

Quarterly Report on Bank Trading and Derivatives Activities

Third Quarter 2019

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

December 2019

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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 1,334¹ insured U.S. commercial banks and savings associations reported trading and derivatives activities at the end of the third 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 third quarter of 2019, four large commercial banks represented 87.2 percent of the total banking industry notional amounts and 83.2 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 96th 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 \$7.2 billion in the third quarter of 2019, \$0.9 billion less (10.9 percent) than in the previous quarter and \$0.1 billion more (2.0 percent) than a year earlier (see table 1).
- Credit exposure from derivatives increased in the third quarter of 2019 compared with the second quarter of 2019. NCCE increased \$54.2 billion, or 14.6 percent, to \$425 billion (see table 5).
- Derivative notional amounts decreased in the third quarter of 2019 by \$3.7 trillion, or 1.8 percent, to \$201.1 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled \$147.1 trillion or 73.1 percent of total derivative notional amounts (see table 10).

¹ Institutions with total assets of less than \$5 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 \$7.2 billion in trading revenue in the third quarter of 2019, \$0.9 billion less (10.9 percent) than in the previous quarter and \$0.1 billion more (2.0 percent) than a year earlier (see table 1). The quarter-over-quarter decrease in trading revenue was driven by decreases in combined interest rate and foreign exchange (FX) derivatives and equity derivatives. 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

	3Q 2019	2Q 2019	Q/Q Change	Q/Q % Change	3Q 2018	Y/Y Change	Y/Y % Change
Interest rate and foreign exchange	\$4,241	\$5,630	-\$1,390	-24.7%	\$5,129	-\$888	-17.3%
Equity	\$1,805	\$2,464	-\$659	-26.7%	\$1,444	\$362	25.1%
Commodity and other	\$1,109	-\$43	\$1,153	2657.9%	\$346	\$763	220.3%
Credit	\$43	\$30	\$13	42.6%	\$141	-\$98	-69.7%
Total trading revenue	\$7,198	\$8,081	-\$883	-10.9%	\$7,059	\$138	2.0%

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 \$16.4 billion in the third quarter of 2019 was \$2.0 billion (10.8 percent) lower than in the previous quarter. The quarter-over-quarter decrease in trading revenue was driven by decreases in combined interest rate and FX derivatives, equity derivatives, and credit derivatives. Year-over-year holding company trading revenue increased by \$2.7 billion (20.0 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

	3Q 2019	2Q 2019	Q/Q change	Q/Q % change	3Q 2018	Y/Y change	Y/Y % change
Interest rate and foreign exchange	\$9,578	\$10,093	-\$515	-5.1%	\$6,891	\$2,687	39.0%
Equity	\$4,547	\$6,083	-\$1,536	-25.3%	\$5,222	-\$675	-12.9%
Commodity and other	\$1,046	\$512	\$534	104.3%	\$874	\$172	19.7%
Credit	\$1,217	\$1,689	-\$472	-27.9%	\$666	\$551	82.7%
Total HC trading revenue	\$16,389	\$18,378	-\$1,989	-10.8%	\$13,653	\$2,736	20.0%

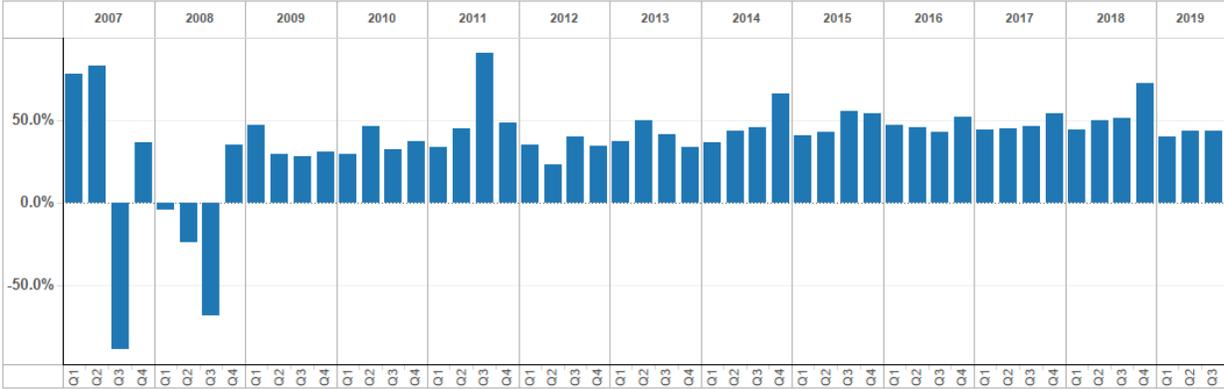
Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

