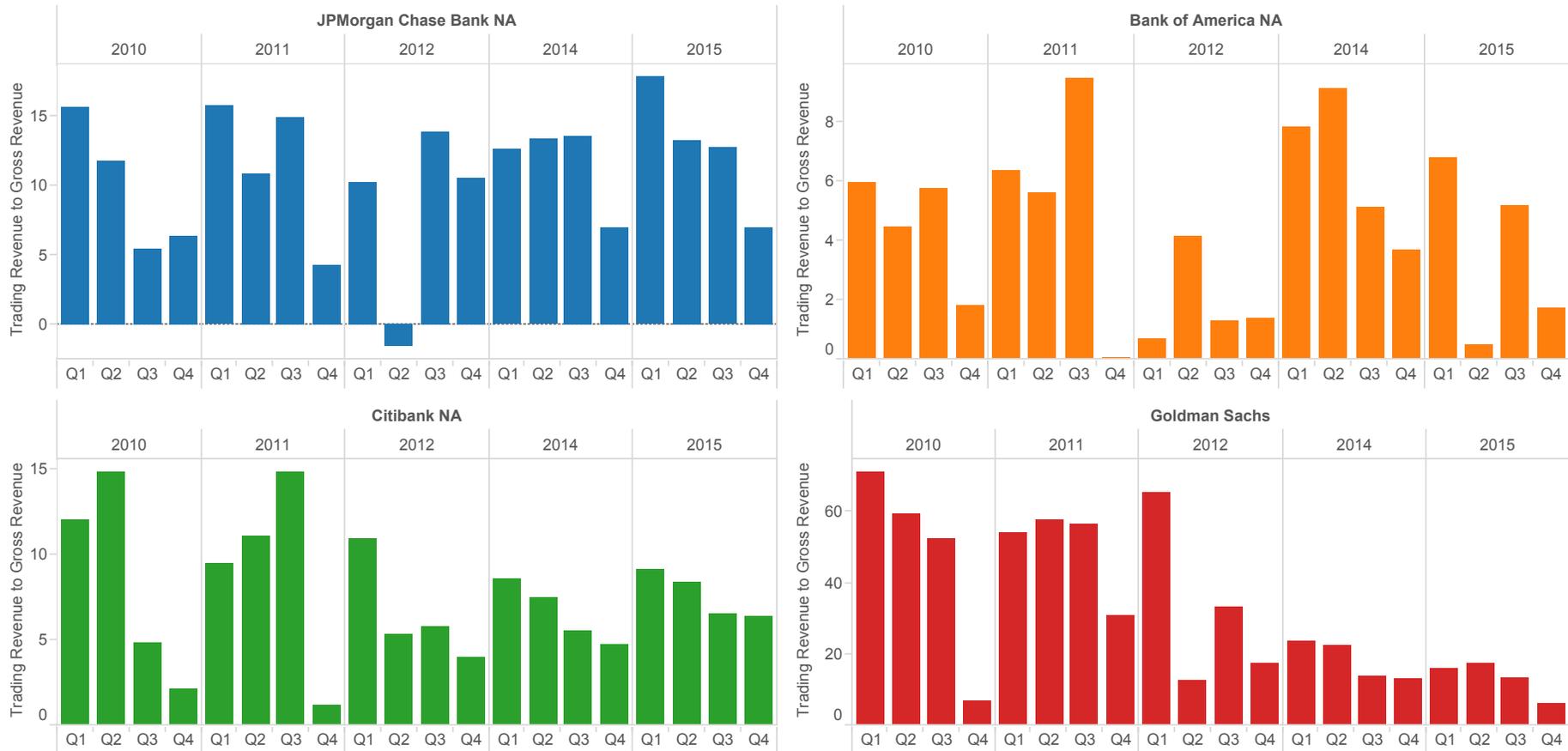


in \$ millions

	2010				2011				2012				2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Interest Rate</b>	304	73	4,161	1,482	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
<b>Foreign Exchange</b>	3,962	4,274	-1,069	1,903	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
<b>Equity</b>	979	417	404	301	762	808	1,442	-111	260	1,140	508	187	838	924	233	491	612	726	654	650	797	598	56	747
<b>Commodity &amp; Other</b>	297	-25	94	258	319	307	558	259	412	390	350	30	364	292	481	265	672	293	411	335	587	129	402	198
<b>Credit</b>	2,727	1,937	515	-472	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
<b>Total Trading Revenue</b>	8,269	6,676	4,106	3,472	7,671	6,624	8,451	2,539	6,359	2,147	5,093	4,778	7,520	7,125	4,527	2,911	6,192	6,428	5,612	4,471	7,669	5,519	5,323	4,279

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

**Graph 10**  
**Quarterly Trading Revenue (Cash & Derivatives Positions) as a Percentage of Gross Revenue (in %)**  
**Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings**



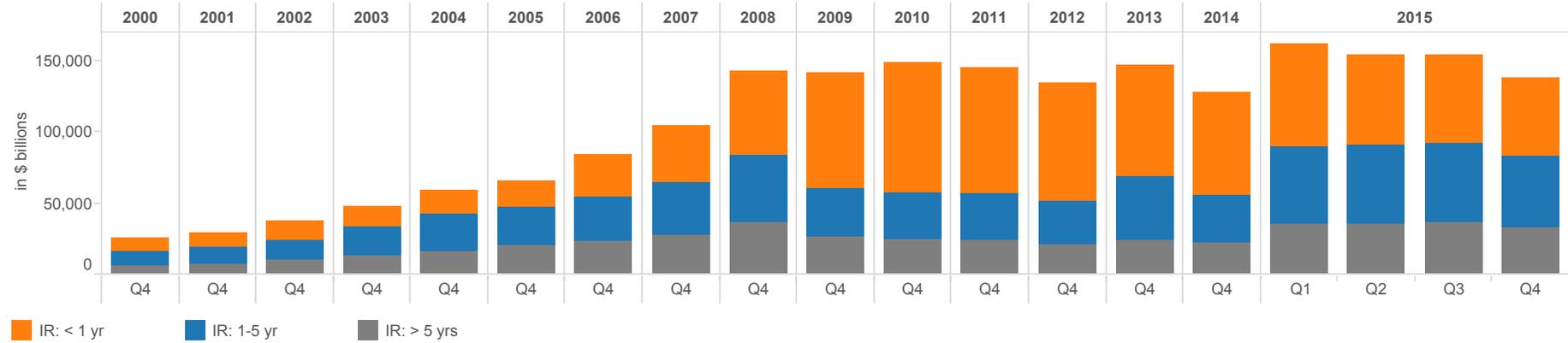
**Trading Revenue to Gross Revenue (%)\***

