

Quarterly Report on Bank Trading and Derivatives Activities

Second Quarter 2019

Office of the Comptroller of the Currency
Washington, D.C.

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About This Report

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 and savings associations; reports filed by U.S. financial holding companies; and other published data. A total of 1,340¹ insured U.S. commercial banks and savings associations reported trading and derivatives activities at the end of the second quarter of 2019. A small group of large financial institutions continues to dominate trading and derivatives activity in the U.S. commercial banking system. During the second quarter of 2019, four large commercial banks represented 87.8 percent of the total banking industry notional amounts and 83.8 percent of industry net current credit exposure (NCCE) (see tables 1 and 4 in the appendix).

The OCC and other supervisors have dedicated examiners at the largest banks to continuously evaluate the credit, market, operational, reputation, and compliance risks of bank trading and derivatives activities. In addition to the OCC's 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. OCC activities include development of objectives and milestones for stronger trade processing and improved market transparency across derivative categories, migration of certain highly liquid products to clearinghouses, and requirements for posting and collecting margin.

This is the 95th edition of the OCC's *Quarterly Report on Bank Trading and Derivatives Activities*. The first report was published in 1995. Please send any comments or feedback on the structure and content of this report to the OCC by email: QuarterlyDerivatives@occ.treas.gov.

Executive Summary

- Insured U.S. commercial banks and savings associations (collectively, banks) reported trading revenue of \$8.0 billion in the second quarter of 2019, \$2.0 billion less (19.8 percent) than in the previous quarter and \$0.7 billion more (9.0 percent) than a year earlier (see table 1).
- Credit exposure from derivatives increased in the second quarter of 2019 compared with the first quarter of 2019. NCCE increased \$35.4 billion, or 10.6 percent, to \$371 billion (see table 5).
- Derivative notional amounts increased in the second quarter of 2019 by \$3.6 trillion, or 1.8 percent, to \$204.9 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled \$151.9 trillion or 74.1 percent of total derivative notional amounts (see table 10).

¹ Institutions with total assets of less than \$1 billion have the option to file the FFIEC 051 call report. Due to the limited amount of derivatives data provided by FFIEC 051 call report filers, this report provides this information separately and distinctly in table 13 in the appendix.

Revenue

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

Insured U.S. commercial banks and savings associations reported \$8.0 billion in trading revenue in the second quarter of 2019, \$2.0 billion less (19.8 percent) than in the previous quarter and \$0.7 billion more (9.0 percent) than a year earlier (see table 1). The quarter-over-quarter decrease in trading revenue was driven by decreases across all derivative categories. For a historical view of quarterly bank trading revenue by instrument, see graph 9a in the appendix.

Table 1: Quarterly Bank Trading Revenue, in Millions of Dollars

	2Q 2019	1Q 2019	Q/Q Change	Q/Q % Change	2Q 2018	Y/Y Change	Y/Y % Change
Interest rate and foreign exchange	\$5,630	\$6,332	-\$701	-11.1%	\$5,156	\$474	9.2%
Equity	\$2,464	\$2,895	-\$432	-14.9%	\$1,727	\$736	42.6%
Commodity and other	-\$43	\$323	-\$366	-113.4%	\$286	-\$329	-115.2%
Credit	-\$2	\$485	-\$487	-100.4%	\$215	-\$217	-101.0%
Total trading revenue	\$8,049	\$10,035	-\$1,986	-19.8%	\$7,384	\$664	9.0%

Source: Call reports, Schedule RI

Holding Company Trading Revenue

Consolidated bank holding company (BHC) trading performance provides a more complete picture of trading revenue in the banking system. As shown in table 2, consolidated holding company trading revenue of \$18.4 billion in the second quarter of 2019 was \$6.5 billion (26.1 percent) lower than in the previous quarter. The quarter-over-quarter decrease in trading revenue was driven by decreases across all derivative categories. Year-over-year holding company trading revenue increased by \$3.5 billion (23.6 percent). For a historical view of quarterly holding company trading revenue by instrument, see graph 9b in the appendix.

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

	2Q 2019	1Q 2019	Q/Q change	Q/Q % change	2Q 2018	Y/Y change	Y/Y % change
Interest rate and foreign exchange	\$10,083	\$11,437	-\$1,354	-11.8%	\$4,793	\$5,290	110.4%
Equity	\$6,084	\$9,215	-\$3,131	-34.0%	\$7,445	-\$1,361	-18.3%
Commodity and other	\$610	\$1,200	-\$590	-49.2%	\$779	-\$169	-21.7%
Credit	\$1,590	\$3,011	-\$1,421	-47.2%	\$1,848	-\$258	-14.0%
Total HC trading revenue	\$18,367	\$24,862	-\$6,495	-26.1%	\$14,866	\$3,501	23.6%

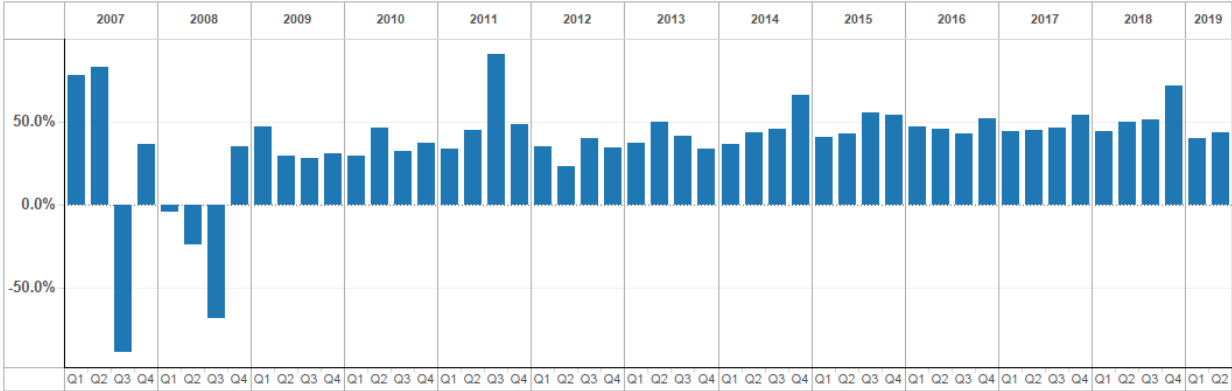
Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

Bank Trading Revenue as a Percentage of Consolidated Holding Company Trading Revenue

Before the financial crisis, trading revenue at banks typically ranged from 60 percent to 80 percent of consolidated BHC trading revenue. Since the financial crisis and the adoption of bank charters by the former investment banks, the percentage of bank trading revenue to consolidated BHC trading revenue has fallen and is now typically between 30 percent and 50 percent. This decline reflects the significant amount of trading activity by the former investment banks that, while included in BHC results, remains outside insured commercial banks. More generally, insured U.S. commercial banks and savings associations have more limited legal authorities than their holding companies, particularly in the trading of commodity and equity products.

In the second quarter of 2019, banks generated 43.8 percent of consolidated holding company trading revenue, up from 40.4 percent in the previous quarter (see figure 1).

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



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

Counterparty Credit Risk

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

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

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

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

GPFV increased by \$219 billion (12.4 percent) in the second quarter of 2019 to \$2 trillion, primarily driven by a \$213 billion (18.9 percent) increase in receivables from interest rate contracts (see table 3). GNFV increased \$234 billion (13.7 percent) to \$1.9 trillion during the quarter, primarily driven by a \$211 billion (19.6 percent) increase in payables on interest rate contracts.

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

	2Q 2019	1Q 2019	Q/Q Change	Q/Q % Change	2Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$1,343	\$1,130	\$213	18.9%	\$1,058	\$285	26.9%
Foreign exchange	\$442	\$444	-\$2	-0.4%	\$569	-\$127	-22.3%
Equity	\$119	\$117	\$2	1.3%	\$123	-\$4	-3.2%
Commodities	\$36	\$33	\$4	10.9%	\$50	-\$13	-26.4%
Credit	\$46	\$43	\$3	6.6%	\$53	-\$7	-12.9%
Gross positive fair value	\$1,987	\$1,767	\$219	12.4%	\$1,852	\$134	7.2%

	2Q 2019	1Q 2019	Q/Q Change	Q/Q % Change	2Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$1,287	\$1,076	\$211	19.6%	\$1,009	\$279	27.6%
Foreign exchange	\$445	\$433	\$12	2.7%	\$545	-\$100	-18.4%
Equity	\$120	\$118	\$2	2.0%	\$118	\$2	1.9%
Commodities	\$39	\$34	\$5	14.7%	\$48	-\$10	-20.2%
Credit	\$49	\$45	\$4	9.1%	\$53	-\$4	-7.5%
Gross negative fair value	\$1,940	\$1,706	\$234	13.7%	\$1,773	\$167	9.4%

Source: Call reports, Schedule RC-L

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

Table 4: Netting Contract Examples

Bank A portfolio with Counterparty B	Number of contracts	Value of contracts	Credit measure/metric
Contracts with positive value to Bank A	6	\$500	Gross positive fair value
Contracts with negative value to Bank A	4	-\$350	Gross negative fair value
Total contracts	10	\$150	NCCE to Bank A from Counterparty B

Most, but not necessarily all, derivative transactions that a bank has with an individual counterparty are subject to a legally enforceable netting agreement. Some transactions may be subject to the laws of a jurisdiction that does not provide legal certainty of netting agreements, in which case banks must regard such transactions as separate from the netting set. Other transactions may involve nonstandard contractual documentation. Transactions that are not subject to the same legally enforceable netting agreement 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. 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 GPFV of contracts less the dollar amount of netting benefits 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 the OCC uses to evaluate credit risk in bank derivative activities. NCCE for insured U.S. commercial banks and savings associations increased by \$35 billion (10.6 percent) to \$371 billion in the second quarter of 2019 (see table 5).² Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 81.3 percent (\$1.6 trillion) in the second quarter of 2019.

Table 5: Net Current Credit Exposure, in Billions of Dollars

	2Q 2019	1Q 2019	Q/Q Change	Q/Q % Change
Gross positive fair value	\$1,987	\$1,767	\$219	12.4%
NCCE RC-R	\$371	\$335	\$35	10.6%
Netting benefit RC-R	\$1,616	\$1,432	\$184	12.9%
Netting benefit % RC-R	81.3%	81.0%		0.4%

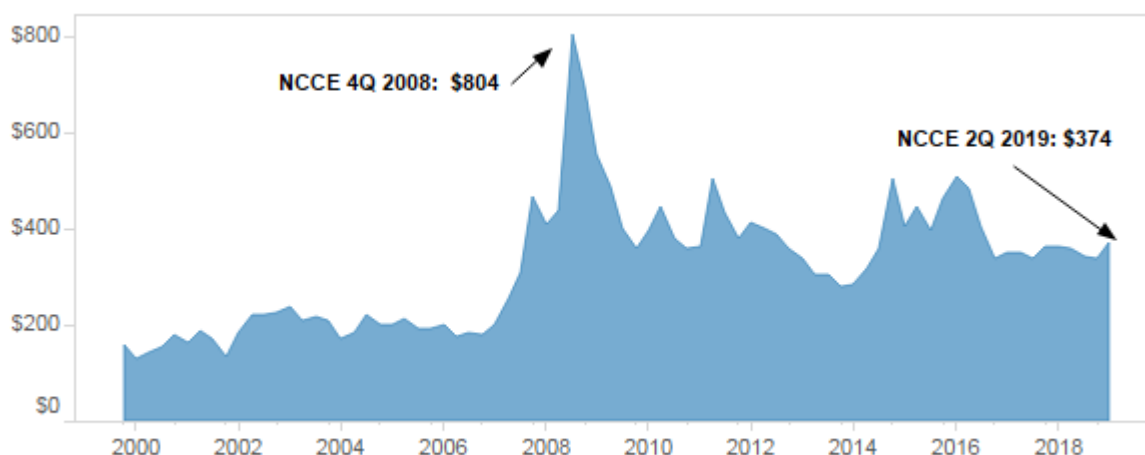
Source: Call reports, Schedules RC-L and RC-R

NCCE peaked at \$804 billion at the end of 2008, during the financial crisis, when interest rates had plunged and credit spreads were very high (see figure 2). The significant decline in NCCE since 2008 has largely resulted from declines in the GPFV of interest rate and credit contracts. The GPFV from interest rate contracts has fallen from \$5.1 trillion at the end of 2008 to

² Banks report NCCE on two different schedules (RC-R and RC-L) of the call report, and the amounts reported are not the same because of differences in the scope of coverage. Neither measure comprehensively captures NCCE. RC-L includes exposure only from OTC derivative transactions; it excludes exchange-traded transactions. RC-R excludes transactions not subject to capital requirements. This report uses RC-R to measure NCCE.

\$1.3 trillion at the end of the second quarter of 2019. In addition, on June 30, 2019, exposure from credit contracts was \$46.0 billion, which is \$1.0 trillion lower (95.8 percent) than the \$1.1 trillion on December 31, 2008 (see table 3).

Figure 2: Net Current Credit Exposure, in Billions of Dollars



Source: Call reports, Schedule RC-R

The bulk of NCCE in the financial system is concentrated in banks and securities firms (41.5 percent) and in corporations and other counterparties (44.5 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (14.1 percent in total).

Table 6: NCCE by Counterparty Type as a Percentage of Total NCCE

	Banks and securities firms	Hedge funds	Sovereign governments	Corp and all other counterparties
Q2 2019	41.5%	4.3%	9.8%	44.5%
Q1 2019	43.5%	4.6%	9.6%	42.3%
Q4 2018	41.7%	5.0%	10.0%	43.2%
Q4 2017	41.7%	3.1%	7.9%	47.3%
Q4 2016	48.4%	2.0%	6.5%	43.0%
Q4 2015	53.3%	2.1%	6.0%	38.5%

Source: Call reports, Schedule RC-L

A more risk-sensitive measure of credit exposure would consider the value of collateral held against counterparty exposures. Reporting banks held collateral valued at 110.1 percent of their total NCCE at the end of the second quarter of 2019, down slightly from 113.4 percent in the first quarter of 2019 (see table 7). Collateral held against hedge fund exposures decreased in the second quarter, although coverage remains very high at 335.2 percent. Bank exposures to hedge funds are secured, because banks take initial margin on transactions with hedge funds, in addition to fully securing any current credit exposure. Collateral coverage of corporate and sovereign exposures is much less than coverage of financial institutions and hedge funds, although coverage of corporate exposures has been increasing over the past several years because of increases in the volume of trades cleared at central counterparties.

Table 7: Ratio of Fair Value Collateral to Net Current Credit Exposure

	FV banks and securities firms	FV hedge funds	FV sovereign governments	FV corporate and all other counterparties	FV/NCCE %
Q2 2019	130.9%	335.2%	47.2%	83.0%	110.1%
Q1 2019	127.7%	343.8%	48.2%	88.2%	113.4%
Q4 2018	128.9%	308.0%	47.1%	91.8%	113.7%
Q4 2017	124.4%	495.5%	25.1%	89.8%	111.5%
Q4 2016	119.1%	491.5%	34.2%	67.0%	98.5%
Q4 2015	101.6%	435.5%	15.6%	66.2%	89.6%

Source: Call reports, Schedule RC-L

The majority of collateral held by banks against NCCE is very liquid with 60.9 percent held in cash (both U.S. dollar and non-dollar) and an additional 13.5 percent held in U.S. Treasuries and government agency securities (see table 8). Supervisors assess changes in the quality and liquidity of collateral held as a key early indicator of potential easing in credit terms. Examiners review the collateral management practices of derivative dealers as a regular part of their supervision activities.

Table 8: Composition of Collateral

	Cash U.S. \$	Cash other currencies	U.S. Treasury securities	U.S. gov. agency	Corp bonds	Equity securities	All other collateral
Q2 2019	34.9%	26.0%	12.0%	1.5%	1.9%	6.6%	17.1%
Q1 2019	34.0%	26.0%	11.9%	1.6%	2.1%	7.4%	17.2%
Q4 2018	37.2%	23.3%	10.8%	2.2%	2.1%	7.1%	17.2%
Q4 2017	37.6%	25.5%	10.3%	1.9%	2.5%	5.7%	16.5%
Q4 2016	40.1%	31.5%	8.1%	1.7%	1.6%	5.0%	12.0%
Q4 2015	43.7%	31.7%	4.6%	1.6%	1.4%	5.3%	11.7%

Source: Call reports, Schedule RC-L

Credit quality metrics for derivative exposures decreased in the second quarter of 2019, as banks reported net charge-offs of \$17.2 million, compared with net charge-offs of \$9.1 million in the first quarter of 2019 (see graph 7 in the appendix). The number of banks reporting charge-offs increased from 12 to 13 banks. Net charge-offs in the second quarter of 2019 represented 0.005 percent of the NCCE from derivative contracts. For comparison purposes, commercial and industrial (C&I) loan net charge-offs increased \$360.2 million, or 25.4 percent, to \$1.8 billion during the quarter and were 0.08 percent of total C&I loans. Charge-offs of derivative exposures typically are associated with problem commercial lending exposures, in which the borrower has an associated swap transaction.

Market Risk

Value-at-Risk

Banks primarily control market risk in trading operations by establishing limits against potential losses. Banks use value-at-risk (VaR) to quantify the maximum expected loss over a specified time period and at a certain confidence level under relevant market conditions. Banks subject to the market risk capital rule, 12 CFR 3, subpart F, are required to report their VaR-based measures quarterly on Form FFIEC 102. The VaR measurement is calculated on a daily basis using a one-tail, 99 percent confidence level, and a holding period equivalent to a 10-business-day movement in underlying risk factors, such as rates, spreads and prices. Tables 9a and 9b show the quarter-over-quarter change in VaR, as well as the VaR-based capital charge, for banks most active in trading and derivatives activity. As shown in table 9a, market risk in trading operations, as measured by VaR, is a small proportion of their risk-based capital. Graph 16 in the appendix illustrates the historical trend in VaR measurements for these institutions.