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 third quarter of 2019, banks generated 43.9 percent of consolidated holding company trading revenue, down from 44 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 \$293 billion (14.7 percent) in the third quarter of 2019 to \$2.3 trillion, primarily driven by a \$220 billion (16.4 percent) increase in receivables from interest rate contracts (see table 3). GNFV increased \$287 billion (14.8 percent) to \$2.2 trillion during the quarter, primarily driven by a \$221 billion (17.2 percent) increase in payables on interest rate contracts.

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

	3Q 2019	2Q 2019	Q/Q Change	Q/Q % Change	3Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$1,563	\$1,343	\$220	16.4%	\$970	\$593	61.2%
Foreign exchange	\$506	\$442	\$64	14.5%	\$544	-\$37	-6.9%
Equity	\$115	\$119	-\$4	-2.9%	\$132	-\$17	-12.8%
Commodities	\$47	\$36	\$11	30.4%	\$52	-\$5	-8.9%
Credit	\$47	\$46	\$1	2.1%	\$55	-\$8	-15.1%
Gross positive fair value	\$2,279	\$1,987	\$293	14.7%	\$1,753	\$526	30.0%

	3Q 2019	2Q 2019	Q/Q Change	Q/Q % Change	3Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$1,509	\$1,287	\$221	17.2%	\$916	\$593	64.7%
Foreign exchange	\$503	\$445	\$59	13.3%	\$518	-\$14	-2.8%
Equity	\$114	\$120	-\$6	-5.1%	\$130	-\$17	-12.7%
Commodities	\$52	\$39	\$13	33.7%	\$49	\$2	4.8%
Credit	\$50	\$49	\$0	0.6%	\$56	-\$7	-11.6%
Gross negative fair value	\$2,227	\$1,940	\$287	14.8%	\$1,669	\$558	33.4%

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 \$54 billion (14.6 percent) to \$425 billion in the third quarter of 2019 (see table 5).² Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 81.4 percent (\$1.9 trillion) in the third quarter of 2019.

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

	3Q 2019	2Q 2019	Q/Q Change	Q/Q % Change
Gross positive fair value	\$2,279	\$1,987	\$293	14.7%
NCCE RC-R	\$425	\$371	\$54	14.6%
Netting benefit RC-R	\$1,854	\$1,616	\$238	14.8%
Netting benefit % RC-R	81.4%	81.3%		0.1%