	2010				2011				2012				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
JPMorgan Chase Bank NA	15.57	11.74	5.39	6.35	15.64	10.84	14.82	4.33	10.24	-1.48	13.79	10.50	12.63	13.31	13.47	6.97	17.73	13.25	12.65	7.03
Bank of America NA	5.97	4.44	5.76	1.82	6.34	5.60	9.48	0.07	0.67	4.16	1.28	1.35	7.80	9.11	5.11	3.68	6.78	0.49	5.19	1.72
Citibank NA	12.00	14.82	4.84	2.15	9.44	11.11	14.79	1.18	10.95	5.36	5.74	3.94	8.51	7.43	5.48	4.78	9.17	8.41	6.54	6.30
Goldman Sachs	71.25	59.50	52.60	7.04	54.26	57.61	56.57	30.93	65.27	12.48	33.26	17.68	23.67	22.21	13.74	13.06	15.85	17.32	13.32	6.16
<b>TOTAL</b>	12.80	11.38	6.25	3.66	11.67	10.32	14.16	2.36	8.70	2.78	7.86	5.72	10.06	10.45	8.53	5.35	11.68	7.62	8.41	5.03

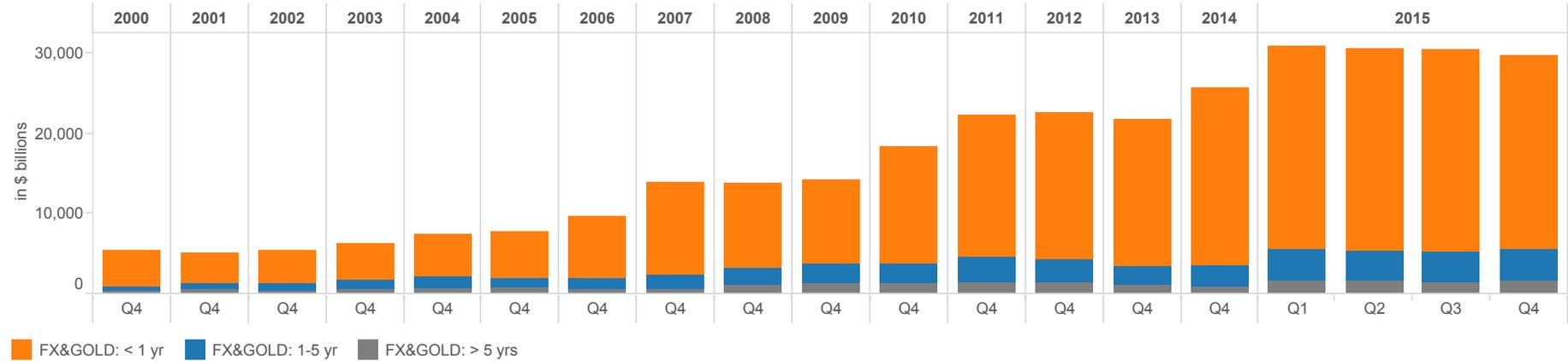
\*The trading revenue figures above are for cash and derivative activities. Revenue figures are quarterly, not year-to-date numbers.  
 Note: Gross Revenue equals interest income plus non-interest income.  
 Data Source: Call Reports

**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**



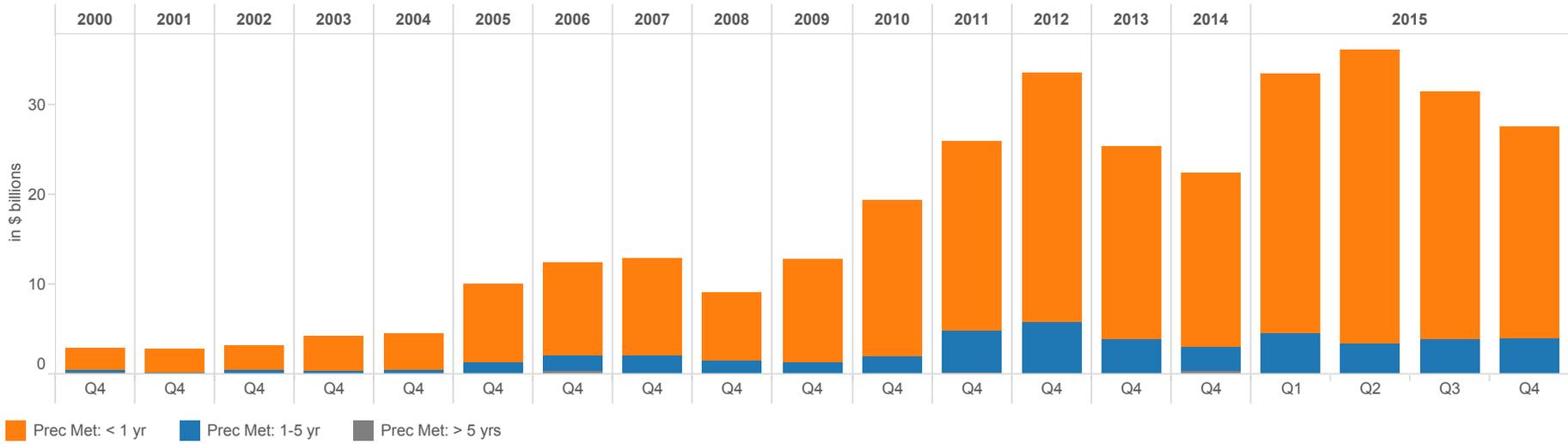
**in \$ billions**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4
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	71,809	71,679	63,465	62,274	55,066
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	54,899	54,759	55,134	49,407
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	35,099	35,837	36,554	32,980
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	25,514	25,082	25,206	24,129
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	3,917	3,859	3,673	3,986
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	1,612	1,613	1,500	1,648

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. 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. Data Source: Call Reports

**Graph 12**  
**Notional Amounts of Precious Metals Contracts by Maturity**  
*Insured U.S. Commercial Banks and Savings Associations*