Table 9a: Value-at-Risk, in Millions of Dollars

	JPMorgan Chase Bank, NA	Citibank, NA	Bank of America, NA	Goldman Sachs Bank USA
2Q 2019 Average 60 Day VaR	\$114	\$87	\$67	\$106
1Q 2019 Average 60 Day VaR	\$148	\$113	\$73	\$97
Q/Q Change	-\$34	-\$26	-\$6	\$8
2Q 2019 Total Risk-Based Capital	\$235,209	\$156,304	\$166,719	\$33,540

Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

Table 9b: Value-at-Risk Capital Requirement, in Millions of Dollars

	JPMorgan Chase Bank, NA	Citibank, NA	Bank of America, NA	Goldman Sachs Bank USA
2Q 2019 VaR Capital Requirement	\$341	\$261	\$201	\$317
1Q 2019 VaR Capital Requirement	\$443	\$338	\$219	\$292
Q/Q Change	-\$102	-\$78	-\$18	\$25
2Q 2019 Total Risk-Based Capital	\$235,209	\$156,304	\$166,719	\$33,540

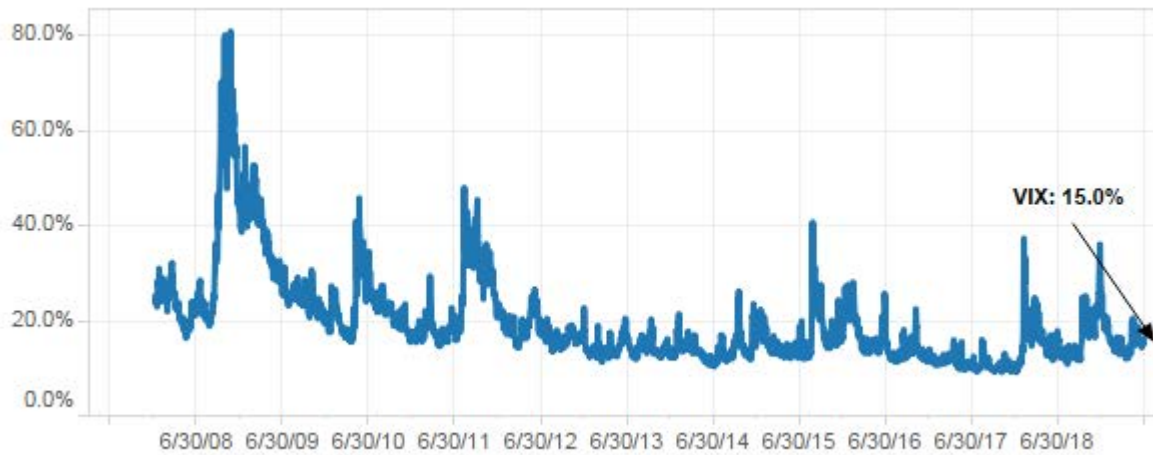
Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

Volatility Index

Figure 3 shows the VIX, a volatility index,³ which measures the market's expectation of stock market volatility in the S&P 500 index 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.

³ VIX is the trademarked ticker symbol for the Chicago Board Options Exchange SPX Volatility Index.

Figure 3: Volatility Index (VIX)

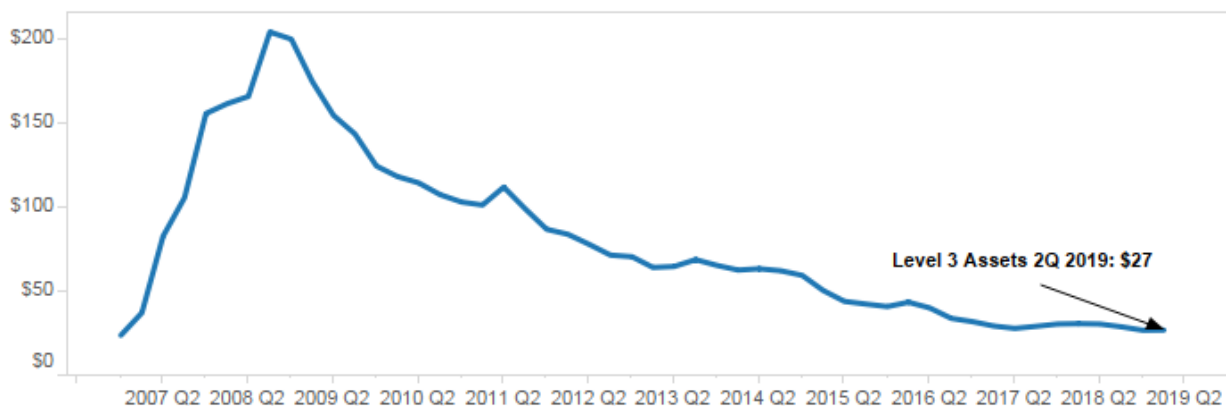


Source: Bloomberg

Level 3 Trading Assets

Another measure used to assess market risk is the volume of and changes in level 3 trading assets. Level 3 trading assets are assets whose fair value cannot be determined by using observable inputs, such as market prices. Since the peak of the financial crisis at the end of 2008, major dealers have reduced the volume of level 3 trading assets. Because banks cannot observe inputs into the models that determine the fair value of these illiquid exposures, banks use their own assumptions in determining their fair values. Level 3 assets peaked at \$204.1 billion at the end of 2008 (see figure 4). At the end of the second quarter of 2019, banks held \$27 billion of level 3 trading assets, up 0.4 percent from the previous quarter, and 12.4 percent lower than a year ago. Level 3 assets are \$177.3 billion (86.9 percent) lower than the peak level from 2008.

Figure 4: Level 3 Trading Assets, in Billions of Dollars



Source: Call reports, Schedule RC-Q

Notional Amounts of All Derivative Contracts

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

The notional amount of derivative contracts held by banks in the second quarter increased by \$3.6 trillion (1.8 percent) to \$204.9 trillion from the previous quarter (see table 10). The increase in the notional amount of derivative contracts by underlying risk exposure was primarily driven by a \$2.7 trillion increase in interest rate notional amounts as well as a combined increase of \$993.9 billion in FX, equity, and commodity notional amounts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at \$151.9 trillion, or 74.1 percent of total derivatives (see table 10).

The increase in the notional amount of derivative contracts by contract type was driven by an increase in swap contracts (see table 11). Swap contracts remained the leading derivatives contract type at 54.1 percent of all notional amounts.

The four banks with the most derivative activity hold 87.8 percent of all bank derivatives, while the largest 25 banks account for nearly 100 percent of all contracts (see tables 3 and 5 and graph 4 in the appendix for further information).

Table 10: Derivative Notional Amounts by Underlying Risk Exposure Quarter-Over-Quarter, in Billions of Dollars

	2Q 2019	1Q 2019	Q/Q Change	Q/Q % Change	2Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$151,852	\$149,183	\$2,668	1.8%	\$157,427	-\$5,575	-3.5%
Foreign exchange	\$43,744	\$42,901	\$842.9	2.0%	\$40,650	\$3,094	7.6%
Equity	\$3,723	\$3,675	\$47.3	1.3%	\$3,421	\$302	8.8%
Commodity	\$1,482	\$1,377	\$104.7	7.6%	\$1,526	-\$44	-2.9%
Credit derivatives	\$4,074	\$4,145	-\$71.0	-1.7%	\$4,179	-\$105	-2.5%
Total notional	\$204,874	\$201,282	\$3,592	1.8%	\$207,201	-\$2,328	-1.1%

Source: Call reports, Schedule RC-L

Table 11: Derivative Notional Amounts by Contract Type Quarter-Over-Quarter, in Billions of Dollars

	2Q 2019	1Q 2019	Q/Q Change	Q/Q % Change	2Q 2018	Y/Y Change	Y/Y % Change
Futures and forwards	\$46,207	\$46,165	\$41	0.1%	\$46,024	\$183	0.4%
Swaps	\$110,905	\$106,837	\$4,069	3.8%	\$107,974	\$2,932	2.7%
Options	\$43,688	\$44,134	-\$447	-1.0%	\$49,025	-\$5,338	-10.9%
Credit derivatives	\$4,074	\$4,145	-\$71	-1.7%	\$4,179	-\$105	-2.5%
Total notional	\$204,874	\$201,282	\$3,592	1.8%	\$207,201	-\$2,328	-1.1%

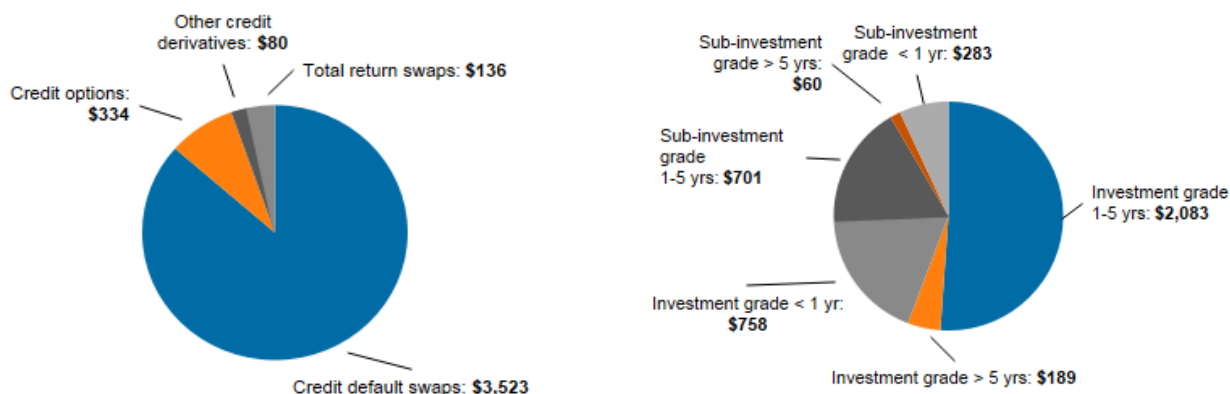
Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives decreased \$71.0 billion (1.7 percent), to \$4.1 trillion, in the second quarter of 2019 (see table 10). Contracts referencing investment-grade firms decreased \$76.0 billion and contracts referencing sub-investment-grade firms increased \$5.0 billion in the second quarter (see graph 14 in the appendix). Credit derivatives outstanding remained well below the peak of \$16.4 trillion in the first quarter of 2008 (see graph 1 in the appendix). As shown in figure 5, credit default swaps are the dominant product, at \$3.5 trillion (86.5 percent) of all credit derivative notional amounts.

Credit derivative contracts referencing investment-grade entities with maturities from one to five years represented the largest segment of the market at \$2.1 trillion or 51.1 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are \$3.0 trillion or 74.4 percent of the market (see chart on right in figure 5).

Figure 5: 2Q 2019 Credit Derivative Composition, in Billions of Dollars



Source: Call reports, Schedule RC-L

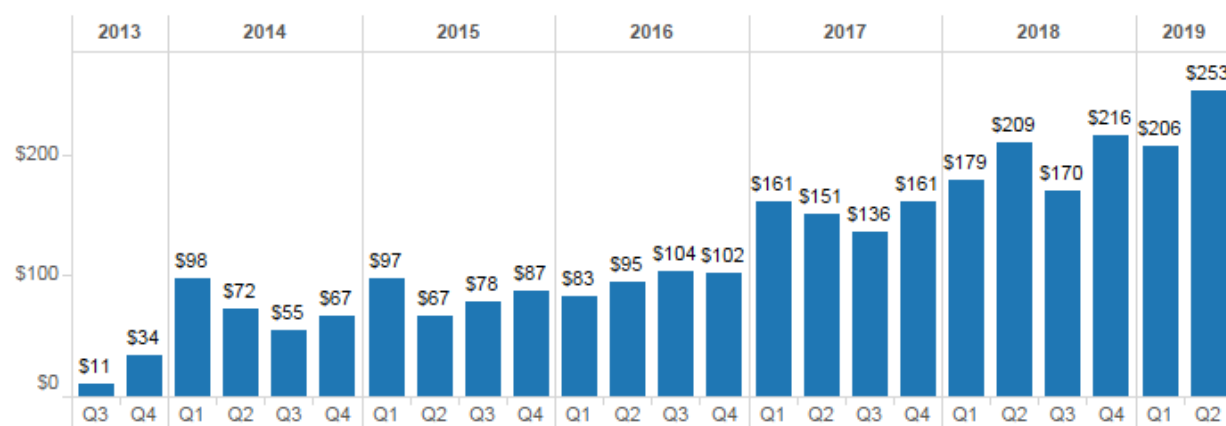
The notional amount for the 84 banks that net sold credit protection (i.e., assumed credit risk) was \$2.0 trillion, down \$52.5 billion (2.6 percent) from the first quarter of 2019 (see table 12 in the appendix). The notional amount for the 64 banks that net purchased credit protection (i.e., hedged credit risk) was \$2.1 trillion, \$18.6 billion lower (0.9 percent) than in the first quarter of 2019 (see table 12 in the appendix).

Compression Activity

Notional amounts of banks' derivative contracts have generally declined since 2011 because of trade compression efforts, leading to less need for risk management products. Trade compression continues to be a significant factor in reducing the amount of notional derivatives outstanding.

Trade compression aggregates a large number of swap contracts with similar factors, such as risk or cash flows, into fewer trades. Compression removes economic redundancy in a derivative book and reduces operational risk and capital costs for large banks. Trade compression activities increased in the second quarter of 2019, as shown in figure 6.

Figure 6: Quarterly Compression Activity, in Trillions of Dollars



Source: LCH Clearnet

Centrally Cleared Derivative Contracts

In the first quarter of 2015, banks began reporting their volumes of cleared and non-cleared derivative transactions, as well as risk weights for counterparties in each of these categories. In the second quarter of 2019, 42.5 percent of banks' derivative holdings were centrally cleared (see table 12). From a market factor perspective, 53.9 percent of interest rate derivative contracts' notional amounts outstanding were centrally cleared, while very little of the FX derivative market was centrally cleared. The bank-held credit derivative market remained largely uncleared, as 25.9 percent of credit derivative transactions were centrally cleared during the second quarter of 2019.

Centrally cleared derivative transactions were heavily concentrated at qualifying central counterparties, with 90.6 percent of notional amounts reflecting the 2 percent risk weight applicable to such counterparties.

Table 12: Centrally Cleared Derivative Contracts as a Percentage of Total Derivative Contracts

	Interest rate	Foreign exchange	Equity	Precious metals	Credit	Other	Total
2Q 2019	53.9%	1.4%	26.8%	10.2%	25.9 %	15.4%	42.5%
1Q 2019	54.0%	1.3%	26.9%	10.0%	27.7%	16.0%	42.4%
4Q 2018	51.0%	1.2%	25.7%	8.0%	29.3%	17.5%	39.8%
4Q 2017	47.8%	1.0%	25.7%	7.8%	25.8%	15.0%	38.0%
4Q 2016	49.1%	1.0%	23.5%	5.6%	20.4%	15.0%	38.8%
4Q 2015	46.2%	0.5%	20.0%	3.7%	16.8%	14.0%	36.9%

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 arrangement means that a bank's receivables or payables, in the event of the default or insolvency of one of the parties, would be the net sum of all positive and negative fair values of contracts included in the bilateral netting arrangement.

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

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

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

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

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

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

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

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

Potential future exposure (PFE): An estimate of what the CCE could be over time, based on a supervisory formula in the agencies' risk-based capital rules. PFE is generally determined by multiplying the notional amount of the contract by a credit conversion factor that is based on the underlying market factor (e.g., interest rates, commodity prices, or equity prices) and the contract's remaining maturity. The risk-based capital rules, however, permit banks to adjust the formulaic PFE measure by the net-to-gross ratio, which proxies the risk-reduction benefits attributable to a valid bilateral netting contract. PFE data in this report use the amounts on which banks hold risk-based capital.

Qualifying central counterparties (QCCP): QCCPs are defined in 12 CFR 3.2 as either a CCP that the Financial Stability Oversight Council has designated systemically important under title VIII of the Dodd–Frank Wall Street Reform and Consumer Protection Act or that meets a series of standards. See 12 CFR 3.2 for a full definition.