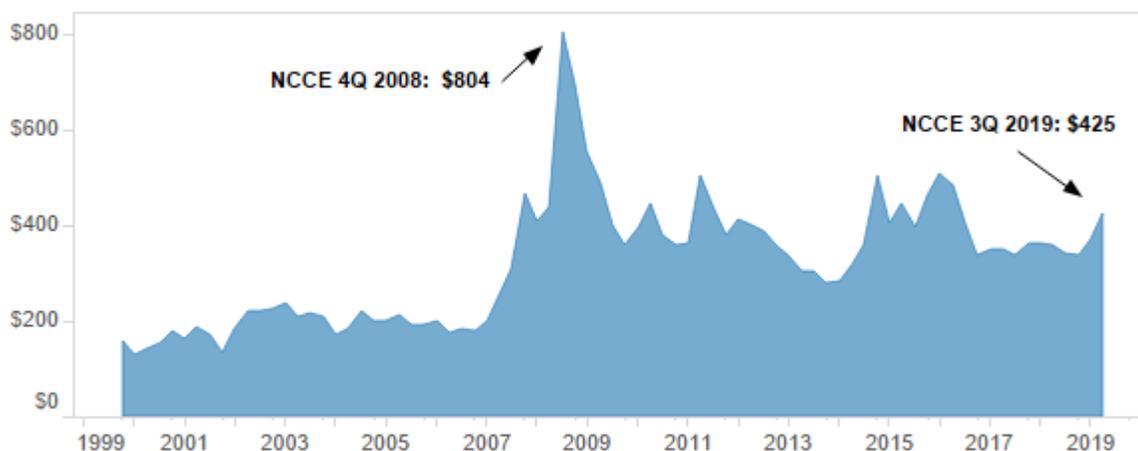
Source: Call reports, Schedules RC-L and RC-R

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 \$1.6 trillion at the end of the third quarter of 2019 (see table 3). In addition, on September 30,

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.

2019, exposure from credit contracts was \$47.0 billion, which is \$1.0 trillion lower (95.7 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 (42.2 percent) and in corporations and other counterparties (46.8 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (11.0 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
3Q 2019	42.2%	1.9%	9.1%	46.8%
2Q 2019	41.5%	4.3%	9.8%	44.5%
1Q 2019	43.5%	4.6%	9.6%	42.3%
4Q 2018	41.7%	5.0%	10.0%	43.2%
4Q 2017	41.7%	3.1%	7.9%	47.3%
4Q 2016	48.4%	2.0%	6.5%	43.0%
4Q 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 109.2 percent of their total NCCE at the end of the third quarter of 2019, down slightly from 110.1 percent in the second quarter of 2019 (see table 7). Collateral held against hedge fund exposures increased in the third quarter and coverage remains very high at 543.8 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 %
3Q 2019	131.8%	543.8%	49.1%	82.8%	109.2%
2Q 2019	130.9%	335.2%	47.2%	83.0%	110.1%
1Q 2019	127.7%	343.8%	48.2%	88.2%	113.4%
4Q 2018	128.9%	308.0%	47.1%	91.8%	113.7%
4Q 2017	124.4%	495.5%	25.1%	89.8%	111.5%
4Q 2016	119.1%	491.5%	34.2%	67.0%	98.5%
4Q 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 63.1 percent held in cash (both U.S. dollar and non-dollar) and an additional 12.5 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
3Q 2019	35.8%	27.3%	11.0%	1.5%	1.8%	6.3%	16.2%
2Q 2019	34.9%	26.0%	12.0%	1.5%	1.9%	6.6%	17.1%
1Q 2019	34.0%	26.0%	11.9%	1.6%	2.1%	7.4%	17.2%
4Q 2018	37.2%	23.3%	10.8%	2.2%	2.1%	7.1%	17.2%
4Q 2017	37.6%	25.5%	10.3%	1.9%	2.5%	5.7%	16.5%
4Q 2016	40.1%	31.5%	8.1%	1.7%	1.6%	5.0%	12.0%
4Q 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 improved in the third quarter of 2019, as banks reported net recoveries of \$4.8 million, compared with net charge-offs of \$17.2 million in the second quarter of 2019 (see graph 7 in the appendix). The number of banks reporting charge-offs decreased from 13 to 11 banks. Net charge-offs in the third quarter of 2019 represented 0.001 percent of the NCCE from derivative contracts. For comparison purposes, commercial and industrial (C&I) loan net charge-offs increased \$417.1 million, or 23.5 percent, to \$2.2 billion during the quarter and were 0.1 percent of total C&I loans. Charge-offs of derivative exposures typically are associated with problem commercial lending exposures, in which the borrower has an associated swap transaction.