**Precious Metals**

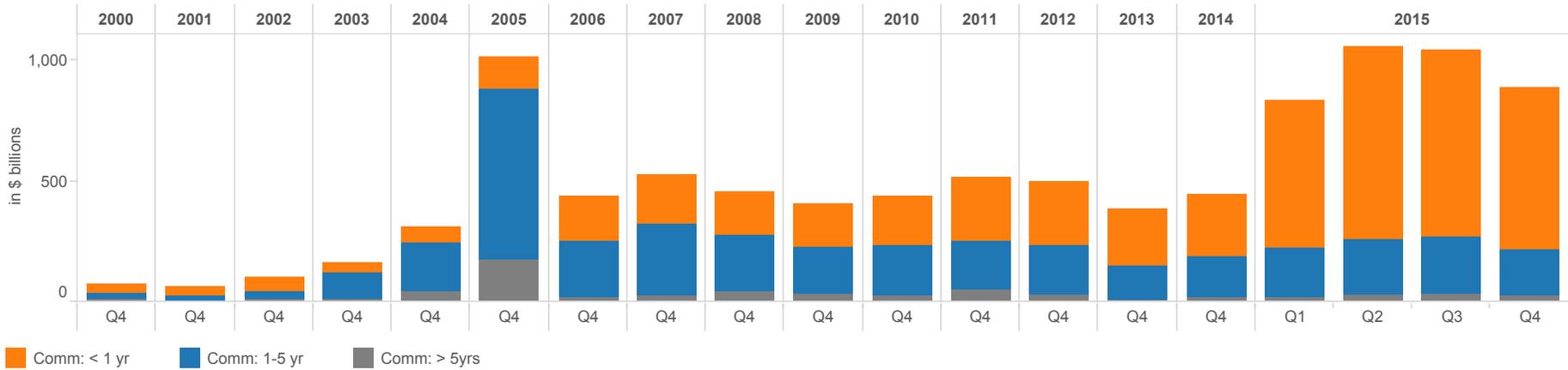


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4						
<b>Prec Met: &lt; 1 yr</b>	2.51	2.44	2.72	3.87	4.04	8.59	10.35	10.72	7.55	11.55	17.47	21.12	27.68	21.41	19.29	28.74	32.58	27.60	23.51
<b>Prec Met: 1-5 yr</b>	0.25	0.23	0.46	0.33	0.51	1.29	1.75	2.10	1.51	1.24	1.89	4.74	5.82	3.80	2.84	4.57	3.43	3.77	3.92
<b>Prec Met: &gt; 5 yrs</b>	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	0.00	0.02	0.06	0.07

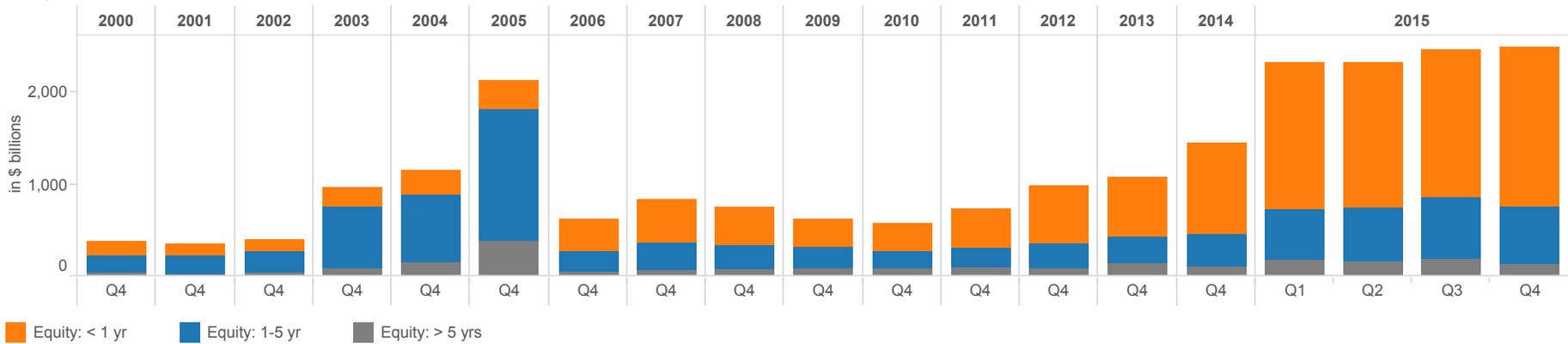
Note: Figures above exclude foreign exchange contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.  
 Data Source: Call Reports

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

**Commodity**



**Equity**

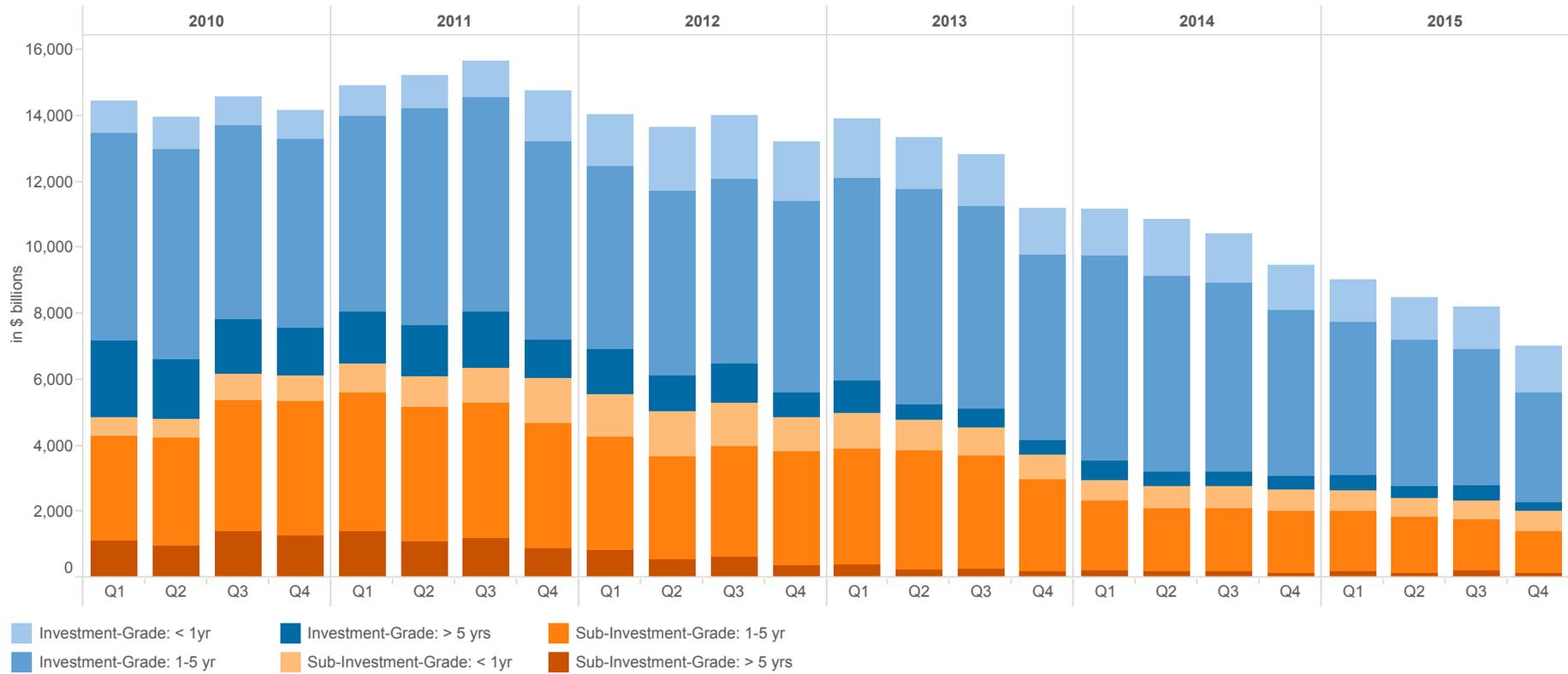


**in \$ billions**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4
<b>Comm: &lt; 1 yr</b>	36	31	55	43	64	133	185	206	179	176	203	261	261	235	257	614	796	774	668
<b>Comm: 1-5 yr</b>	27	25	35	103	205	707	235	297	233	198	209	209	208	144	164	202	228	242	197
<b>Comm: &gt; 5yrs</b>	11	2	9	14	40	175	20	25	43	33	25	46	28	6	20	21	32	29	22
<b>Equity: &lt; 1 yr</b>	162	121	127	197	273	321	341	473	409	312	296	427	627	645	996	1,595	1,567	1,604	1,735
<b>Equity: 1-5 yr</b>	180	209	249	674	736	1,428	221	297	256	228	191	210	262	291	352	555	580	670	628
<b>Equity: &gt; 5 yrs</b>	38	18	25	84	140	383	45	70	72	82	85	94	82	136	101	169	163	184	130