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

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

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

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

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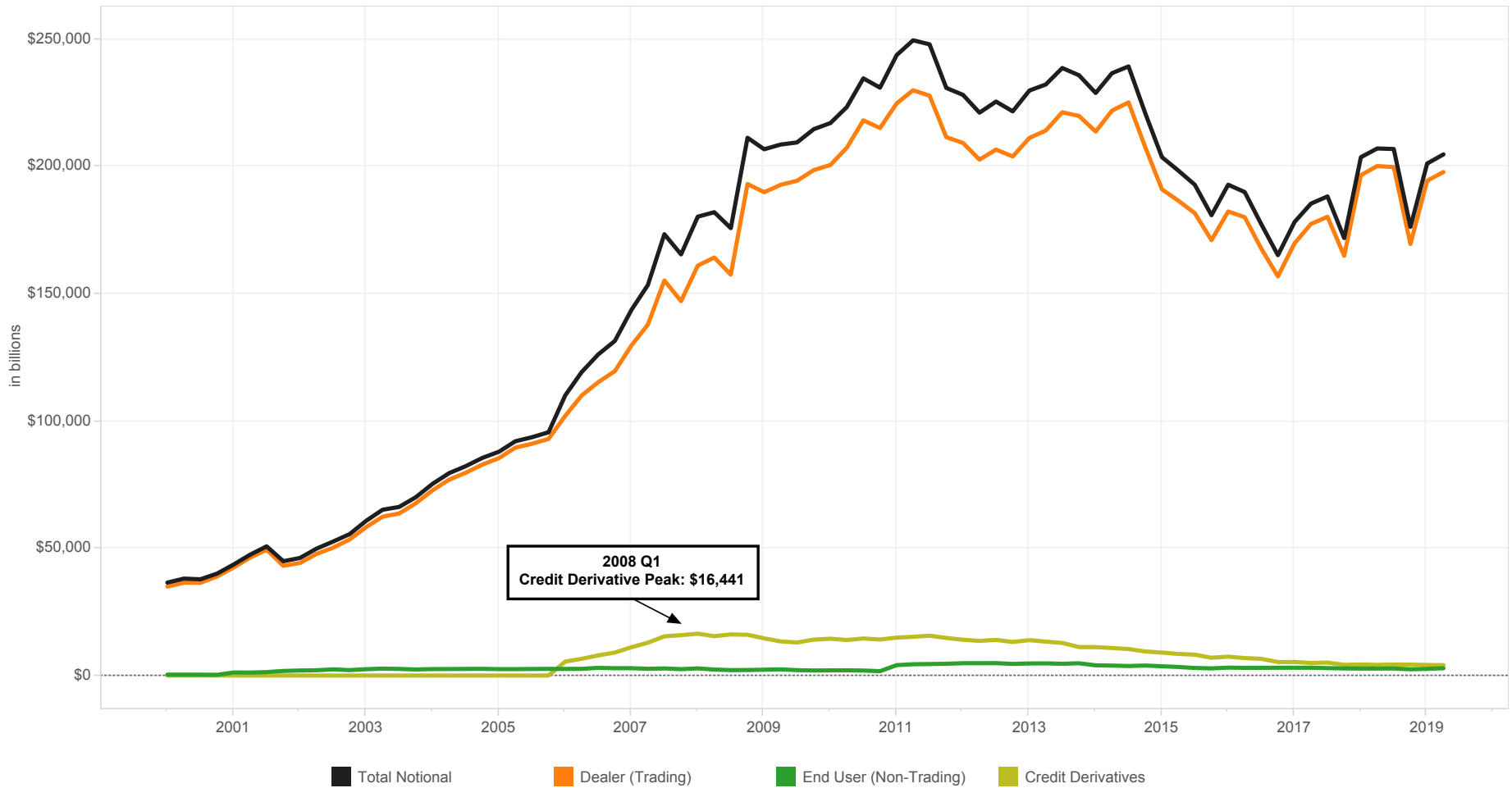
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Graph 1
Derivative Notional Amounts by Type
Insured U.S. Commercial Banks and Savings Associations

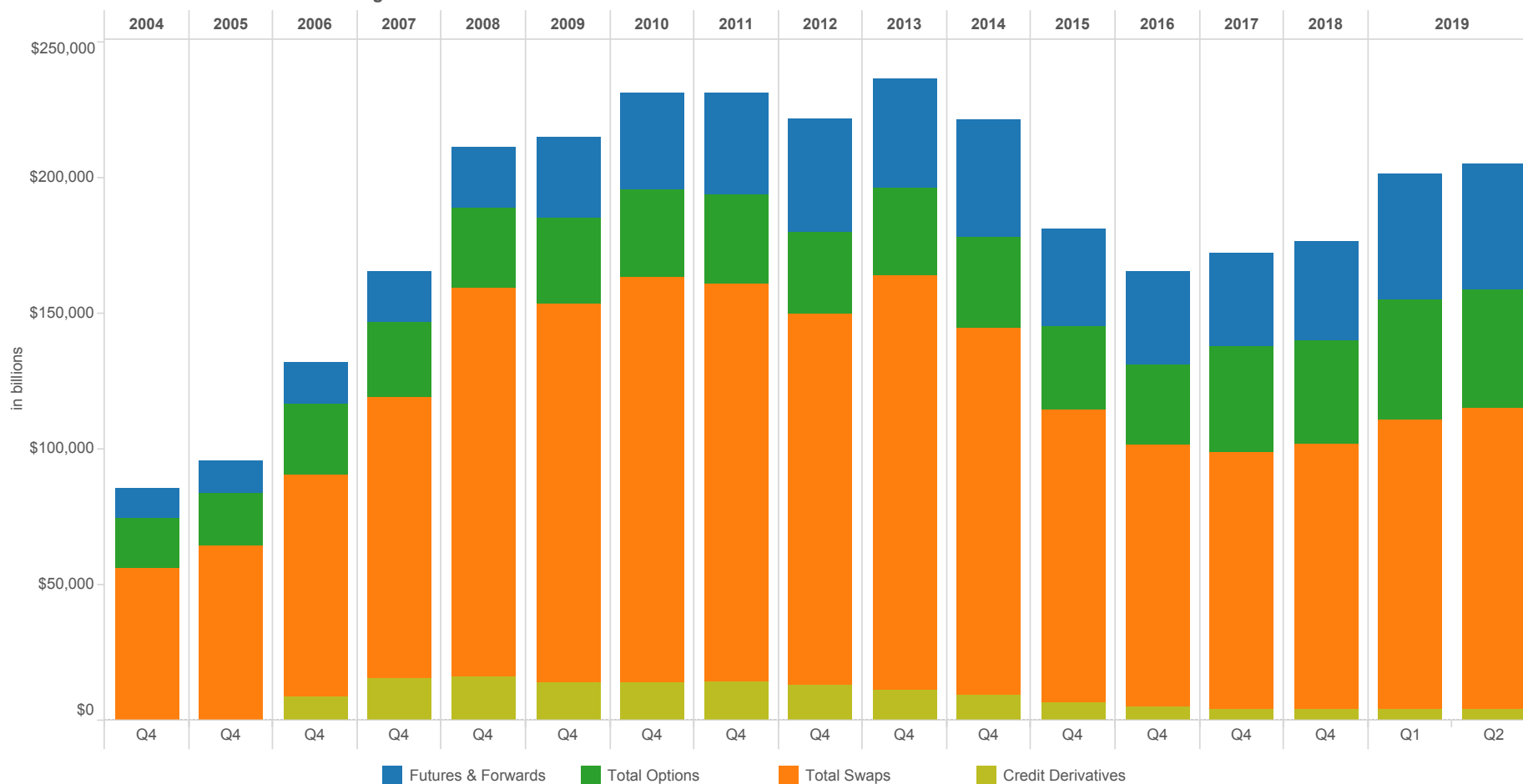


In billions of dollars

	2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Total Notional	\$203,777	\$198,530	\$192,942	\$180,959	\$192,952	\$190,057	\$177,466	\$165,252	\$178,335	\$185,522	\$188,351	\$171,973	\$203,767	\$207,201	\$206,995	\$176,353	\$201,282	\$204,874
Dealer (Trading)	191,123	186,686	181,777	171,172	182,437	180,186	167,873	156,901	169,971	177,519	180,344	165,002	196,684	200,286	199,891	169,629	194,518	197,950
End User (Non-Trading)	3,637	3,356	2,968	2,800	3,097	3,018	3,030	3,057	3,061	3,069	2,917	2,785	2,737	2,737	2,763	2,447	2,619	2,850
Credit Derivatives	9,017	8,488	8,198	6,986	7,418	6,853	6,562	5,293	5,304	4,935	5,090	4,186	4,345	4,179	4,342	4,277	4,145	4,074

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

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



In billions of dollars

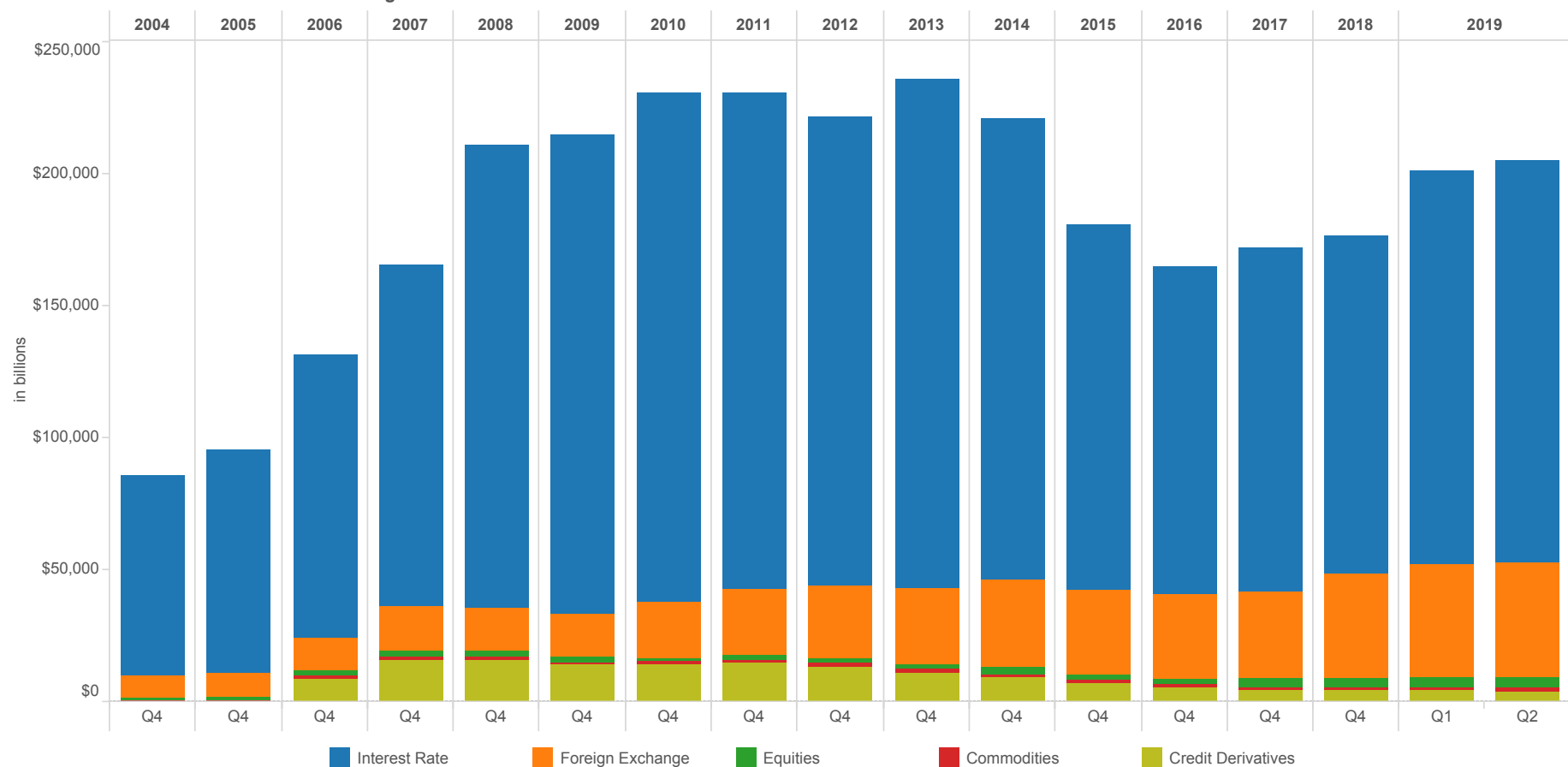
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Futures & Forwards	\$11,370	\$12,057	\$14,882	\$18,867	\$22,529	\$29,652	\$35,539	\$37,469	\$41,621	\$40,027	\$43,380	\$35,691	\$34,201	\$34,162	\$36,144	\$46,165	\$46,207
Total Options	17,754	18,858	26,277	27,727	29,747	31,884	32,078	32,505	30,375	32,305	33,081	30,889	29,373	38,841	38,009	44,134	43,688
Total Swaps	56,411	64,712	81,340	103,102	143,111	139,138	149,331	146,266	136,608	152,469	135,169	107,392	96,384	94,784	97,923	106,837	110,905
Credit Derivatives	0	0	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,277	4,145	4,074
Total Notional	85,536	95,627	131,519	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,959	165,252	171,973	176,353	201,282	204,874

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

Note: Numbers may not add up to total due to rounding.

Source: Call reports

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

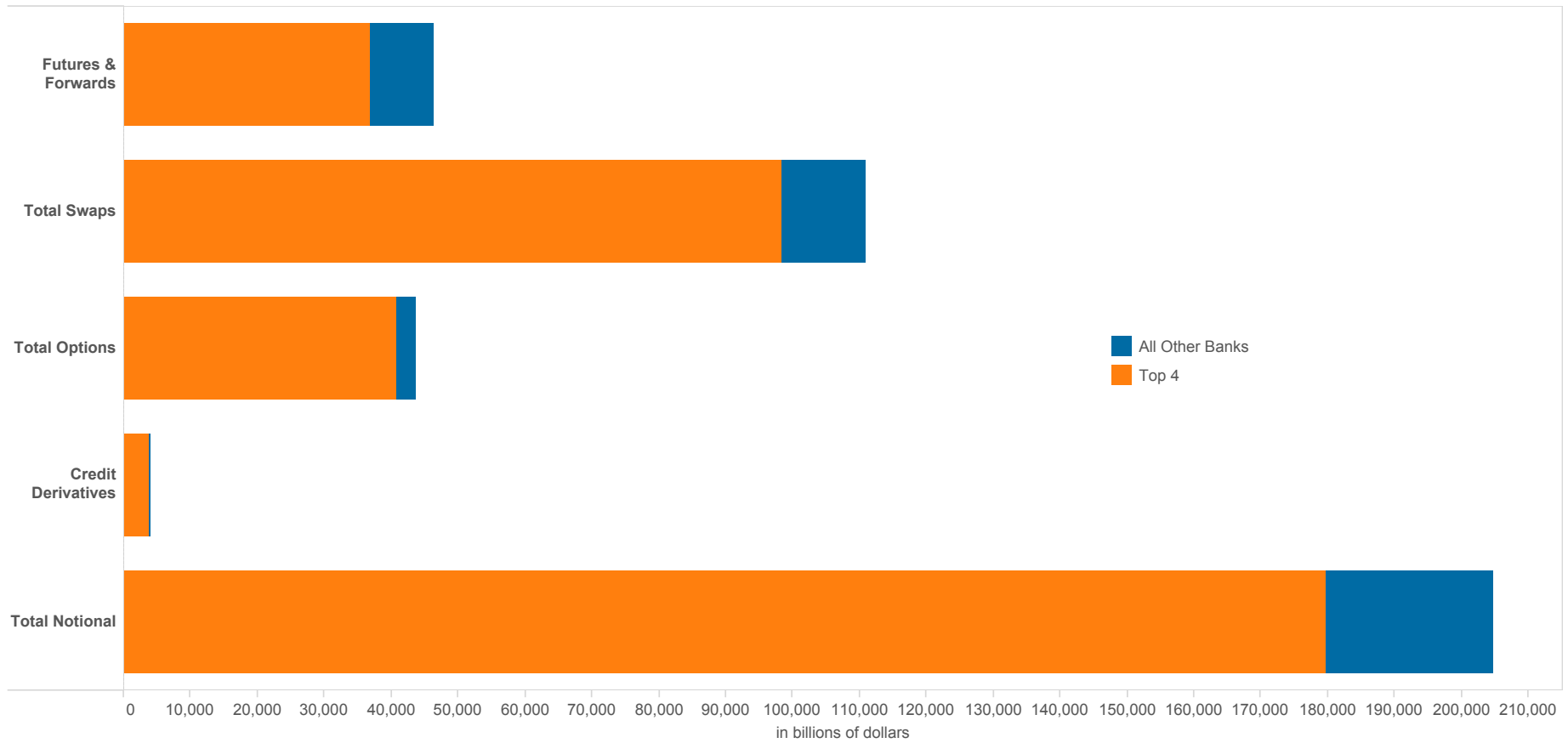


In billions of dollars

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Interest Rate	\$84,530	\$107,435	\$129,491	\$175,895	\$181,454	\$193,399	\$187,866	\$177,650	\$193,084	\$174,687	\$138,369	\$124,488	\$130,417	\$128,166	\$149,183	\$151,852
Foreign Exchange	9,289	11,900	16,614	16,224	16,555	20,990	25,436	27,587	28,480	33,183	32,100	31,737	32,903	39,221	42,901	43,744
Equities	1,255	2,271	2,524	2,207	1,685	1,364	1,606	1,970	2,028	2,537	2,395	2,475	3,080	3,374	3,675	3,723
Commodities	552	893	1,067	1,061	979	1,195	1,330	1,397	1,209	1,222	1,108	1,257	1,388	1,315	1,377	1,482
Credit Derivatives	0	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,277	4,145	4,074
Total Notional	95,627	131,519	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,959	165,252	171,973	176,353	201,282	204,874