Market Risk

Value-at-Risk

Banks primarily control market risk in trading operations by establishing limits against potential losses. Banks use 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
3Q 2019 Average 60 Day VaR	\$130	\$96	\$47	\$132
2Q 2019 Average 60 Day VaR	\$114	\$87	\$67	\$106
Q/Q Change	\$16	\$9	-\$20	\$26
3Q 2019 Total Risk-Based Capital	\$223,038	\$155,735	\$166,062	\$33,950

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
3Q 2019 VaR Capital Requirement	\$390	\$288	\$141	\$397
2Q 2019 VaR Capital Requirement	\$341	\$261	\$201	\$317
Q/Q Change	\$49	\$27	-\$60	\$80
3Q 2019 Total Risk-Based Capital	\$223,038	\$155,735	\$166,062	\$33,950

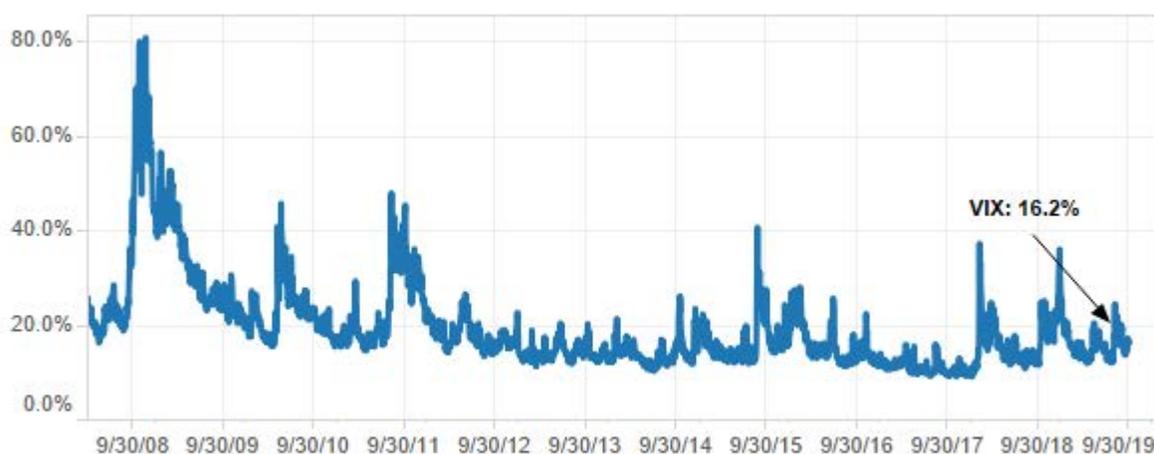
Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

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)