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**

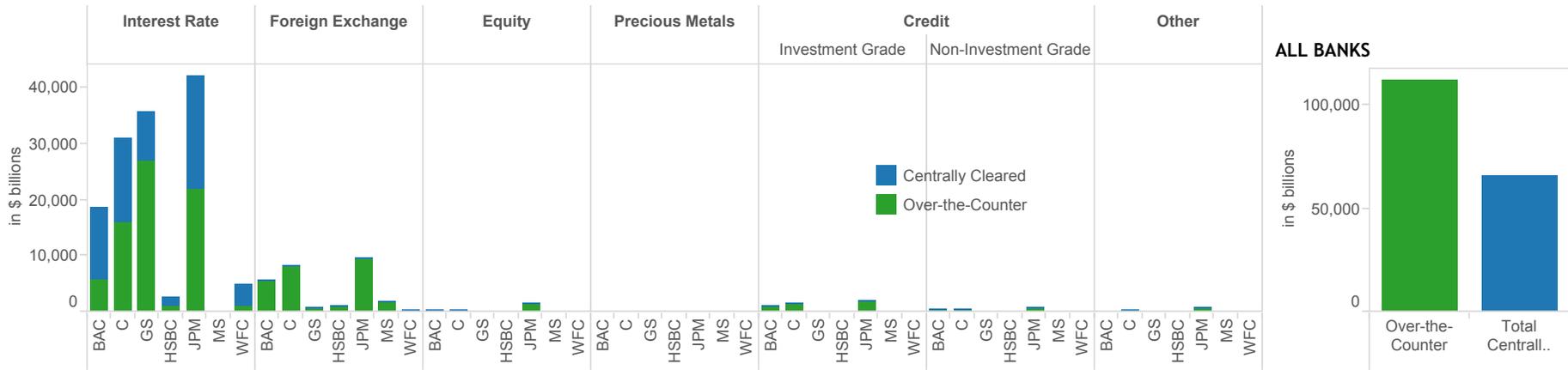


in \$ billions

	2010				2011				2012				2013				2014				2015			
	Q1	Q2	Q3	Q4																				
<b>Investment-Grade: &lt; 1yr</b>	986	970	871	856	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
<b>Investment-Grade: 1-5 yr</b>	6,286	6,372	5,850	5,731	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
<b>Investment-Grade: &gt; 5 yrs</b>	2,310	1,803	1,681	1,446	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
<b>Total Investment Grade</b>	9,581	9,145	8,402	8,033	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
<b>Sub-Investment-Grade: &lt; 1yr</b>	574	585	750	791	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
<b>Sub-Investment-Grade: 1-5 yr</b>	3,195	3,263	3,998	4,073	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
<b>Sub-Investment-Grade: &gt; 5 yrs</b>	1,101	968	1,400	1,254	1,403	1,083	1,180	885	835	541	623	352	414	197	262	179	200	160	157	140	194	152	213	119
<b>Total Sub-Investment Grade</b>	4,870	4,816	6,148	6,118	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

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 15**  
**Notional Amounts of Over-The-Counter and Centrally Cleared Derivative Contracts**  
**Insured U.S. Commercial Banks and Savings Associations**



in \$ billions

Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other	
	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Gr..		Centrally Cleared	Over-the-Counter						
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter		
<b>JPM</b>	20,059	22,091	27	9,670	412	1,185	0	13	366	1,747	101	673	56	595
<b>C</b>	15,109	15,965	56	8,330	5	335	1	5	147	1,408	58	422	52	84
<b>BAC</b>	13,005	5,604	55	5,594	39	291	0	0	345	682	113	489	0	18
<b>GS</b>	8,838	26,954	0	757	0	73	0	0	0	89	0	71	0	7
<b>HSBC</b>	1,543	1,064	0	1,075	0	40	0	6	5	35	9	41	0	0
<b>WFC</b>	3,923	1,080	0	347	24	50	0	2	0	1	2	15	15	22
<b>MS</b>	2	1	0	1,783	0	0	0	0	0	2	0	2	0	0
<b>Grand Total</b>	<b>62,481</b>	<b>72,758</b>	<b>138</b>	<b>27,556</b>	<b>479</b>	<b>1,975</b>	<b>1</b>	<b>26</b>	<b>863</b>	<b>3,965</b>	<b>284</b>	<b>1,712</b>	<b>124</b>	<b>726</b>

Total Centrally Cleared	Over-the-Counter	Total Notional
21,021	35,974	56,995
15,429	26,550	41,979
13,557	12,678	26,235
8,838	27,950	36,789
1,558	2,262	3,819
2	1,788	1,790
3,964	1,516	5,480
<b>64,369</b>	<b>108,718</b>	<b>173,087</b>

**ALL OTHER**

1,084	1,131	3	2,066	1	38	0	0	0	6	0	5	0	37
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1,089	3,284	4,373
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**TOTAL**

63,565	73,889	141	29,622	480	2,013	1	26	864	3,971	284	1,717	124	763
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65,458	112,002	177,460
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% of Total

Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other	
	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Gr..		Centrally Cleared	Over-the-Counter						
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter		
<b>JPM</b>	48%	52%	0%	100%	26%	74%	0%	100%	17%	83%	13%	87%	9%	91%
<b>C</b>	49%	51%	1%	99%	1%	99%	16%	84%	9%	91%	12%	88%	39%	61%
<b>BAC</b>	70%	30%	1%	99%	12%	88%			34%	66%	19%	81%	0%	100%
<b>GS</b>	25%	75%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%
<b>HSBC</b>	59%	41%	0%	100%	0%	100%	0%	100%	13%	87%	18%	82%	0%	100%
<b>WFC</b>	78%	22%	0%	100%	32%	68%	0%	100%	0%	100%	13%	87%	41%	59%
<b>MS</b>	66%	34%	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%
37%	63%
52%	48%
24%	76%
41%	59%
0%	100%
72%	28%

Data Source: Call Reports, Schedule RC-R.