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

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

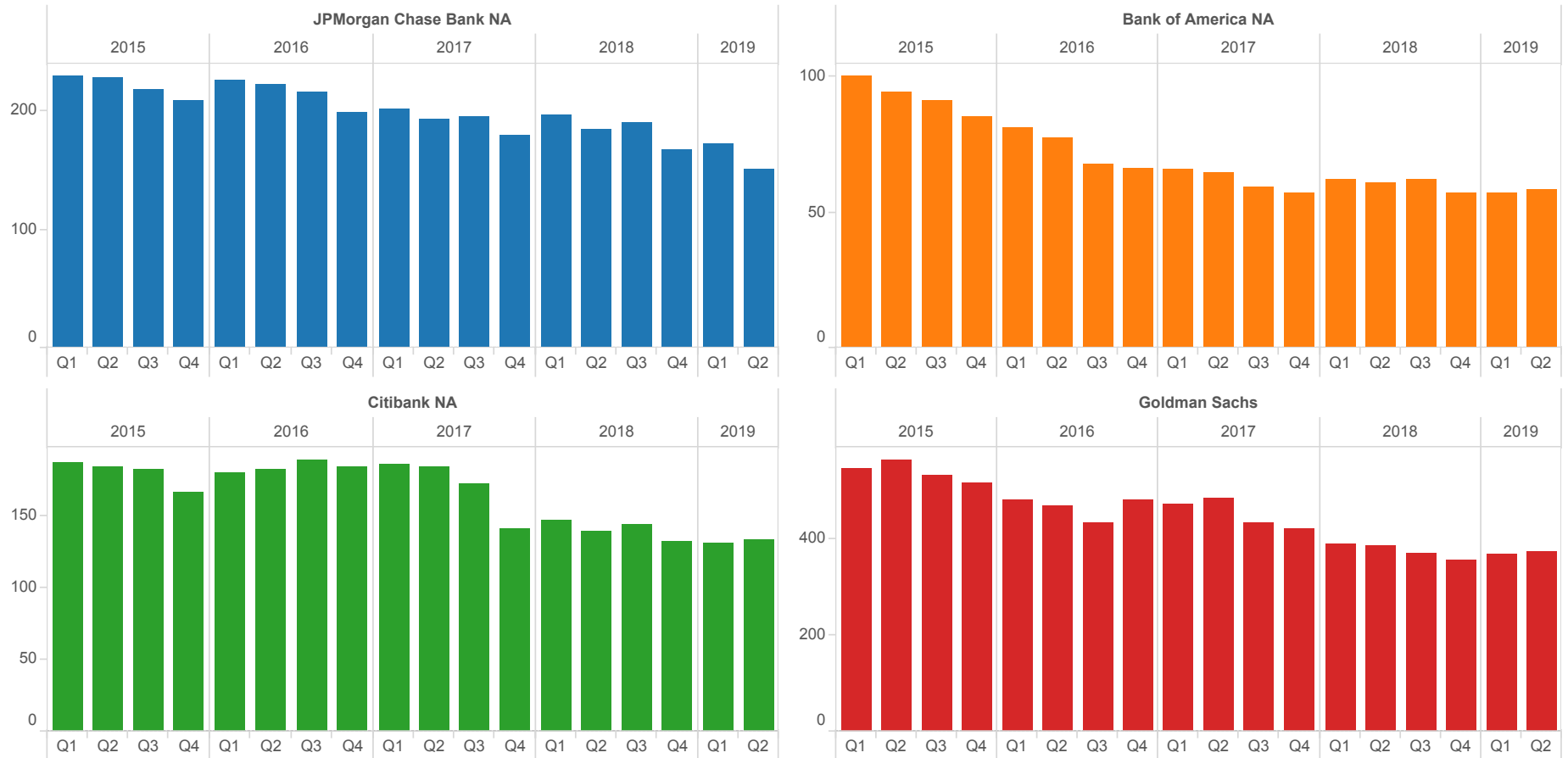


In billions of dollars

	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$36,752	\$9,455	\$46,207
Total Swaps	98,329	12,577	110,905
Total Options	40,957	2,731	43,688
Credit Derivatives	3,849	225	4,074
Total Notional	179,887	24,987	204,874

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

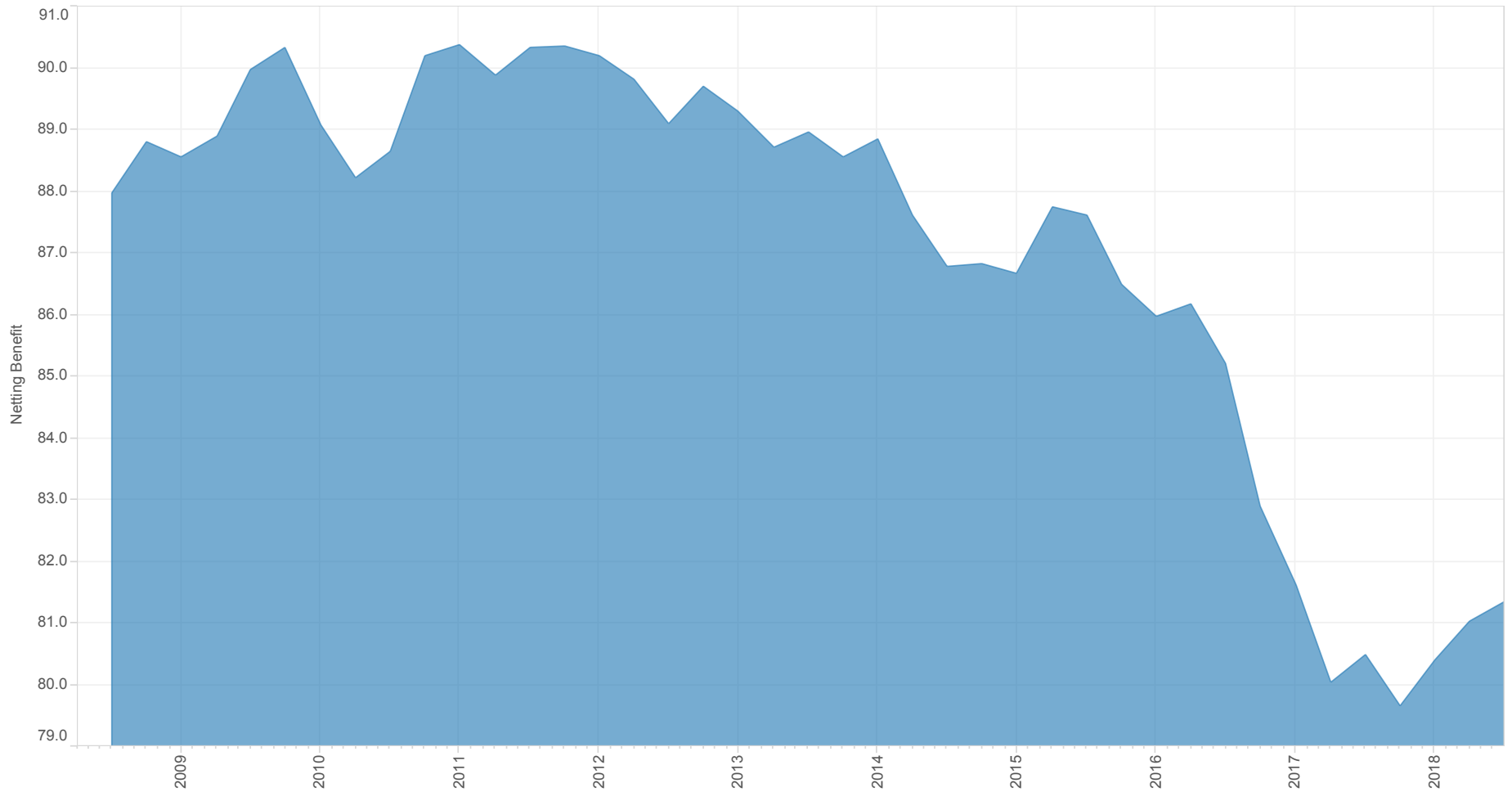
Graph 5
Credit Exposure to Risk-Based Capital (in Percentage)
Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



	2012				2013				2014				2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
JPMorgan Chase Bank NA	250	246	247	229	219	216	205	183	183	189	181	177	229	228	219	209	225	221	216	199	201	193	195	179	197	184	190	167	173	150
Bank of America NA	149	141	139	132	129	125	121	117	109	107	107	93	100	95	91	85	81	77	68	66	66	64	59	57	62	61	62	57	58	58
Citibank NA	172	171	170	170	165	164	161	148	147	156	190	173	187	184	181	166	180	181	188	183	186	184	171	140	146	139	144	132	130	132
Goldman Sachs	751	738	727	705	703	693	719	741	689	620	539	516	547	563	530	516	482	467	433	481	472	484	433	420	389	384	371	354	366	372
TOTAL	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	284	282	281	271	261	258	262	262	248	240	224	211	238	242	232	223	226	222	217	220	220	218	205	191	195	187	188	173	178	169

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

Graph 6
Netting Benefit*: Amount of Gross Credit Exposure Eliminated Through Bilateral Netting (in Percentage)
Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings

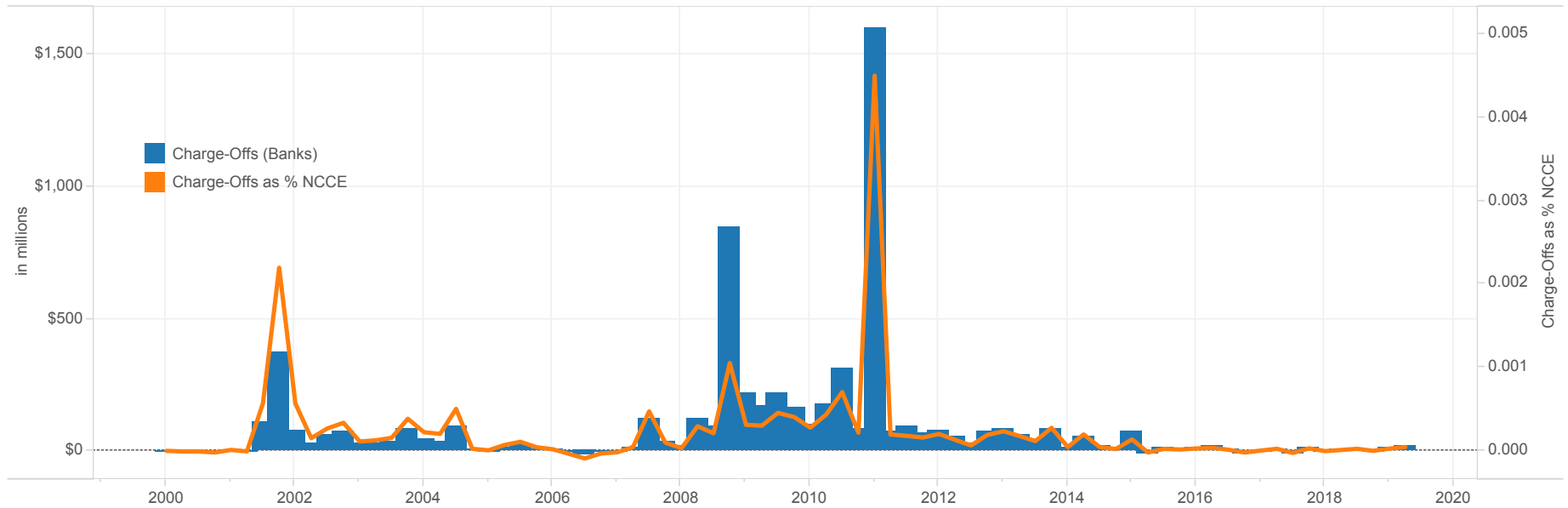


Netting Benefit

2011				2012				2013				2014				2015				2016				2017				2018				2019	
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
88.2	88.6	90.2	90.4	89.9	90.3	90.3	90.2	89.8	89.1	89.7	89.3	88.7	88.9	88.6	88.8	87.6	86.8	86.8	86.7	87.7	87.6	86.5	86.0	86.2	85.2	82.9	81.6	80.0	80.5	79.7	80.4	81.0	81.3

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

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

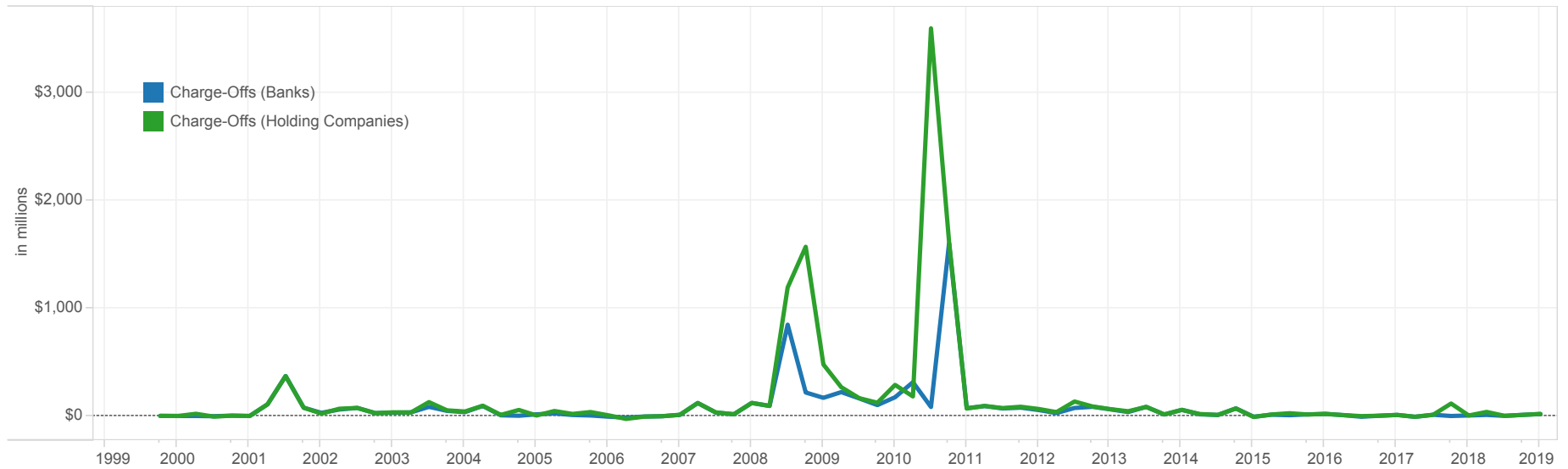


In millions of dollars

	2000				2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	0.0	-1.0	-1.0	-3.0	2.0	-1.0	107.3	370.0	75.8	28.2	59.0	73.7	25.3	29.9	32.3	83.7
	2004				2005				2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	46.7	34.9	92.2	5.4	1.3	14.2	23.0	8.3	3.6	-7.0	-16.0	-5.8	-3.1	9.1	119.5	30.7
	2008				2009				2010				2011			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	15	120	92	847	217	168	221	162	100	173	313	83	1,601	72	91	69
	2012				2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	76.35	54.34	26.12	73.44	84.28	60.72	35.77	83.45	12.78	55.90	14.53	7.91	69.31	-7.93	10.44	6.40
	2016				2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Charge-Offs (Banks)	13.30	18.56	6.48	-7.84	1.22	8.71	-8.77	10.26	-1.14	3.97	8.73	0.13	9.11	17.23		

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

Graph 8
Quarterly Charge-Offs/(Recoveries) From Derivatives - Holding Company
Insured U.S. Commercial Banks and Savings Associations with Derivatives Compared with Holding Companies

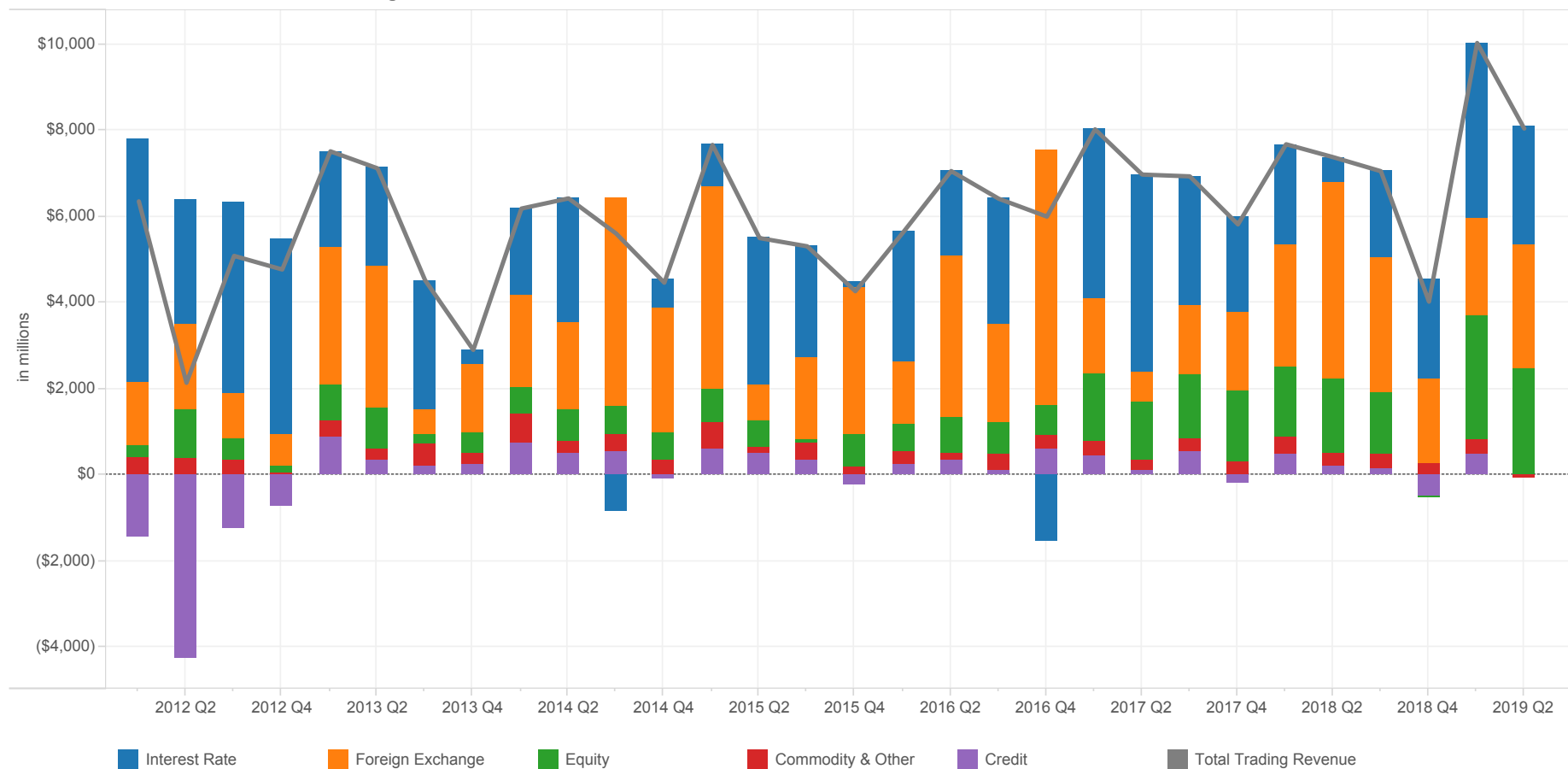


In millions of dollars

	2000				2001				2002				2003				2004			
	Q1	Q2	Q3	Q4	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	46.7	34.9	92.2	5.4
Charge-Offs (Holding Companies)	0.1	-1.0	19.3	-7.0	2.0	-1.0	107.3	369.6	75.8	21.2	66.0	73.7	25.3	32.9	31.4	127.8	51.2	40.4	94.2	9.0
	2005				2006				2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	1	14	23	8	4	-7	-16	-6	-3	9	119	31	15	120	92	847	217	168	221	162
Charge-Offs (Holding Companies)	55	4	45	18	35	5	-28	-7	-3	10	119	32	15	120	93	1,192	1,570	477	266	164
	2010				2011				2012				2013				2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	100	173	313	83	1,601	72	91	69	76	54	26	73	84	61	36	83	13	56	15	8
Charge-Offs (Holding Companies)	122	288	181	3,598	1,617	68	92	73	85	64	35	133	87	63	43	83	14	56	17	9
	2015				2016				2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Charge-Offs (Banks)	69.3	-7.9	10.4	6.4	13.3	18.6	6.5	-7.8	1.2	8.7	-8.8	10.3	-1.1	4.0	8.7	0.1	9.1	17.2		
Charge-Offs (Holding Companies)	69.0	-10.2	12.9	24.5	12.8	18.0	7.5	-2.5	1.4	8.9	-8.3	9.6	114.5	3.5	36.6	0.1	9.5	17.9		