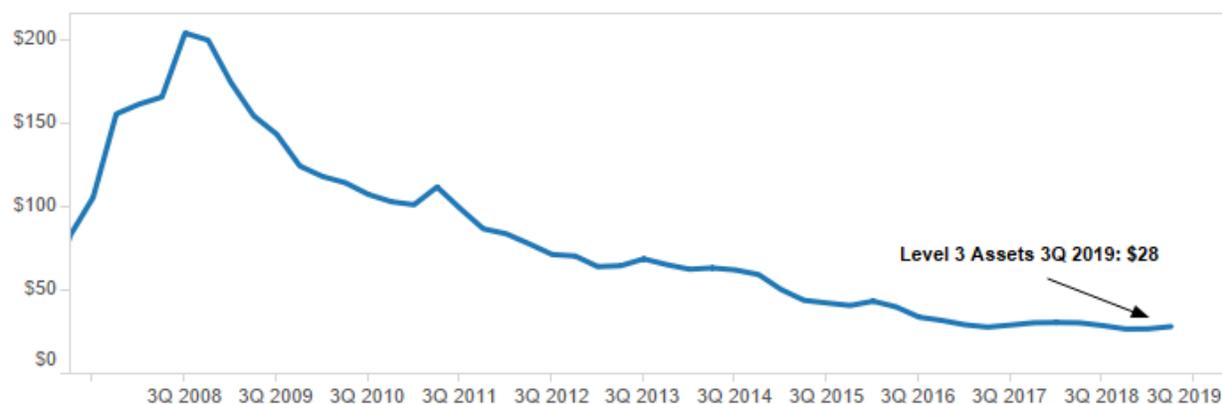


Source: Bloomberg

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 trading assets peaked at \$204.1 billion at the end of 2008 (see figure 4). At the end of the third quarter of 2019, banks held \$28 billion of level 3 trading assets, up 5.1 percent from the previous quarter, and 7.3 percent lower than a year ago. Level 3 trading assets are \$175.9 billion (86.2 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 total notional amount of derivative contracts held by banks in the third quarter decreased by \$3.7 trillion (1.8 percent) to \$201.1 trillion from the previous quarter (see table 10). The decrease in the notional amount of derivative contracts by underlying risk exposure was primarily driven by a \$4.8 trillion decrease in interest rate notional amounts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at \$147.1 trillion, or 73.1 percent of total derivatives (see table 10).

The decrease in the total notional amount of derivative contracts by contract type was driven by a decrease in option contracts as well as swap contracts (see table 11). Swap contracts remained the leading derivatives contract type at 54.2 percent of all notional amounts.

The four banks with the most derivative activity hold 87.2 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

	3Q 2019	2Q 2019	Q/Q Change	Q/Q % Change	3Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$147,079	\$151,852	-\$4,773	-3.1%	\$156,774	-\$9,695	-6.2%
Foreign exchange	\$44,382	\$43,744	\$639	1.5%	\$40,710	\$3,672	9.0%
Equity	\$3,835	\$3,723	\$113	3.0%	\$3,645	\$191	5.2%
Commodity	\$1,662	\$1,482	\$180	12.1%	\$1,526	\$136	8.9%
Credit derivatives	\$4,183	\$4,074	\$109	2.7%	\$4,342	-\$159	-3.7%
Total notional	\$201,141	\$204,874	-\$3,732	-1.8%	\$206,995	-\$5,854	-2.8%

Source: Call reports, Schedule RC-L

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

	3Q 2019	2Q 2019	Q/Q Change	Q/Q % Change	3Q 2018	Y/Y Change	Y/Y % Change
Futures and forwards	\$46,958	\$46,207	\$751	1.6%	\$47,051	-\$93	-0.2%
Swaps	\$108,935	\$110,905	-\$1,970	-1.8%	\$104,801	\$4,134	3.9%
Options	\$41,066	\$43,688	-\$2,622	-6.0%	\$50,801	-\$9,735	-19.2%
Credit derivatives	\$4,183	\$4,074	\$109	2.7%	\$4,342	-\$159	-3.7%
Total notional	\$201,141	\$204,874	-\$3,732	-1.8%	\$206,995	-\$5,854	-2.8%