TABLE 1

**NOTIONAL AMOUNT OF DERIVATIVE CONTRACTS  
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
DECEMBER 31, 2015, \$ MILLIONS**

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	\$1,914,658	\$51,139,448	\$893,828	\$1,488,253	\$9,115,468	\$28,269,897	\$8,478,963	\$2,893,039	\$90,307
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	1,679,558	1,144,998	5,792,003	28,251,519	7,472,430	2,059,748	342,200
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	1,865,747	2,052,435	3,446,595	27,188,351	6,324,203	164,005	7,853
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	2,298,883	120,601	5,939,356	13,842,243	1,850,465	1,617,946	404,112
5	Wells Fargo Bank NA	SD	1,610,580	5,732,768	209,208	109,414	526,659	4,256,487	601,788	29,212	4,353
6	HSBC NA	VA	183,138	4,164,986	61,093	26,280	904,403	2,653,139	329,403	190,670	42,724
7	MORGAN STANLEY BANK NA	UT	136,028	2,118,804	29,198	2,786	444,243	1,080,895	557,805	3,877	36,499
8	STATE STREET BANK&TRUST CO	MA	240,898	1,271,580	2,573	0	1,238,650	4,967	25,390	0	37,065
9	BANK OF NEW YORK MELLON	NY	319,258	1,067,851	38,110	209	570,180	395,725	63,308	319	52,706
10	PNC BANK NATIONAL ASSN	DE	348,291	351,788	37,737	6,000	20,071	257,539	25,323	5,117	1,067
11	NORTHERN TRUST CO	IL	116,391	250,829	0	0	236,971	12,819	1,040	0	10,712
12	SUNTRUST BANK	GA	186,711	248,713	22,351	13,588	16,734	134,381	57,002	4,657	99
13	U S BANK NATIONAL ASSN	OH	417,458	198,435	3,248	5,018	51,357	112,829	21,570	4,413	1,003
14	TD BANK NATIONAL ASSN	DE	246,486	187,016	0	0	10,519	175,148	584	765	5
15	MUFG UNION BANK NA	CA	115,384	129,102	2,411	0	55,358	61,615	9,708	10	498
16	REGIONS BANK	AL	125,121	78,643	2,306	68	16,003	54,246	4,094	1,926	71
17	FIFTH THIRD BANK	OH	138,621	70,310	295	113	6,605	44,254	17,208	1,834	300
18	KEYBANK NATIONAL ASSN	OH	93,038	67,887	8,398	0	7,674	45,392	5,791	632	567
19	CAPITAL ONE NATIONAL ASSN	VA	273,232	65,497	95	0	1,718	61,938	9	1,737	12
20	BRANCH BANKING&TRUST CO	NC	205,126	56,858	415	0	7,719	40,195	8,529	0	28
21	CITIZENS BANK NATIONAL ASSN	RI	108,065	52,330	0	0	9,268	37,392	3,923	1,746	44
22	BOKF NATIONAL ASSN	OK	31,273	35,601	138	297	30,621	2,551	1,994	0	17
23	HUNTINGTON NATIONAL BANK	OH	70,880	32,484	99	0	2,355	27,948	989	1,093	1
24	COMPASS BANK	AL	85,427	31,224	390	0	1,121	22,615	7,097	0	55
25	CAPITAL ONE BANK USA NA	VA	102,172	30,990	0	0	8,245	22,744	0	0	103
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,142,036	\$180,494,231	\$7,156,082	\$4,970,060	\$28,459,897	\$107,056,830	\$25,868,615	\$6,982,748	\$1,032,401
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,277,069	478,962	3,407	1,202	65,548	335,738	69,321	3,746	1,091
TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	7,159,488	4,971,262	28,525,445	107,392,568	25,937,936	6,986,493	1,033,492

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 foreign exchange. Beginning in the first quarter, 1995, spot foreign exchange was reported separately.

Note: Numbers may not add due to rounding.

Data source: Call Reports, schedule RC-L

TABLE 2

**NOTIONAL AMOUNT OF DERIVATIVE CONTRACTS  
TOP 25 HOLDING COMPANIES IN DERIVATIVES  
DECEMBER 31, 2015, \$ MILLIONS**

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	JPMORGAN CHASE & CO.	NY	\$2,351,698	\$50,574,503	\$940,334	\$1,572,299	\$9,311,478	\$27,675,881	\$8,174,836	\$2,899,675	\$84,607
2	CITIGROUP INC.	NY	1,731,210	50,399,592	2,019,578	5,064,812	6,695,905	27,468,517	7,194,644	1,956,136	335,253
3	GOLDMAN SACHS GROUP, INC., THE	NY	861,419	47,320,975	2,200,120	2,947,681	5,828,513	26,413,538	8,039,073	1,892,050	179,903
4	BANK OF AMERICA CORPORATION	NC	2,147,391	41,891,212	2,817,413	650,252	8,614,866	24,105,011	3,785,142	1,918,528	274,521
5	MORGAN STANLEY	NY	787,465	28,798,385	1,662,460	1,248,678	2,866,258	16,109,653	5,484,172	1,427,164	25,049
6	HSBC NORTH AMERICA HOLDINGS INC.	NY	271,889	7,019,838	281,181	476,163	904,620	4,831,534	335,669	190,670	42,724
7	WELLS FARGO & COMPANY	CA	1,787,632	5,646,645	214,102	126,363	554,492	4,125,605	597,521	28,562	4,353
8	STATE STREET CORPORATION	MA	245,199	1,279,813	2,821	0	1,239,458	12,003	25,390	141	37,065
9	BANK OF NEW YORK MELLON CORPORATION, THE	NY	393,780	1,077,813	39,378	3,070	595,400	376,339	63,307	319	52,718
10	PNC FINANCIAL SERVICES GROUP, INC., THE	PA	358,690	346,909	37,800	6,000	20,126	250,957	26,909	5,117	1,067
11	RBC USA HOLDCO CORPORATION	NY	133,133	330,823	157,419	1,824	72,742	5,013	93,139	687	44
12	GE CAPITAL GLOBAL HOLDINGS, LLC	CT	318,826	299,387	0	0	193,780	99,018	3,061	3,528	1,715
13	NORTHERN TRUST CORPORATION	IL	116,750	250,079	0	0	236,971	12,069	1,040	0	10,712
14	SUNTRUST BANKS, INC.	GA	190,989	248,012	22,563	13,588	16,734	133,381	56,955	4,792	99
15	TD GROUP US HOLDINGS LLC	DE	267,144	201,581	0	0	16,221	184,011	584	765	5
16	U.S. BANCORP	MN	421,853	201,413	3,248	5,018	51,430	116,134	21,570	4,013	1,003
17	MUFG AMERICAS HOLDINGS CORPORATION	NY	116,210	129,102	2,411	0	55,358	61,615	9,708	10	498
18	CAPITAL ONE FINANCIAL CORPORATION	VA	334,180	105,801	95	0	9,971	93,988	9	1,737	115
19	REGIONS FINANCIAL CORPORATION	AL	126,234	77,958	2,306	68	16,003	53,561	4,094	1,926	71
20	FIFTH THIRD BANCORP	OH	141,082	72,015	295	113	6,605	45,959	17,208	1,834	300
21	KEYCORP	OH	95,271	71,424	8,398	0	7,674	48,108	6,611	632	567
22	BB&T CORPORATION	NC	209,947	67,514	415	0	12,122	46,447	8,529	0	28
23	CITIZENS FINANCIAL GROUP, INC.	RI	138,574	61,963	0	0	9,291	45,983	4,499	2,191	44
24	SANTANDER HOLDINGS USA, INC.	MA	132,156	59,723	0	0	987	36,296	22,430	10	61
25	ALLY FINANCIAL INC.	MI	158,581	59,116	1,905	0	499	20,252	36,460	0	0
TOP 25 HOLDING COMPANIES WITH DERIVATIVES			\$13,837,303	\$236,591,597	\$10,414,242	\$12,115,928	\$37,337,503	\$132,370,872	\$34,012,561	\$10,340,490	\$1,052,523