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

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

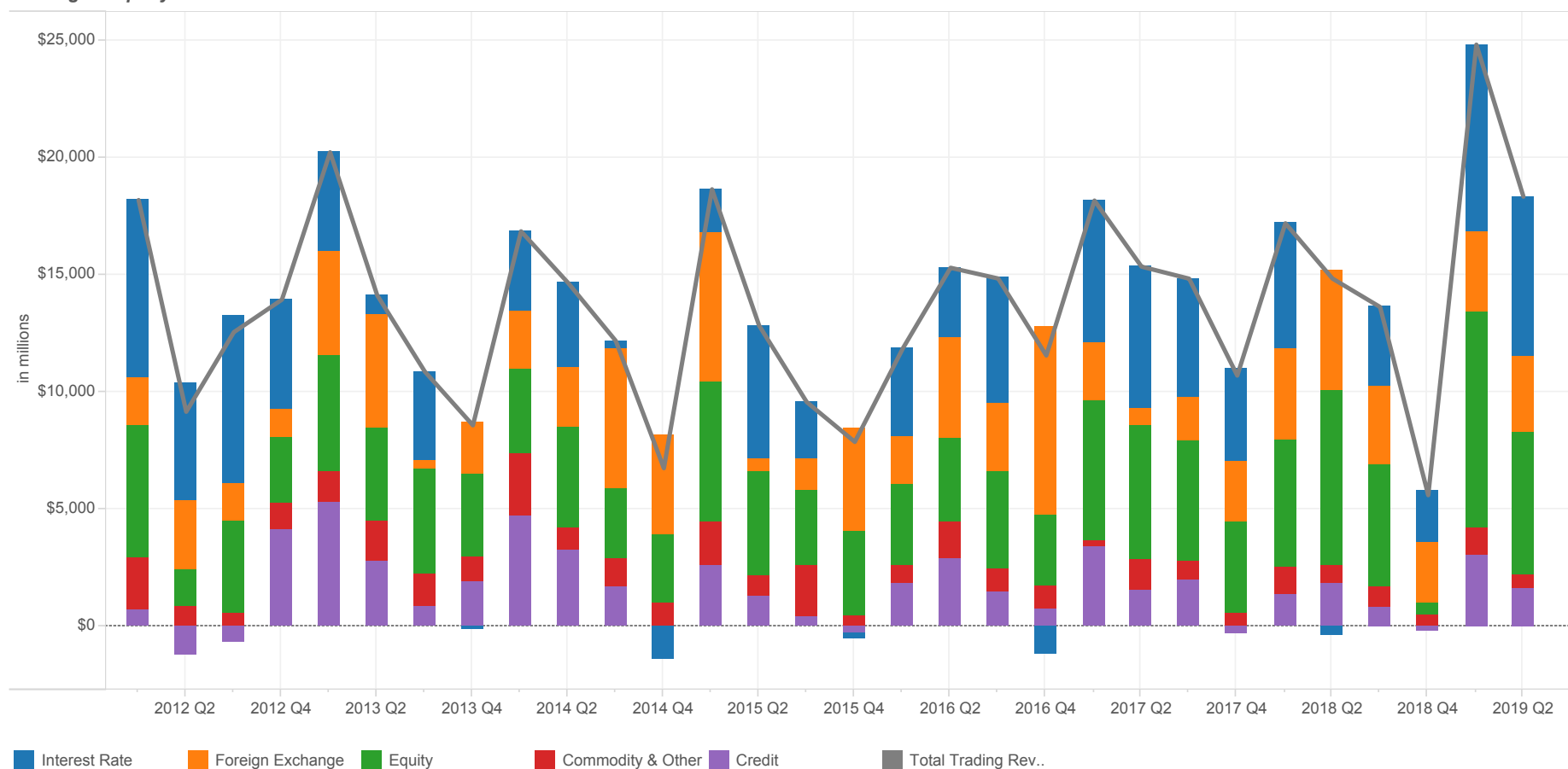


In millions of dollars

	2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Interest Rate	\$958	\$3,406	\$2,578	\$154	\$3,023	\$1,973	\$2,920	(\$1,547)	\$3,917	\$4,586	\$3,011	\$2,220	\$2,317	\$587	\$1,998	\$2,305	\$4,078	\$2,730
Foreign Exchange	4,703	855	1,931	3,401	1,424	3,719	2,294	5,941	1,743	697	1,608	1,811	2,861	4,569	3,130	1,971	2,254	2,900
Equity	797	587	49	742	668	867	734	681	1,595	1,359	1,454	1,649	1,624	1,727	1,444	-43	2,895	2,464
Commodity & Other	587	129	402	198	271	161	353	296	330	211	300	324	395	286	346	274	323	-43
Credit	624	530	357	-222	263	342	118	634	447	128	566	-178	487	215	141	-476	485	-2
Total Trading Revenue	7,669	5,507	5,316	4,273	5,650	7,062	6,420	6,006	8,031	6,981	6,940	5,824	7,684	7,384	7,059	4,031	10,035	8,049

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

Graph 9b
Quarterly Trading Revenue (Cash and Derivative Positions)*
Holding Company

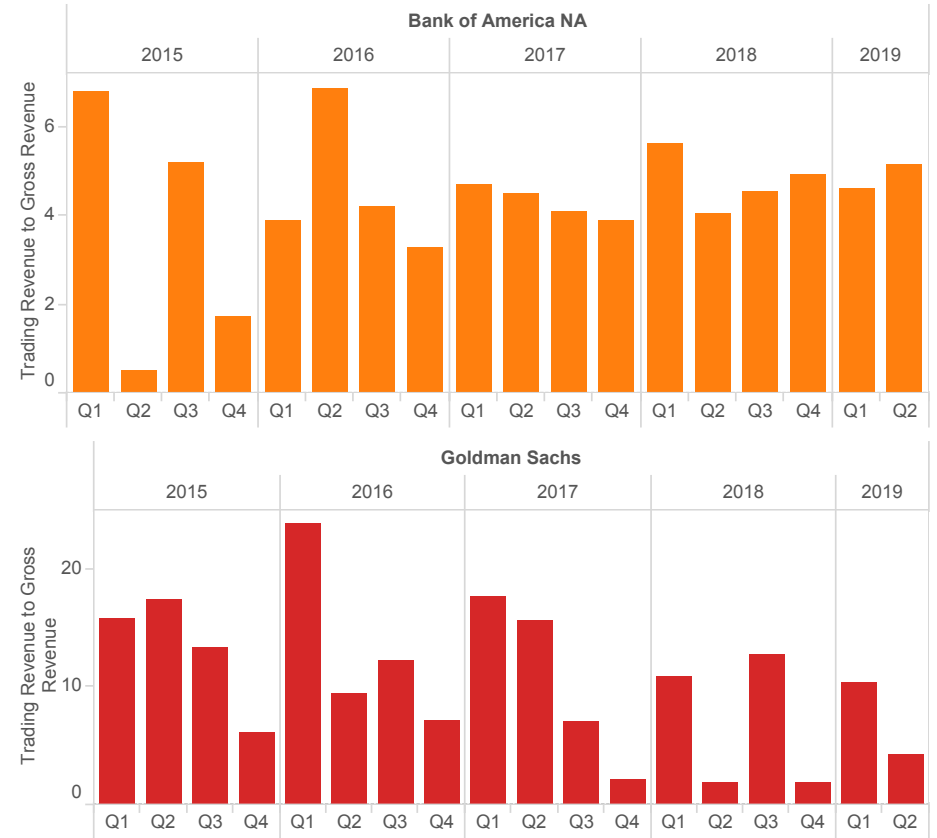
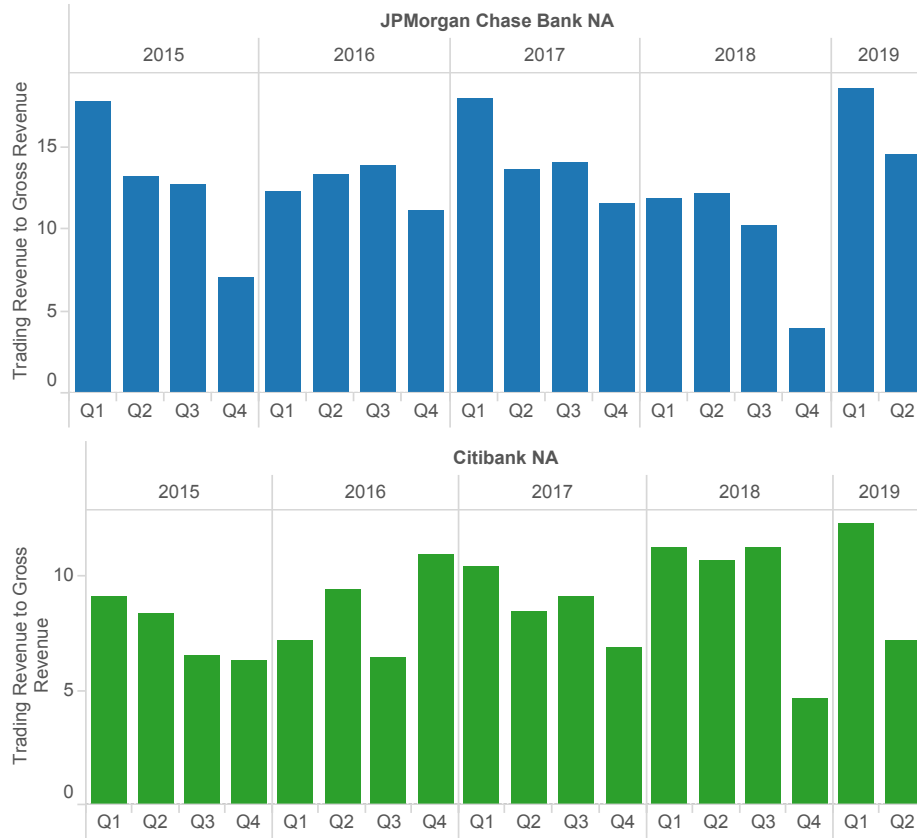


In millions of dollars

	2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Interest Rate	\$1,893	\$5,662	\$2,403	(\$243)	\$3,808	\$2,965	\$5,359	(\$1,193)	\$6,055	\$6,019	\$5,124	\$4,006	\$5,360	(\$340)	\$3,386	\$2,182	\$7,961	\$6,795
Foreign Exchange	6,329	552	1,393	4,338	2,025	4,318	2,899	8,007	2,524	733	1,848	2,589	3,900	5,133	3,341	2,603	3,476	3,288
Equity	6,022	4,481	3,196	3,696	3,441	3,612	4,159	3,021	5,939	5,783	5,123	3,867	5,431	7,445	5,222	502	9,215	6,084
Commodity & Other	1,833	871	2,146	412	738	1,491	969	1,003	299	1,317	769	568	1,177	779	874	508	1,200	610
Credit	2,603	1,294	452	-317	1,880	2,940	1,482	742	3,381	1,523	1,996	-310	1,359	1,848	826	-185	3,011	1,590
Total Trading Revenue	18,680	12,860	9,590	7,887	11,892	15,327	14,868	11,579	18,198	15,376	14,861	10,721	17,228	14,866	13,650	5,610	24,862	18,367

*The trading revenue figures are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date.
 Note: Numbers may not add up to total due to rounding.
 Source: Y9

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



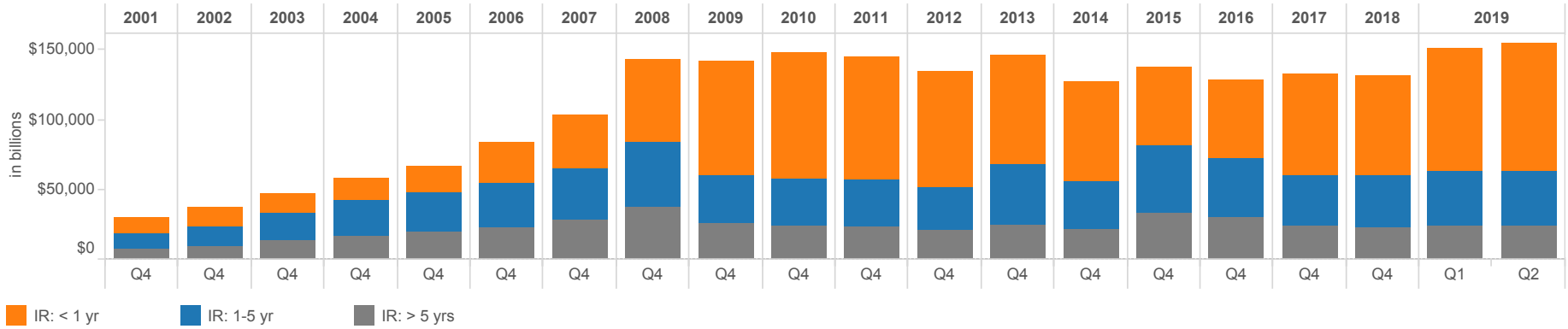
Trading Revenue to Gross Revenue*

	2013				2014				2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
JPMorgan Chase Bank NA	18.65	18.73	10.67	1.24	12.63	13.31	13.47	6.97	17.73	13.25	12.65	7.03	12.26	13.34	13.83	11.17	17.98	13.66	14.01	11.52	11.90	12.19	10.26	3.92	18.57	14.57
Bank of America NA	3.39	-5.97	2.14	-1.58	7.80	9.11	5.11	3.68	6.78	0.49	5.19	1.72	3.90	6.87	4.18	3.28	4.70	4.49	4.09	3.87	5.62	4.04	4.54	4.90	4.60	5.14
Citibank NA	7.45	11.71	6.39	7.20	8.51	7.43	5.48	4.78	9.17	8.41	6.54	6.30	7.19	9.41	6.47	10.97	10.47	8.50	9.12	6.94	11.33	10.69	11.26	4.66	12.32	7.23
Goldman Sachs	32.65	37.30	11.54	24.45	23.67	22.21	13.74	13.06	15.85	17.32	13.32	6.16	23.78	9.54	12.16	7.22	17.71	15.66	7.10	2.15	10.85	1.84	12.77	1.86	10.31	4.29
TOTAL	10.42	9.56	6.72	2.77	10.06	10.45	8.53	5.35	11.68	7.62	8.41	5.03	8.45	10.14	8.51	8.51	11.68	9.32	9.39	7.55	9.77	8.95	8.82	4.36	12.43	9.49

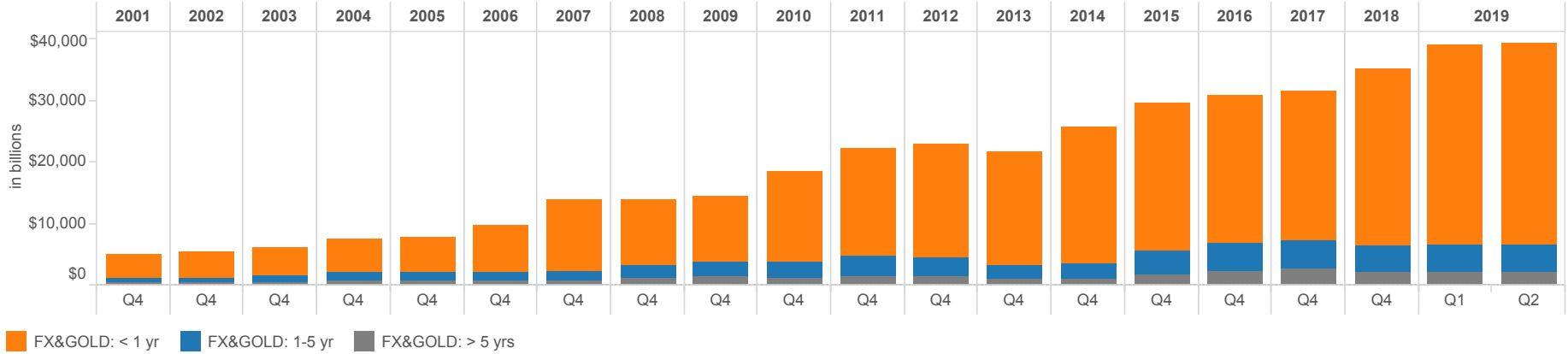
*The trading revenue figures are for cash and derivative activities. Revenue figures are quarterly, not year-to-date numbers.
 Note: Gross revenue equals interest income plus non-interest income.
 Source: Call reports