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: Prior to the first quarter of 2005, total derivatives included spot foreign exchange. Beginning in that quarter, spot foreign exchange has been reported separately.

Note: Numbers may not add due to rounding.

Data 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**  
**DECEMBER 31, 2015, \$ MILLIONS**

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	\$1,914,658	\$51,139,448	4.7	95.3	71.8	18.8	3.7	5.7
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	6.1	93.9	73.5	20.4	1.7	4.4
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	9.5	90.5	94.4	5.0	0.2	0.4
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	9.4	90.6	72.1	20.3	1.3	6.3
5	Wells Fargo Bank NA	SD	1,610,580	5,732,768	5.6	94.4	90.0	6.2	3.2	0.5
6	HSBC NA	VA	183,138	4,164,986	2.1	97.9	66.0	27.5	2.0	4.6
7	MORGAN STANLEY BANK NA	UT	136,028	2,118,804	1.5	98.5	1.4	98.4	0.0	0.2
8	STATE STREET BANK&TRUST CO	MA	240,898	1,271,580	0.2	99.8	0.4	97.7	1.9	0.0
9	BANK OF NEW YORK MELLON	NY	319,258	1,067,851	3.6	96.4	50.1	49.7	0.2	0.0
10	PNC BANK NATIONAL ASSN	DE	348,291	351,788	12.4	87.6	93.9	3.9	0.7	1.5
11	NORTHERN TRUST CO	IL	116,391	250,829	0.0	100.0	4.9	95.1	0.1	0.0
12	SUNTRUST BANK	GA	186,711	248,713	14.4	85.6	76.4	2.8	19.0	1.9
13	U S BANK NATIONAL ASSN	OH	417,458	198,435	4.2	95.8	74.8	22.6	0.4	2.2
14	TD BANK NATIONAL ASSN	DE	246,486	187,016	0.0	100.0	91.2	8.4	0.0	0.4
15	MUFG UNION BANK NA	CA	115,384	129,102	1.9	98.1	90.5	3.9	5.6	0.0
16	REGIONS BANK	AL	125,121	78,643	3.0	97.0	94.4	1.4	1.7	2.4
17	FIFTH THIRD BANK	OH	138,621	70,310	0.6	99.4	68.8	22.7	5.9	2.6
18	KEYBANK NATIONAL ASSN	OH	93,038	67,887	12.4	87.6	88.6	10.0	0.5	0.9
19	CAPITAL ONE NATIONAL ASSN	VA	273,232	65,497	0.1	99.9	96.2	0.4	0.8	2.7
20	BRANCH BANKING&TRUST CO	NC	205,126	56,858	0.7	99.3	99.1	0.9	0.0	0.0
21	CITIZENS BANK NATIONAL ASSN	RI	108,065	52,330	0.0	100.0	80.8	15.9	0.0	3.3
22	BOKF NATIONAL ASSN	OK	31,273	35,601	1.2	98.8	93.2	3.1	3.7	0.0
23	HUNTINGTON NATIONAL BANK	OH	70,880	32,484	0.3	99.7	88.6	5.2	2.8	3.4
24	COMPASS BANK	AL	85,427	31,224	1.2	98.8	91.3	2.9	5.8	0.0
25	CAPITAL ONE BANK USA NA	VA	102,172	30,990	0.0	100.0	73.4	26.6	0.0	0.0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,142,036	\$180,494,231	\$12,126,141	\$168,368,089	\$137,969,326	\$32,067,369	\$61	\$6,982,748
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,277,069	478,962	4,608	474,353	432,364	32,257	1,533	3,746
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	12,130,750	168,842,442	138,401,691	32,099,626	1,594	6,986,493
				(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				99.7	6.7	93.0	76.2	17.7	0.0	3.9
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				0.3	0.0	0.3	0.2	0.0	0.0	0.0
TOTAL FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				100.0	6.7	93.3	76.5	17.7	0.0	3.9

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: "Foreign Exchange" does not include spot fx.

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

Note: Numbers may not add due to rounding.

Data source: Call Reports, schedule RC-L

TABLE 4

**CREDIT EQUIVALENT EXPOSURES**  
**TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**DECEMBER 31, 2015, \$ MILLIONS**