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

Interest Rate



FX & Gold



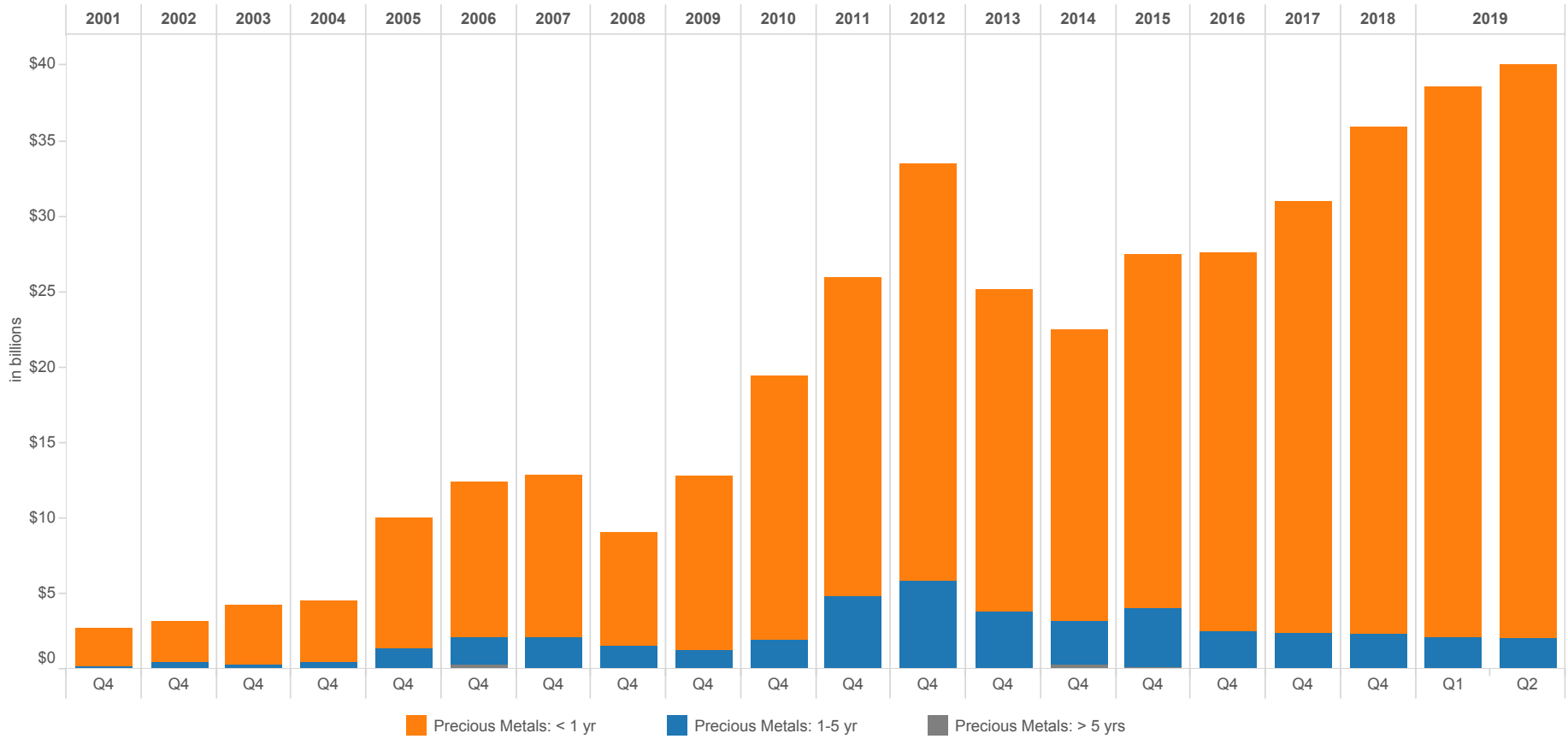
In billions of dollars

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
IR: < 1 yr	\$13,581	\$15,921	\$18,483	\$29,552	\$39,085	\$58,618	\$81,236	\$90,843	\$87,812	\$82,948	\$77,758	\$71,808	\$55,054	\$55,061	\$72,589	\$71,491	\$87,926	\$90,564
IR: 1-5 yr	20,404	25,893	27,683	31,386	37,222	47,456	33,970	33,497	32,750	30,191	44,157	33,727	49,406	43,261	36,154	36,680	38,987	39,191
IR: > 5 yrs	13,117	16,492	19,825	23,273	27,724	36,868	26,374	24,307	24,168	21,175	24,630	22,214	32,981	29,762	23,565	23,244	24,261	24,214
FX&GOLD: < 1 yr	4,510	5,384	5,728	7,730	11,660	10,640	10,490	14,629	17,632	18,386	18,372	22,145	24,130	23,912	24,380	28,892	32,627	32,805
FX&GOLD: 1-5 yr	1,146	1,317	1,381	1,452	1,639	2,195	2,473	2,462	3,117	2,910	2,341	2,587	3,986	4,454	4,805	4,219	4,364	4,340
FX&GOLD: > 5 yrs	582	762	689	594	622	1,082	1,347	1,290	1,503	1,480	1,029	969	1,648	2,420	2,525	2,096	2,182	2,171

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

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

Precious Metals



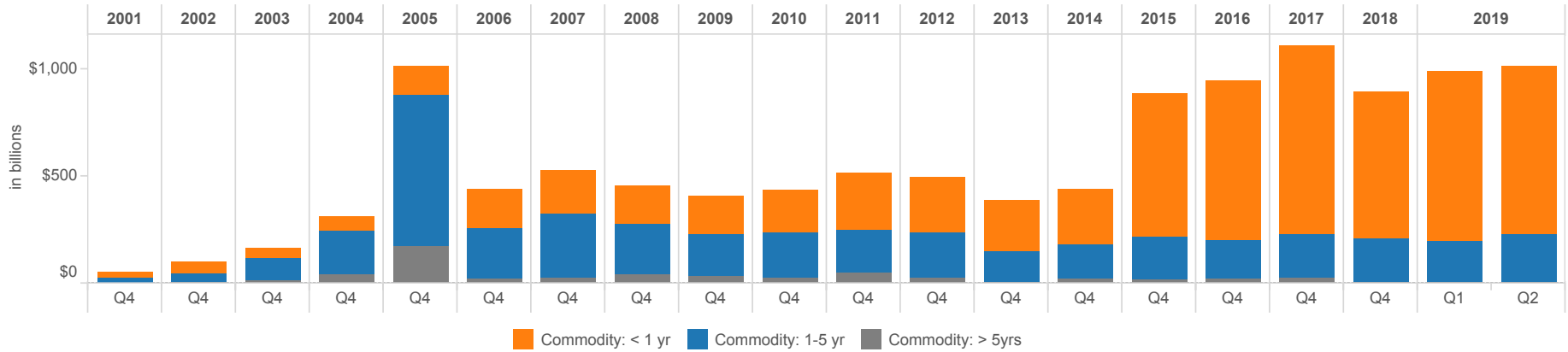
In billions of dollars

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Precious Metals: < 1 yr	\$2.72	\$3.87	\$4.04	\$8.59	\$10.35	\$10.72	\$7.55	\$11.55	\$17.47	\$21.12	\$27.68	\$21.41	\$19.29	\$23.51	\$25.07	\$28.62	\$33.62	\$36.45	\$38.00
Precious Metals: 1-5 yr	0.46	0.33	0.51	1.29	1.75	2.10	1.51	1.24	1.89	4.74	5.82	3.80	2.84	3.92	2.49	2.38	2.25	2.12	2.06
Precious Metals: > 5 yrs	0.00	0.00	0.00	0.06	0.33	0.01	0.00	0.00	0.03	0.10	0.03	0.00	0.29	0.07	0.02	0.01	0.01	0.00	0.00

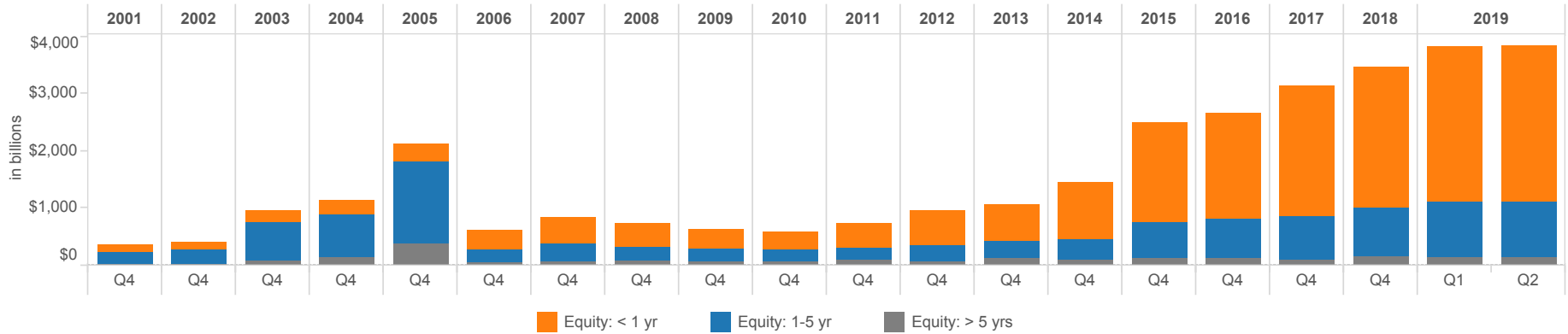
Note: Figures exclude FX contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.
 Source: Call reports

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

Commodity



Equity

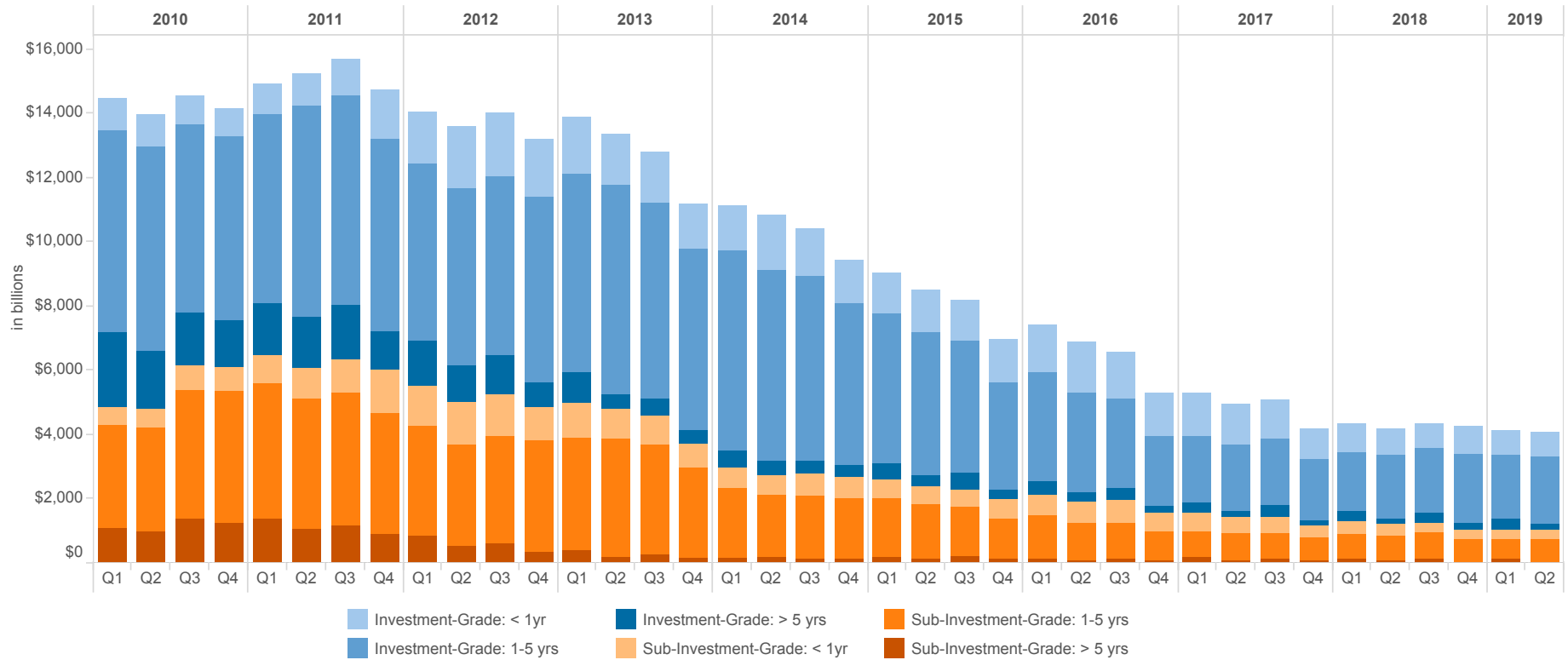


In billions of dollars

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Commodity: < 1 yr	\$55	\$43	\$64	\$133	\$185	\$206	\$179	\$176	\$203	\$261	\$261	\$235	\$257	\$668	\$750	\$883	\$688	\$790	\$790
Commodity: 1-5 yr	35	103	205	707	235	297	233	198	209	209	208	144	164	197	179	202	198	191	219
Commodity: > 5 yrs	9	14	40	175	20	25	43	33	25	46	28	6	20	22	23	25	9	8	10
Equity: < 1 yr	127	197	273	321	341	473	409	312	296	427	627	645	996	1,743	1,842	2,296	2,449	2,715	2,725
Equity: 1-5 yr	249	674	736	1,428	221	297	256	228	191	210	262	291	352	628	677	733	864	958	972
Equity: > 5 yrs	25	84	140	383	45	70	72	82	85	94	82	136	101	130	123	113	139	143	149

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.
Source: Call reports

Graph 14
Notional Amounts of Credit Derivative Contracts by Credit Quality and Maturity
Insured U.S. Commercial Banks and Savings Associations

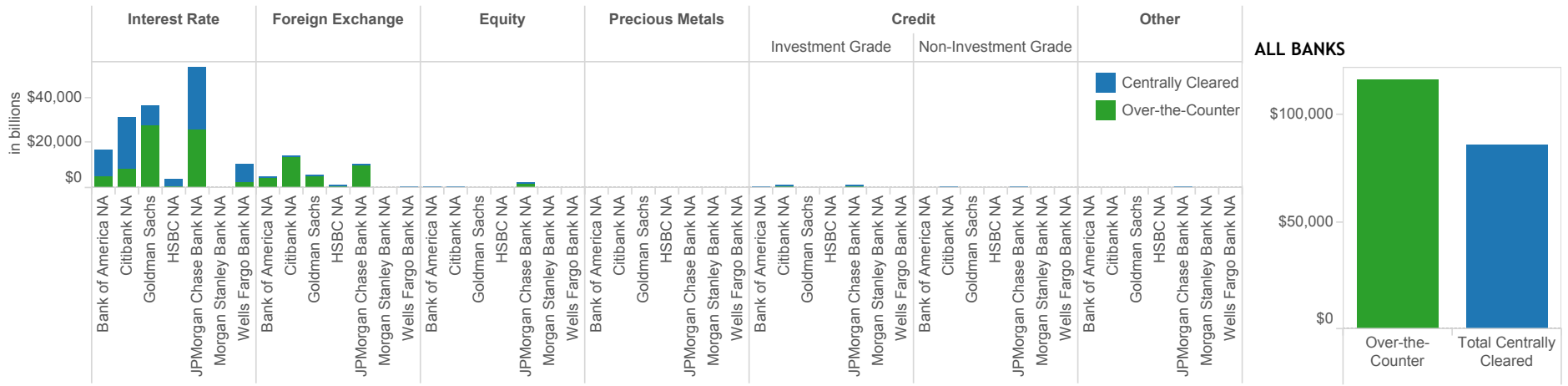


In billions of dollars

	2014				2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Investment-Grade: < 1yr	\$1,414	\$1,707	\$1,478	\$1,375	\$1,256	\$1,292	\$1,270	\$1,380	\$1,471	\$1,549	\$1,451	\$1,348	\$1,343	\$1,234	\$1,216	\$934	\$880	\$805	\$764	\$844	\$763	\$758
Investment-Grade: 1-5 yrs	6,227	5,909	5,722	5,007	4,649	4,450	4,108	3,328	3,400	3,101	2,765	2,170	2,072	2,073	2,085	1,897	1,839	1,995	1,988	2,173	1,976	2,083
Investment-Grade: > 5 yrs	577	448	433	382	508	359	520	281	457	262	385	214	309	195	345	186	331	184	338	204	367	189
Total Investment Grade	\$8,218	\$8,064	\$7,633	\$6,764	\$6,413	\$6,101	\$5,898	\$4,990	\$5,328	\$4,911	\$4,601	\$3,732	\$3,724	\$3,502	\$3,647	\$3,016	\$3,050	\$2,984	\$3,089	\$3,221	\$3,106	\$3,030
	2014				2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Sub-Investment-Grade: < 1yr	\$619	\$642	\$671	\$658	\$596	\$562	\$569	\$607	\$622	\$683	\$683	\$581	\$582	\$509	\$480	\$375	\$400	\$335	\$318	\$304	\$259	\$283
Sub-Investment-Grade: 1-5 yrs	2,127	1,960	1,948	1,887	1,813	1,673	1,518	1,271	1,313	1,159	1,122	869	838	830	814	718	763	791	801	691	661	701
Sub-Investment-Grade: > 5 yrs	200	160	157	140	194	152	213	119	155	101	157	111	159	93	149	77	133	69	133	61	119	60
Total Sub-Investment Grade	\$2,946	\$2,763	\$2,775	\$2,685	\$2,604	\$2,387	\$2,299	\$1,997	\$2,090	\$1,943	\$1,962	\$1,561	\$1,579	\$1,432	\$1,443	\$1,170	\$1,296	\$1,195	\$1,252	\$1,056	\$1,039	\$1,044