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL RISK-BASED CAPITAL	BILATERALLY NETTED CURRENT CREDIT EXPOSURE		TOTAL CREDIT EXPOSURE FROM ALL CONTRACTS (%)	
						POTENTIAL FUTURE EXPOSURE	TOTAL CREDIT EXPOSURE TO CAPITAL		
1	JPMORGAN CHASE BANK NA	OH	\$1,914,658	\$51,139,448	\$176,423	\$143,490	\$224,678	\$368,168	209
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	149,708	79,868	168,622	248,490	166
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	25,328	61,671	69,067	130,738	516
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	159,871	43,468	92,735	136,203	85
5	Wells Fargo Bank NA	SD	1,610,580	5,732,768	149,970	18,977	27,769	46,746	31
6	HSBC NA	VA	183,138	4,164,986	26,670	10,619	16,875	27,494	103
7	MORGAN STANLEY BANK NA	UT	136,028	2,118,804	15,097	2,367	5,838	8,205	54
8	STATE STREET BANK&TRUST CO	MA	240,898	1,271,580	16,027	6,177	6,514	12,691	79
9	BANK OF NEW YORK MELLON	NY	319,258	1,067,851	17,116	5,426	5,460	10,886	64
10	PNC BANK NATIONAL ASSN	DE	348,291	351,788	36,482	2,906	794	3,700	10
11	NORTHERN TRUST CO	IL	116,391	250,829	8,771	1,576	1,256	2,832	32
12	SUNTRUST BANK	GA	186,711	248,713	20,101	1,456	2,750	4,206	21
13	U S BANK NATIONAL ASSN	OH	417,458	198,435	41,112	1,007	3,232	4,239	10
14	TD BANK NATIONAL ASSN	DE	246,486	187,016	21,465	3,647	1,582	5,229	24
15	MUFG UNION BANK NA	CA	115,384	129,102	14,003	1,295	216	1,510	11
16	REGIONS BANK	AL	125,121	78,643	14,311	605	534	1,139	8
17	FIFTH THIRD BANK	OH	138,621	70,310	15,642	1,131	845	1,976	13
18	KEYBANK NATIONAL ASSN	OH	93,038	67,887	10,454	826	71	897	9
19	CAPITAL ONE NATIONAL ASSN	VA	273,232	65,497	23,832	658	513	1,171	5
20	BRANCH BANKING&TRUST CO	NC	205,126	56,858	21,859	881	500	1,381	6
21	CITIZENS BANK NATIONAL ASSN	RI	108,065	52,330	13,132	679	444	1,123	9
22	BOKF NATIONAL ASSN	OK	31,273	35,601	2,658	203	127	330	12
23	HUNTINGTON NATIONAL BANK	OH	70,880	32,484	6,851	336	170	506	7
24	COMPASS BANK	AL	85,427	31,224	9,002	453	278	732	8
25	CAPITAL ONE BANK USA NA	VA	102,172	30,990	13,192	511	-149	362	3
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,142,036	\$180,494,231	\$1,009,076	\$390,233	\$630,721	\$1,020,955	101
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,277,069	478,962	460,683	4,732	4,295	9,026	2
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	1,469,759	394,965	635,016	1,029,981	70
						328,497			
Commercial banks also hold on-balance sheet assets in volumes that are multiples of bank capital. For example:						83.2%			
EXPOSURES FROM OTHER ASSETS			EXPOSURE TO RISK						
ALL COMMERCIAL BANKS & SAVINGS ASSOCIATIONS			BASED CAPITAL						
1-4 FAMILY MORTGAGES			197%						
C&I LOANS			107%						
SECURITIES NOT IN TRADING ACCOUNT			189%						
<p>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.</p> <p>Note: The total credit exposure to capital ratio is calculated using risk based capital (tier one plus tier two capital).</p> <p>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.</p> <p>Note: Numbers may not add due to rounding.</p> <p>Data source: Call Reports, Schedule RC-R.</p>									

TABLE 5

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
DECEMBER 31, 2015, \$ MILLIONS**

<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	\$1,914,658	\$48,246,409	\$47,770,087	99.0	\$476,322	1.0
2	CITIBANK NATIONAL ASSN	SD	1,299,801	44,340,508	44,272,025	99.8	68,483	0.2
3	GOLDMAN SACHS BANK USA	NY	134,695	40,877,331	40,846,815	99.9	30,516	0.1
4	BANK OF AMERICA NA	NC	1,639,305	24,051,548	23,215,388	96.5	836,160	3.5
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$157,515,796	\$156,104,315	99.1	\$1,411,481	0.9
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,470,903	15,088,757	91.6	1,382,146	8.4
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	173,986,699	171,193,072	98.4	2,793,627	1.6
<p>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.</p> <p>Note: Numbers may not add due to rounding.</p> <p>Data source: Call Reports, schedule RC-L</p>								

TABLE 6

**GROSS FAIR VALUES OF DERIVATIVE CONTRACTS  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
DECEMBER 31, 2015, \$ MILLIONS**

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	\$1,914,658	\$51,139,448	\$952,423	\$932,716	\$2,723	\$4,043	\$51,583	\$50,872
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	590,269	584,126	543	928	37,124	35,935
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	725,073	699,299	391	25	3,238	2,432
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	313,656	316,098	22,382	24,623	25,468	24,216
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$164,250,534	\$2,581,421	\$2,532,239	\$26,039	\$29,619	\$117,413	\$113,455
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,722,658	214,229	211,543	18,369	10,171	5,088	4,667
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	2,795,650	2,743,782	44,408	39,790	122,501	118,122

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.

Data 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**  
**DECEMBER 31, 2015, \$ MILLIONS**  
**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	\$1,914,658	\$51,139,448	\$1,351	\$510	\$516	\$237	\$57	\$31
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	952	588	444	19	67	(166)
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	57	(1,283)	1,396	103	0	(159)
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	304	(76)	231	83	45	21
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$164,250,534	\$2,664	(\$261)	\$2,587	\$442	\$169	(\$273)
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,722,658	1,615	416	814	305	29	51
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	4,279	155	3,401	747	198	(222)

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.

Data source: Call Reports, schedule RI

TABLE 8

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
DECEMBER 31, 2015, \$ MILLIONS**

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	\$1,914,658	\$51,139,448	\$18,417,040	\$14,605,047	\$9,127,952	\$42,150,039	\$6,965,306	\$1,842,768	\$889,229	\$9,697,303
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	13,090,835	11,250,445	6,733,546	31,074,826	7,190,498	929,016	266,603	8,386,117
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	12,311,421	13,221,833	10,258,757	35,792,011	412,955	193,490	150,324	756,769
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	8,591,618	6,360,800	3,656,177	18,608,595	4,767,629	671,685	209,204	5,648,518
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$164,250,534	\$52,410,914	\$45,438,125	\$29,776,432	\$127,625,471	\$19,336,388	\$3,636,959	\$1,515,360	\$24,488,707
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,722,658	2,655,097	3,968,969	3,203,723	9,827,789	4,793,046	349,481	132,439	5,274,966
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	55,066,011	49,407,094	32,980,155	137,453,260	24,129,434	3,986,440	1,647,799	29,763,673

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange 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.

Numbers may not add due to rounding.

Effective 1Q 2015, the reporting form and call report instructions changed. Schedule RC-R now requires banks to report foreign exchange (FX) and gold notionals in aggregate, rather than separately.

Data 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**  
**DECEMBER 31, 2015, \$ MILLIONS**

<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	\$1,914,658	\$51,139,448	\$11,662	\$1,747	\$63	\$13,472
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	5,561	824	0	6,385
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	0	0	0	0
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	0	0	0	0
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$164,250,534	\$17,223	\$2,571	\$63	\$19,857
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,722,658	6,292	1,352	2	7,646
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	23,515	3,923	65	27,503

Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange contracts with an original maturity of 14 days or less,  
Note: 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.