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

Graph 15
2Q 2019 Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts
Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

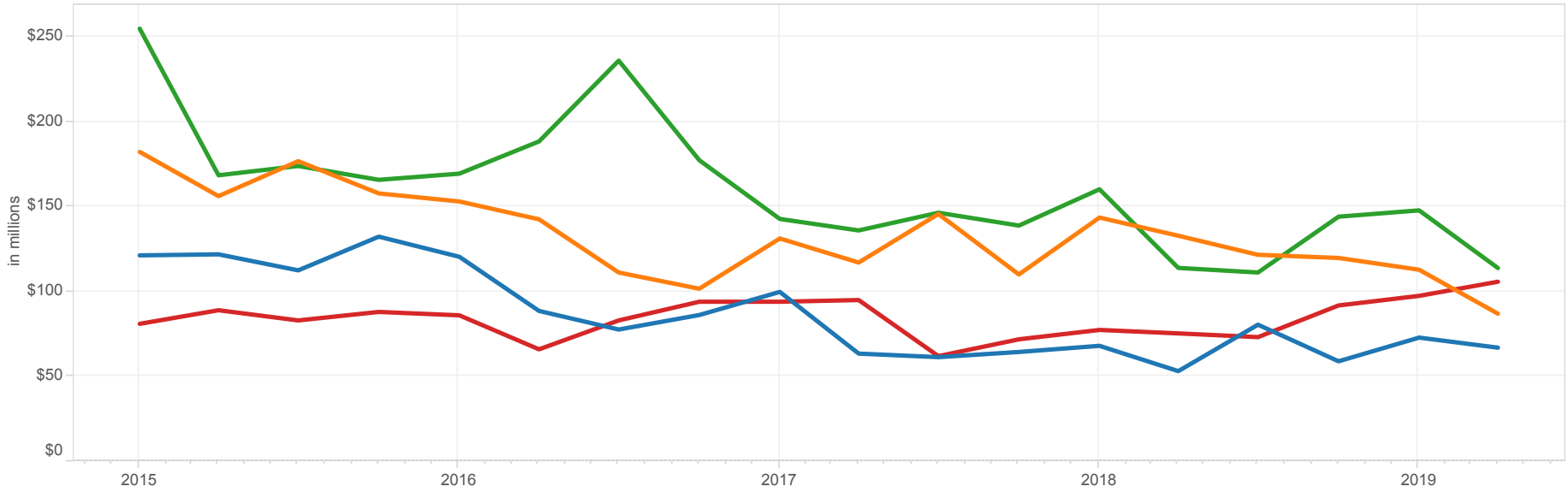
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared	Over-the-Counter	Total Notional
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter			
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter					
JPMorgan Chase Bank NA	27,300	25,809	108	10,167	787	1,662	0	18	414	550	117	242	75	620	28,801	39,068	67,869
Citibank NA	22,395	8,697	256	13,596	40	504	4	8	221	1,258	52	312	79	100	23,047	24,474	47,521
Bank of America NA	11,626	4,628	81	5,119	166	405	0	0	169	200	55	125	0	19	12,097	10,497	22,594
Goldman Sachs	8,392	27,471	78	5,482	0	27	0	0	0	90	0	75	0	4	8,471	33,150	41,620
HSBC NA	3,184	580	40	1,263	0	81	0	9	1	14	7	43	0	2	3,232	1,992	5,224
Wells Fargo Bank NA	8,121	2,436	0	427	39	108	0	2	0	2	0	20	1	55	8,162	3,051	11,213
Morgan Stanley Bank NA	0	11	0	39	0	1	0	0	0	5	0	2	0	0	0	59	59
Grand Total	81,018	69,634	563	36,093	1,032	2,788	4	36	806	2,120	231	820	156	800	83,810	112,290	196,100
ALL OTHER	2,048	1,269	1	2,659	0	27	0	0	1	18	0	17	1	63	2,051	4,053	6,104
TOTAL	83,066	70,903	564	38,752	1,032	2,815	4	36	807	2,138	232	837	157	862	85,861	116,343	202,204

% of Total

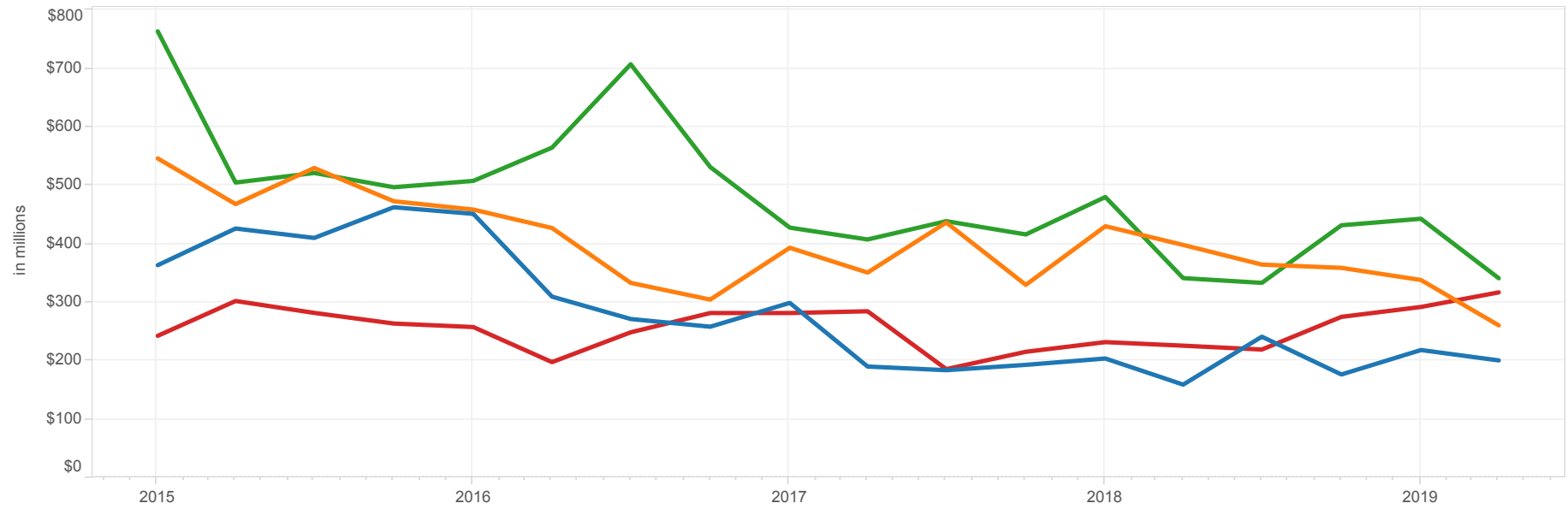
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared as a % of Total Notional	Total Over-the-Counter as a % of Total Notional
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter		
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter				
JPMorgan Chase Bank NA	51%	49%	1%	99%	32%	68%	0%	100%	43%	57%	33%	67%	11%	89%	42%	58%
Citibank NA	72%	28%	2%	98%	7%	93%	34%	66%	15%	85%	14%	86%	44%	56%	48%	52%
Bank of America NA	72%	28%	2%	98%	29%	71%			46%	54%	31%	69%	0%	100%	54%	46%
Goldman Sachs	23%	77%	1%	99%	0%	100%			0%	100%	0%	100%	0%	100%	20%	80%
HSBC NA	85%	15%	3%	97%	0%	100%	0%	100%	9%	91%	14%	86%	0%	100%	62%	38%
Wells Fargo Bank NA	77%	23%	0%	100%	26%	74%	0%	100%	19%	81%	0%	100%	2%	98%	73%	27%
Morgan Stanley Bank NA	1%	99%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%	0%	100%

Source: Call reports, Schedule RC-R

Graph 16
Average 60 Day VaR



VaR Capital Requirement



■ Bank of America, National Association
 ■ Citibank, N.A.
 ■ JPMorgan Chase Bank, National Association
 ■ Goldman Sachs Bank USA

Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

TABLE 1

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	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	7H6GLXDRUGQFU57RNE97	\$2,354,812	\$55,747,717	\$1,253,228	\$3,090,780	\$9,492,407	\$30,761,340	\$9,878,879	\$1,271,083	\$593,977
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	835,948	1,147,499	9,564,042	30,573,406	8,649,916	1,866,200	616,184
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	1,275,774	3,541,433	8,067,219	24,523,366	11,696,591	171,727	345,080
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	279,656	203,039	5,983,918	12,470,523	2,748,984	539,717	563,594
5	Wells Fargo Bank NA	KB1H1D5PRFMYMCUFXT09	1,699,842	12,086,185	176,511	273,282	4,522,618	5,548,083	1,532,218	33,473	5,052
6	HSBC NA	11E8VN30JCEQV1H4R804	180,699	5,463,985	169,199	6,013	988,052	3,782,560	395,286	122,874	42,539
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	238,122	2,368,778	14,452	0	2,305,911	18,931	29,484	0	68,736
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4NONFVK49	310,148	1,070,200	14,445	31	273,862	762,121	19,576	165	113,829
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	473,138	517,531	17,420	2,330	73,610	300,761	114,131	9,278	655
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	393,267	429,546	4,327	5,096	22,362	356,286	31,128	10,348	1,473
11	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,512	313,769	2,237	0	221,397	85,012	4,934	190	633
12	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	126,103	295,571	0	0	276,083	18,688	801	0	14,846
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	216,297	256,440	3,341	17,974	25,907	155,867	47,650	5,701	228
14	TD BANK NATIONAL ASSN	03DOJEWFDFUS0SEEKG89	305,419	209,914	0	0	2,756	206,179	978	0	0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	163,025	183,107	4,946	0	12,999	141,353	20,840	2,970	244
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YMOOVDV0K75	311,288	170,473	616	0	4,011	160,537	791	4,518	286
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	126,896	135,222	970	60	36,831	76,078	15,726	5,557	78
18	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	41,761	119,290	896	233	109,832	5,975	2,347	7	0
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	167,179	118,916	927	212	6,046	80,161	25,805	5,763	411
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	143,051	116,420	1,693	0	5,188	91,985	17,119	435	539
21	MANUFACTURERS&TRADERS TR CO	WWB2VOFCW3A0EE3ZJN75	121,115	86,642	0	0	2,819	64,548	19,275	0	134
22	MORGAN STANLEY BANK NA	G1MLHIS0N3213QPILB75	134,409	76,174	167	0	20,787	28,922	18,880	7,418	1,794
23	HUNTINGTON NATIONAL BANK		108,236	56,652	229	0	3,423	41,145	9,345	2,510	13
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	223,086	52,858	156	0	6,465	39,159	6,326	752	21
25	BBVA USA		90,997	50,342	2,987	0	2,044	35,358	9,279	673	0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,515,016	\$204,064,690	\$4,060,125	\$8,287,983	\$42,030,589	\$110,328,345	\$35,296,289	\$4,061,359	\$2,370,347
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,941,866	809,086	3,980	726	112,210	576,870	102,675	12,625	1,753
TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	4,064,105	8,288,708	42,142,799	110,905,216	35,398,964	4,073,984	2,372,099

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

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

Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-L

TABLE 2

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS (HOLDING COMPANIES)
TOP 25 HOLDING COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS**

RANK	HOLDING COMPANY	LEGAL ENTITY IDENTIFIER	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.	815DZWKVZS11NUHU748	\$2,727,379	\$55,433,681	\$1,299,393	\$3,408,246	\$9,951,473	\$29,918,874	\$9,561,530	\$1,294,165	\$583,559
2	CITIGROUP INC.	6SHGI4ZSSLCXQSB395	1,988,226	53,496,485	1,000,157	2,484,966	11,050,748	29,073,152	8,473,600	1,413,862	613,816
3	GOLDMAN SACHS GROUP, INC., THE	784F5XWPLTWKTBV3E584	944,916	53,014,350	2,020,306	4,645,258	8,630,039	23,980,509	12,593,067	1,145,171	314,937
4	BANK OF AMERICA CORPORATION	9DJT3UX1JIZJ14WXO774	2,396,484	40,331,576	1,384,825	1,277,531	9,316,627	23,089,351	4,324,783	938,459	453,807
5	MORGAN STANLEY	IGJSJL3JD5P30I6NJZ34	891,959	37,436,325	1,260,487	1,778,669	5,173,434	19,705,254	9,094,576	423,905	61,167
6	WELLS FARGO & COMPANY	PBLDOEJDB5FWOLXP3B76	1,923,388	12,342,852	184,883	296,514	4,915,471	5,386,429	1,528,044	31,511	5,054
7	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	296,713	8,272,377	409,543	564,179	989,012	5,783,852	402,917	122,874	42,539
8	MIZUHO AMERICAS LLC		46,919	6,620,065	17,535	16,769	497,882	5,953,481	132,932	1,466	8,247
9	SMBC AMERICAS HOLDINGS, INC.		20,873	4,821,777	107,350	1,572,837	817,533	1,637,800	685,537	721	0
10	STATE STREET CORPORATION	549300ZFEJ2IP5VME73	241,540	2,361,557	14,452	0	2,305,912	11,709	29,484	0	68,736
11	BANK OF NEW YORK MELLON CORPORATION, THE	WFLPEPC7FZXENRZV188	381,213	1,081,003	15,372	369	304,200	741,321	19,576	165	113,881
12	BARCLAYS US LLC	213800H14XVWOV87O172	154,325	783,050	30,535	356,823	321,950	22,688	0	51,054	49
13	RBC US GROUP HOLDINGS LLC		125,578	541,585	112,670	172,393	7,619	247,928	590	386	112
14	U.S. BANCORP	N1GZ7BBF3NP8GI976H15	481,719	519,606	17,420	2,330	74,126	302,321	114,131	9,278	655
15	PNC FINANCIAL SERVICES GROUP, INC., THE	CFGNEKWOP8842LEUIA51	405,855	425,459	4,350	5,096	25,969	348,569	31,128	10,348	1,473
16	TD GROUP US HOLDINGS LLC	549300ARWZ5E3L64UH29	387,660	402,230	151,659	2,020	34,106	213,467	978	0	0
17	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	128,612	339,272	4,961	3,045	182,185	83,367	10,435	55,279	79
18	MUFG AMERICAS HOLDINGS CORPORATION	5493004K1ECE43Q0BX47	172,010	327,301	4,408	471	232,189	85,109	4,934	190	633
19	NORTHERN TRUST CORPORATION	549300GLF98S992BC502	126,551	293,821	0	0	276,083	16,938	801	0	14,846
20	SUNTRUST BANKS, INC.	7E1PDLW1JL6TS0BS1G03	222,530	255,352	3,341	17,974	29,020	152,900	46,415	5,701	228
21	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	373,619	229,456	616	0	12,473	211,057	791	4,518	286
22	CITIZENS FINANCIAL GROUP, INC.	2138004JDDA4ZQUPFW65	163,346	183,107	4,946	0	12,999	141,353	20,840	2,970	244
23	BNP PARIBAS USA, INC.	RKPI3RZGV1V1FJTH5T61	129,373	164,019	3	4	144,148	18,038	1,827	0	57
24	DB USA CORPORATION	529900RO45LRDMWLR157	119,751	160,966	9,700	124,487	5,431	19,833	400	1,115	0
25	REGIONS FINANCIAL CORPORATION		127,871	132,122	970	60	36,831	72,978	15,726	5,557	78
TOP 25 HOLDING COMPANIES WITH DERIVATIVES			\$14,978,409	\$279,969,395	\$8,059,880	\$16,730,042	\$55,347,459	\$147,218,279	\$47,095,041	\$5,518,694	\$2,284,482

Note: Currently, the Y-9 report does not differentiate credit derivativ

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

Note: Numbers may not add up to total due to rounding.

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

TABLE 3

DISTRIBUTION OF DERIVATIVE CONTRACTS
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	PERCENT EXCH TRADED CONTRACTS (%)	PERCENT OTC CONTRACTS (%)	PERCENT INT RATE CONTRACTS (%)	PERCENT FOREIGN EXCH CONTRACTS (%)	PERCENT EQUITY CONTRACTS (%)	PERCENT OTHER CONTRACTS (%)	PERCENT CREDIT DERIVATIVES (%)
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,354,812	\$55,747,717	7.8	92.2	71.3	21.7	3.2	1.5	2.3
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	3.8	96.2	64.9	29.0	1.8	0.8	3.5
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	9.8	90.2	87.5	12.0	0.1	0.0	0.3
4	BANK OF AMERICA NA	B4TYDEB6GKMZ0031MB27	1,792,891	22,225,837	2.2	97.8	71.7	23.3	2.5	0.1	2.4
5	Wells Fargo Bank NA	KB1H1DSRPFMYMUCFXT09	1,699,842	12,086,185	3.7	96.3	93.4	3.6	2.1	0.6	0.3
6	HSBC NA	1IE8VN30JCEQV1H4R804	180,699	5,463,985	3.2	96.8	72.0	23.4	1.5	0.9	2.2
7	STATE STREET BANK&TRUST CO	571474TGEMMWWANRLN572	238,122	2,368,778	0.6	99.4	1.3	97.5	0.0	1.1	0.0
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4NONFVK49	310,148	1,070,200	1.4	98.6	30.3	69.6	0.1	0.0	0.0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	473,138	517,531	3.8	96.2	86.1	11.8	0.0	0.3	1.8
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	393,267	429,546	2.2	97.8	90.5	4.3	1.3	1.4	2.4
11	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,512	313,769	0.7	99.3	97.1	2.7	0.1	0.1	0.1
12	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	126,103	295,571	0.0	100.0	5.1	94.7	0.2	0.0	0.0
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	216,297	256,440	8.3	91.7	79.7	3.7	13.4	1.0	2.2
14	TD BANK NATIONAL ASSN	03DOJEWDFUSOSEKGG89	305,419	209,914	0.0	100.0	97.8	2.2	0.0	0.0	0.0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	163,025	183,107	2.7	97.3	91.0	7.3	0.0	0.0	1.6
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM00VDV0K75	311,288	170,473	0.4	99.6	88.8	1.3	0.0	7.2	2.7
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	126,896	135,222	0.8	99.2	93.7	1.1	0.0	1.1	4.1
18	BOKF NATIONAL ASSN	FU7RSW4CQQY98A207J66	41,761	119,290	0.9	99.1	96.4	0.4	0.1	3.1	0.0
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	167,179	118,916	1.0	99.0	73.6	12.6	2.4	6.6	4.8
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	143,051	116,420	1.5	98.5	88.8	5.0	0.0	5.8	0.4
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	121,115	86,642	0.0	100.0	99.1	0.9	0.0	0.0	0.0
22	MORGAN STANLEY BANK NA	G1MLHISON3213QPILB75	134,409	76,174	0.2	99.8	21.2	68.1	1.0	0.0	9.7
23	HUNTINGTON NATIONAL BANK		108,236	56,652	0.4	99.6	85.5	3.5	0.7	5.8	4.4
24	BRANCH BANKING&TRUST CO	JJKC32MCHWD171265Z06	223,086	52,858	0.3	99.7	97.6	1.0	0.0	0.0	1.4
25	BBVA USA		90,997	50,342	5.9	94.1	93.7	3.6	1.4	0.0	1.3
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,515,016	\$204,064,690	\$12,348,107	\$191,716,583	\$151,104,798	\$43,703,013	\$3,719,271	\$1,476,249	\$4,061,359
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,941,866	809,086	4,706	804,380	746,845	40,511	3,260	5,845	12,625
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	12,352,813	192,520,963	151,851,643	43,743,524	3,722,531	1,482,094	4,073,984
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			99.6	99.6	6.0	93.6	73.8	21.3	1.8	0.7	2.0
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			0.4	0.4	0.0	0.4	0.4	0.0	0.0	0.0	0.0
TOTAL FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			100.0	100.0	6.0	94.0	74.1	21.4	1.8	0.7	2.0
<p>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.</p> <p>Note: "FX" does not include spot FX.</p> <p>Note: "Other" is defined as the sum of commodity and equity contracts.</p> <p>Note: Numbers may not add up to total due to rounding.</p> <p>Source: Call reports, Schedule RC-L</p>											

TABLE 4

CREDIT EQUIVALENT EXPOSURES
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL RISK-BASED CAPITAL	BILATERALLY NETTED CURRENT CREDIT EXPOSURE		TOTAL CREDIT EXPOSURE FROM ALL CONTRACTS		TOTAL CREDIT EXPOSURE TO CAPITAL (%)
						POTENTIAL FUTURE EXPOSURE				
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,354,812	\$55,747,717	\$235,209	\$145,199	\$207,974	\$353,173	150	
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	156,304	62,944	143,924	206,868	132	
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	33,540	60,875	63,920	124,795	372	
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	166,719	41,404	55,469	96,873	58	
5	Wells Fargo Bank NA	KB1H1DSPRFMYMCUFXT09	1,699,842	12,086,185	166,648	16,530	30,362	46,892	28	
6	HSBC NA	11E8VN30JCEQV1H4R804	180,699	5,463,985	23,655	6,065	20,118	26,184	111	
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	238,122	2,368,778	18,300	6,343	9,829	16,172	88	
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	310,148	1,070,200	19,301	4,278	5,803	10,081	52	
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	473,138	517,531	47,228	2,375	6,539	8,915	19	
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	393,267	429,546	38,042	4,672	-169	4,503	12	
11	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,512	313,769	14,257	1,061	361	1,423	10	
12	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	126,103	295,571	10,161	832	2,243	3,075	30	
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	216,297	256,440	20,067	1,767	2,570	4,336	19	
14	TD BANK NATIONAL ASSN	03D0JEWFDUS0SEEKG89	305,419	209,914	28,692	321	956	1,278	4	
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	163,025	183,107	17,611	955	1,226	2,180	12	
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM00VDVOK75	311,288	170,473	29,969	1,750	3,384	5,134	17	
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	126,896	135,222	13,625	604	529	1,133	8	
18	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	41,761	119,290	3,615	8	13	20	1	
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	167,179	118,916	18,547	1,301	1,977	3,278	18	
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	143,051	116,420	15,809	924	1,067	1,991	13	
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	121,115	86,642	12,481	416	153	569	5	
22	MORGAN STANLEY BANK NA	G1MLHISON32I3QPILB75	134,409	76,174	16,148	211	1,831	2,042	13	
23	HUNTINGTON NATIONAL BANK		108,236	56,652	11,756	788	857	1,645	14	
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	223,086	52,858	24,062	482	247	729	3	
25	BBVA USA		90,997	50,342	9,390	380	177	557	6	
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,515,016	\$204,064,690	\$1,154,136	\$362,486	\$561,360	\$923,845	80	
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,941,866	809,086	530,880	8,153	6,144	14,297	3	
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	1,685,016	370,639	567,503	938,142	56	

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

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

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

Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-R.

TABLE 5

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS**

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL HELD FOR TRADING & MTM	% HELD FOR TRADING & MTM	TOTAL NOT FOR TRADING MTM	% NOT FOR TRADING MTM
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,354,812	\$55,747,717	\$54,141,128	99.4	\$335,506	0.6
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	50,666,766	99.8	104,045	0.2
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	49,084,467	100.0	19,916	0.0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	21,156,926	97.6	529,194	2.4
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$175,049,287	99.4	\$988,661	0.6
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	22,900,779	92.5	1,861,065	7.5
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	197,950,066	98.6	2,849,726	1.4

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

Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-L

TABLE 6

GROSS FAIR VALUES OF DERIVATIVE CONTRACTS
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	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	7H6GLXDRUGQFU57RNE97	\$2,354,812	\$55,747,717	\$574,083	\$552,254	\$1,789	\$1,770	\$15,278	\$16,548
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	442,574	435,933	1,000	1,168	19,664	20,443
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	609,116	600,566	285	249	3,752	4,199
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	170,997	160,436	14,013	19,144	5,573	6,098
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$1,796,770	\$1,749,189	\$17,087	\$22,331	\$44,267	\$47,288
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	114,311	107,445	12,484	11,599	1,747	1,931
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	1,911,081	1,856,634	29,571	33,930	46,014	49,219

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

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

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

Source: Call reports, Schedule RC-L

TABLE 7

TRADING REVENUES FROM CASH INSTRUMENTS AND DERIVATIVES
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS
NOTE: REVENUE FIGURES ARE FOR THE QUARTER (NOT YEAR-TO-DATE)

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	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	7H6GLXDRUGOFU57RNE97	\$2,354,812	\$55,747,717	\$4,269	\$950	\$762	\$1,897	\$241	\$419
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWFA76	1,459,623	52,637,011	1,350	948	401	183	11	(193)
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	101	29	382	(90)	0	(220)
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	1,119	289	304	411	63	52
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$6,839	\$2,216	\$1,849	\$2,401	\$315	\$58
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	1,210	514	1,051	63	(358)	(60)
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	8,049	2,730	2,900	2,464	(43)	(2)

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 add up to total due to rounding.

Source: Call reports, Schedule RI

TABLE 8

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY (INTEREST RATE, FX AND GOLD)
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS**

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	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	7H6GLXDRUGQFU57RNE97	\$2,354,812	\$55,747,717	\$26,733,281	\$17,070,803	\$9,305,270	\$53,109,354	\$7,028,494	\$2,185,603	\$1,061,208	\$10,275,305
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	24,806,519	3,553,513	2,732,222	31,092,254	13,012,119	634,363	204,986	13,851,468
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	21,985,155	7,668,876	6,209,544	35,863,575	4,285,669	701,499	572,950	5,560,118
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	8,212,887	5,302,590	2,738,380	16,253,857	4,507,035	496,020	196,370	5,199,425
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$81,737,842	\$33,595,782	\$20,985,416	\$136,319,040	\$28,833,317	\$4,017,485	\$2,035,514	\$34,886,316
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	8,826,357	5,594,759	3,228,548	17,649,664	3,971,416	322,792	135,457	4,429,665
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	90,564,199	39,190,541	24,213,964	153,968,704	32,804,733	4,340,277	2,170,971	39,315,981

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

Note: Numbers may not add up to total due to rounding.

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

Source: Call reports, Schedule RC-R

TABLE 9

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY (PRECIOUS METALS)
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	PREC METALS MATURITY < 1 YR	PREC METALS MATURITY 1 - 5 YRS	PREC METALS MATURITY > 5 YRS	PREC METALS ALL MATURITIES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGOFU57RNE97	\$2,354,812	\$55,747,717	\$17,125	\$828	\$0	\$17,953
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	11,448	439	0	11,887
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	0	0	0	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	0	0	0	0
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$28,573	\$1,267	\$0	\$29,840
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	9,429	790	0	10,219
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	38,002	2,057	0	40,059
<p>Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as FX contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps. Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.</p> <p>Note: Numbers may not add up to total due to rounding.</p> <p>Source: Call reports, Schedule RC-R</p>								

TABLE 10

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY (OTHER COMMODITY AND EQUITY)
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS**

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	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	7H6GLXDRUGOFU57RNE97	\$2,354,812	\$55,747,717	\$596,178	\$94,210	\$4,853	\$695,241	\$1,742,763	\$605,006	\$100,442	\$2,448,211
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWFEA76	1,459,623	52,637,011	129,087	45,201	4,577	178,865	385,346	135,948	22,876	544,170
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	2,779	1,609	0	4,388	12,718	12,692	1,824	27,234
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	14,291	4,641	14	18,946	442,631	124,672	4,523	571,826
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$742,335	\$145,661	\$9,444	\$897,440	\$2,583,458	\$878,318	\$129,665	\$3,591,441
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	47,646	73,613	300	121,559	141,996	94,179	19,557	255,732
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	789,981	219,274	9,744	1,018,999	2,725,454	972,497	149,222	3,847,173

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

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

Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-R

TABLE 11

**NOTIONAL AMOUNTS OF CREDIT DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY (INVESTMENT GRADE AND SUB-INVESTMENT GRADE)
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS**

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	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	7H6GLXDRUGOFU57RNE97	\$2,354,812	\$55,747,717	\$1,271,083	\$230,560	\$669,848	\$66,294	\$966,702	\$84,337	\$201,152	\$18,892	\$304,381
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,459,623	52,637,011	1,866,200	337,871	1,090,175	72,081	1,500,127	109,111	250,709	6,253	366,073
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,276,110	171,727	23,017	58,187	13,328	94,532	11,352	54,263	11,580	77,195
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,792,891	22,225,837	539,717	148,762	214,826	24,815	388,403	57,424	84,018	9,872	151,314
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,807,426	\$179,886,675	\$3,848,727	\$740,210	\$2,033,036	\$176,518	\$2,949,764	\$262,224	\$590,142	\$46,597	\$898,963
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,649,457	24,987,101	225,257	17,447	50,455	12,346	80,247	20,310	110,937	13,764	145,010
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	204,873,776	4,073,984	757,657	2,083,491	188,864	3,030,011	282,534	701,079	60,361	1,043,973

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

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

Note: Numbers may not add up to total due to rounding.

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

TABLE 12

DISTRIBUTION OF CREDIT DERIVATIVE CONTRACTS HELD FOR TRADING
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERIVATIVES	TOTAL CREDIT DERIVATIVES				SOLD					
						PURCHASED	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	7H6GLXDRUGOFU57RNE97	\$2,354,812	\$54,476,634	\$1,271,083	\$648,504	\$622,579	\$578,672	\$29,836	\$34,808	\$5,188	\$563,804	\$20,783	\$37,944	\$48
2	CITIBANK NATIONAL ASSN	E570DZWZ7FF32TWEFA76	1,459,623	50,770,811	1,866,200	967,395	898,805	853,515	24,119	89,761	0	814,218	7,697	76,890	0
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	200,100	49,104,383	171,727	94,831	76,896	84,887	2,833	6,897	214	67,455	2,833	6,438	170
4	BANK OF AMERICA NA	B4TYDEB6GKMZ0031MB27	1,792,891	21,686,120	539,717	272,179	267,538	225,965	10,322	35,892	0	208,130	14,391	45,017	0
5	Wells Fargo Bank NA	KB1H1DSPRFMYMCFXT09	1,699,842	12,052,712	33,473	21,582	11,891	4,096	0	120	17,366	2,937	0	0	8,954
6	HSBC NA	1IE8VN30JCEQV1H4R804	180,699	5,341,111	122,874	68,741	54,133	55,456	13,286	0	0	52,798	1,335	0	0
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	238,122	2,368,778	0	0	0	0	0	0	0	0	0	0	0
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	310,148	1,070,035	165	165	0	165	0	0	0	0	0	0	0
9	U S BANK NATIONAL ASSN	6BYL5OZYBDK8S7L3M02	473,138	508,253	9,278	3,438	5,840	1,130	0	0	2,308	0	0	0	5,840
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	393,267	419,198	10,348	3,106	7,242	0	0	0	3,106	0	0	0	7,242
11	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,512	313,579	190	190	0	190	0	0	0	0	0	0	0
12	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFVH30	126,103	295,571	0	0	0	0	0	0	0	0	0	0	0
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	216,297	250,739	5,701	3,268	2,433	870	2,392	0	7	0	2,392	0	41
14	TD BANK NATIONAL ASSN	03DOJEWFDFUS0SEKGG89	305,419	209,914	0	0	0	0	0	0	0	0	0	0	0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1QOQEMXLAU1P80	163,025	180,137	2,970	0	2,970	0	0	0	0	0	0	0	2,970
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YMO0VDV0K75	311,288	165,955	4,518	1,666	2,852	0	0	0	1,666	0	0	0	2,852
17	REGIONS BANK	EQ7WLK1G7ODGCC2MGLV11	126,896	129,665	5,557	1,681	3,876	43	0	0	1,638	43	0	0	3,833
18	BOKF NATIONAL ASSN	FU7RSW4CQOY98A2O7J66	41,761	119,283	7	1	6	1	0	0	0	6	0	0	0
19	FIFTH THIRD BANK	QFROUN1UWUYUODV1W51	167,179	113,153	5,763	1,301	4,462	0	0	0	1,301	0	0	0	4,462
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	143,051	115,985	435	154	280	154	0	0	0	187	93	0	0
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	121,115	86,642	0	0	0	0	0	0	0	0	0	0	0
22	MORGAN STANLEY BANK NA	G1MLHISON3213QPILB75	134,409	68,756	7,418	7,345	73	6,815	0	530	0	73	0	0	0
23	HUNTINGTON NATIONAL BANK		108,236	54,142	2,510	1,651	859	0	0	0	1,651	0	0	0	859
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	223,086	52,106	752	83	669	0	0	0	83	0	0	0	669
25	BBVA USA		90,997	49,668	673	8	666	8	0	0	0	666	0	0	0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,515,016	\$200,003,331	\$4,061,359	\$2,097,290	\$1,964,070	\$1,811,966	\$82,787	\$168,008	\$34,528	\$1,710,317	\$49,523	\$166,289	\$37,940
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,941,866	796,461	12,625	7,074	5,551	110	4,081	0	2,882	598	2	0	4,952
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,456,883	200,799,792	4,073,984	2,104,363	1,969,621	1,812,077	86,868	168,008	37,410	1,710,915	49,525	166,289	42,892
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					99.7	51.5	48.2	44.5	2.0	4.1	0.8	42.0	1.2	4.1	0.9
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1

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

Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-L

TABLE 13

DERIVATIVES DATA REPORTED BY FFIEC 051 FILERS
COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
JUNE 30, 2019, MILLIONS OF DOLLARS

Call Report Schedule SU										
A. Gross Notional Amount of Derivatives	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17
Total gross notional amount of interest rate derivatives held for trading	\$922	\$1,142	\$623	\$751	\$736	\$684	\$542	\$729	\$749	\$655
Total gross notional amount of all other derivatives held for trading	\$37	\$24	\$2	\$2	\$5	\$7	\$5	\$5	\$6	\$2
Total gross notional amount of interest rate derivatives not held for trading	\$11,121	\$9,009	\$8,432	\$6,893	\$7,642	\$8,483	\$6,092	\$7,731	\$8,259	\$7,154
Total gross notional amount of all other derivatives not held for trading	\$210	\$180	\$160	\$2,754	\$3,133	\$531	\$86	\$89	\$89	\$80

Call Report Schedule RC-R										
A. Notional principal amounts of over-the-counter derivative contracts covered by the regulatory capital rules:										
a. Interest rate	\$7,172	\$5,858	\$4,147	\$4,459	\$4,584	\$4,471	\$3,847	\$4,657	\$5,024	\$4,758
b. Foreign exchange rate and gold	\$4	\$5	\$3	\$4	\$5	\$429	\$0	\$0	\$0	\$0
c. Credit (investment grade reference asset)	\$39	\$41	\$35	\$17	\$14	\$14	\$13	\$14	\$8	\$4
d. Credit (non-investment grade reference asset)	\$25	\$25	\$12	\$12	\$12	\$11	\$11	\$11	\$11	\$11
e. Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
q. Other	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5
f. Precious metals (except gold)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. Notional principal amounts of centrally cleared derivative contracts covered by the regulatory capital rules:										
a. Interest rate	\$168	\$686	\$1,937	\$2,731	\$3,169	\$129	\$249	\$343	\$178	\$158
b. Foreign exchange rate and gold	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Credit (investment grade reference asset)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
d. Credit (non-investment grade reference asset)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
e. Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
f. Precious metals (except gold)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
g. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Current credit exposure across all derivative contracts covered by the regulatory capital rules	\$95	\$59	\$49	\$76	\$119	\$62	\$44	\$57	\$49	\$39

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