Data source: Call Reports, schedule RC-R

TABLE 10

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY**  
**TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES**  
**DECEMBER 31, 2015, \$ MILLIONS**

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	\$1,914,658	\$51,139,448	\$550,333	\$85,476	\$15,023	\$650,832	\$1,131,002	\$371,908	\$94,396	\$1,597,306
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	79,802	50,854	5,171	135,827	225,326	100,385	14,273	339,984
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	5,332	1,502	0	6,834	49,614	15,632	8,172	73,418
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	13,603	4,609	27	18,239	256,510	72,029	1,763	330,302
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$164,250,534	\$649,070	\$142,441	\$20,221	\$811,732	\$1,662,452	\$559,954	\$118,604	\$2,341,010
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,722,658	18,985	54,265	1,586	74,836	72,532	67,620	11,584	151,736
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	668,055	196,706	21,807	886,568	1,734,984	627,574	130,188	2,492,746

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange 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.

Data source: Call Reports, schedule RC-R

TABLE 11

**NOTIONAL AMOUNTS OF CREDIT DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY  
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES  
DECEMBER 31, 2015, \$ MILLIONS**

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	\$1,914,658	\$51,139,448	\$2,893,039	\$614,665	\$1,400,194	\$106,789	\$2,121,648	\$226,055	\$507,101	\$38,235	\$771,391
2	CITIBANK NATIONAL ASSN	SD	1,299,801	46,400,256	2,059,748	417,444	1,045,488	109,686	1,572,618	134,258	324,846	28,026	487,130
3	GOLDMAN SACHS BANK USA	NY	134,695	41,041,336	164,005	29,085	50,917	11,444	91,446	27,432	33,844	11,283	72,559
4	BANK OF AMERICA NA	NC	1,639,305	25,669,494	1,617,946	294,363	753,283	44,734	1,092,380	186,908	312,017	26,641	525,566
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$4,988,459	\$164,250,534	\$6,734,738	\$1,355,557	\$3,249,882	\$272,653	\$4,878,092	\$574,653	\$1,177,808	\$104,185	\$1,856,646
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			9,430,645	16,722,658	251,755	24,607	78,330	8,810	111,746	32,538	92,749	14,721	140,009
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	180,973,192	6,986,493	1,380,164	3,328,212	281,463	4,989,838	607,191	1,270,557	118,906	1,996,655

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange 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.

Data 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**  
DECEMBER 31, 2015, \$ MILLIONS

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERIVATIVES	TOTAL CREDIT DERIVATIVES				BOUGHT				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	\$1,914,658	\$48,246,409	\$2,893,039	\$1,467,588	\$1,425,451	\$1,410,638	\$14,970	\$38,226	\$3,754	\$1,382,805	\$2,769	\$39,690	\$187		
2	CITIBANK NATIONAL ASSN	SD	1,299,801	44,340,508	2,059,748	1,050,500	1,009,248	985,130	34,592	30,778	0	964,666	19,542	25,040	0		
3	GOLDMAN SACHS BANK USA	NY	134,695	40,877,331	164,005	93,486	70,519	85,223	2,285	5,854	124	68,177	2,217	50	75		
4	BANK OF AMERICA NA	NC	1,639,305	24,051,548	1,617,946	802,738	815,208	785,208	12,138	5,392	0	778,895	14,036	22,277	0		
5	Wells Fargo Bank NA	SD	1,610,580	5,703,556	29,212	18,319	10,893	5,193	0	0	13,126	4,321	20	31	6,521		
6	HSBC NA	VA	183,138	3,974,317	190,670	97,761	92,909	91,062	6,699	0	0	89,459	3,449	0	0		
7	MORGAN STANLEY BANK NA	UT	136,028	2,114,927	3,877	3,877	0	2,855	0	1,022	0	0	0	0	0		
8	STATE STREET BANK&TRUST CO	MA	240,898	1,271,580	0	0	0	0	0	0	0	0	0	0	0		
9	BANK OF NEW YORK MELLON	NY	319,258	1,067,532	319	319	0	319	0	0	0	0	0	0	0		
10	PNC BANK NATIONAL ASSN	DE	348,291	346,671	5,117	2,627	2,491	91	0	0	2,535	0	0	0	2,491		
11	NORTHERN TRUST CO	IL	116,391	250,829	0	0	0	0	0	0	0	0	0	0	0		
12	SUNTRUST BANK	GA	186,711	244,056	4,657	2,422	2,235	190	2,227	0	6	0	2,227	0	9		
13	U S BANK NATIONAL ASSN	OH	417,458	194,022	4,413	1,427	2,986	435	0	0	992	400	0	0	2,586		
14	TD BANK NATIONAL ASSN	DE	246,486	186,251	765	760	5	760	0	0	0	5	0	0	0		
15	MUFG UNION BANK NA	CA	115,384	129,092	10	10	0	10	0	0	0	0	0	0	0		
16	REGIONS BANK	AL	125,121	76,717	1,926	317	1,610	0	0	0	317	0	0	0	1,610		
17	FIFTH THIRD BANK	OH	138,621	68,475	1,834	170	1,664	0	0	0	170	0	0	0	1,664		
18	KEYBANK NATIONAL ASSN	OH	93,038	67,255	632	535	97	535	0	0	0	5	93	0	0		
19	CAPITAL ONE NATIONAL ASSN	VA	273,232	63,760	1,737	650	1,088	0	0	0	650	0	0	0	1,088		
20	BRANCH BANKING&TRUST CO	NC	205,126	56,858	0	0	0	0	0	0	0	0	0	0	0		
21	CITIZENS BANK NATIONAL ASSN	RI	108,065	50,584	1,746	0	1,746	0	0	0	0	0	0	0	1,746		
22	BOKF NATIONAL ASSN	OK	31,273	35,601	0	0	0	0	0	0	0	0	0	0	0		
23	HUNTINGTON NATIONAL BANK	OH	70,880	31,391	1,093	750	344	0	31,391	0	750	0	0	0	344		
24	COMPASS BANK	AL	85,427	31,224	0	0	0	0	0	0	0	0	0	0	0		
25	CAPITAL ONE BANK USA NA	VA	102,172	30,990	0	0	0	0	0	0	0	0	0	0	0		
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$10,142,036	\$173,511,483	\$6,982,748	\$3,544,255	\$3,438,493	\$3,367,649	\$72,911	\$81,272	\$22,423	\$3,288,733	\$44,353	\$87,088	\$18,319		
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,277,069	475,216	3,746	1,397	2,349	150	78	0	1,169	157	2	0	2,189		
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			14,419,104	173,986,699	6,986,493	3,545,652	3,440,841	3,367,799	72,989	81,272	23,592	3,288,890	44,355	87,088	20,508		
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					99.9	50.7	49.2	48.2	1.0	1.2	0.3	47.1	0.6	1.2	0.3		
TOTAL AMOUNT FOR 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		
					100.0	50.8	49.2	48.2	1.0	1.2	0.3	47.1	0.6	1.2	0.3		

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

Note: Numbers may not add due to rounding.

Data source: Call Reports, schedule RC-L