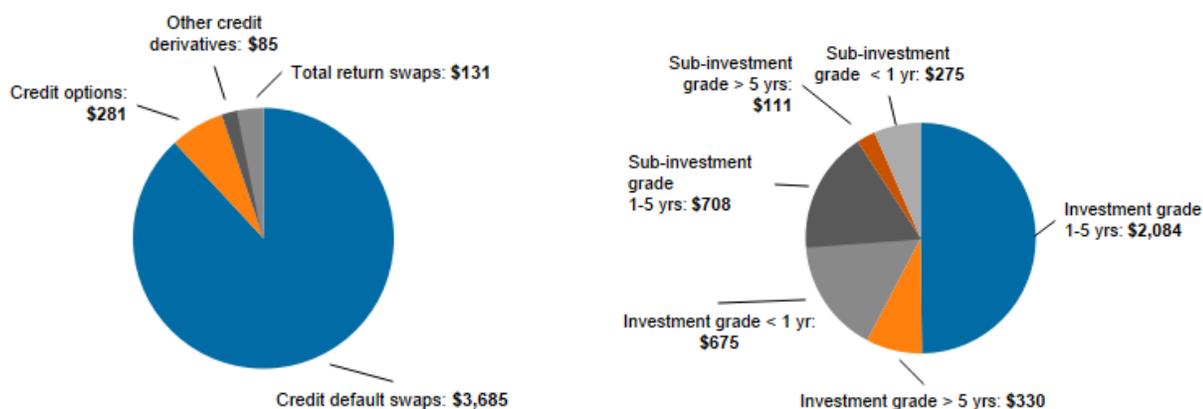
Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives increased \$109 billion (2.7 percent), to \$4.2 trillion, in the third quarter of 2019 (see table 10). Contracts referencing investment-grade firms increased \$59.0 billion and contracts referencing sub-investment-grade firms increased \$50.0 billion in the third 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 \$3.7 trillion (88.1 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 49.8 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are \$3.1 trillion or 73.8 percent of the market (see chart on right in figure 5).

Figure 5: 3Q 2019 Credit Derivative Composition, in Billions of Dollars



Source: Call reports, Schedule RC-L

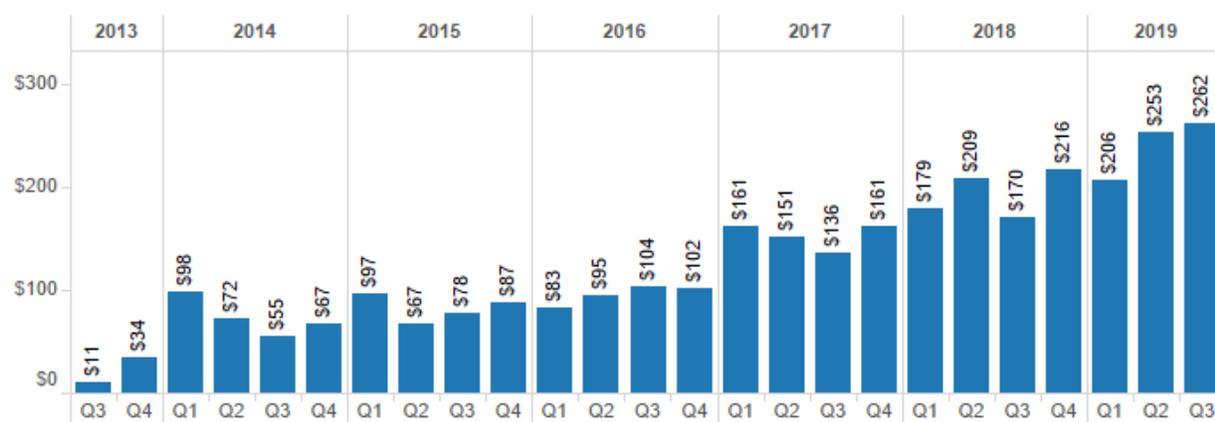
The notional amount for the 83 banks that net sold credit protection (i.e., assumed credit risk) was \$2.0 trillion, up \$40.7 billion (2.1 percent) from the second quarter of 2019 (see table 12 in the appendix). The notional amount for the 68 banks that net purchased credit protection (i.e., hedged credit risk) was \$2.2 trillion, \$68.0 billion higher (3.2 percent) than in the second 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 third quarter of 2019, as shown in figure 6.

Figure 6: Quarterly Compression Activity, in Trillions of Dollars



Source: LCH Clearenet

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 third quarter of 2019, 43.0 percent of banks' derivative holdings were centrally cleared (see table 12). From a market factor perspective, 55.1 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 28.3 percent of credit derivative transactions were centrally cleared during the third quarter of 2019.

Centrally cleared derivative transactions were heavily concentrated at qualifying central counterparties, with 91.6 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
3Q 2019	55.1%	1.5%	26.8%	6.5%	28.3%	15.2%	43.0%
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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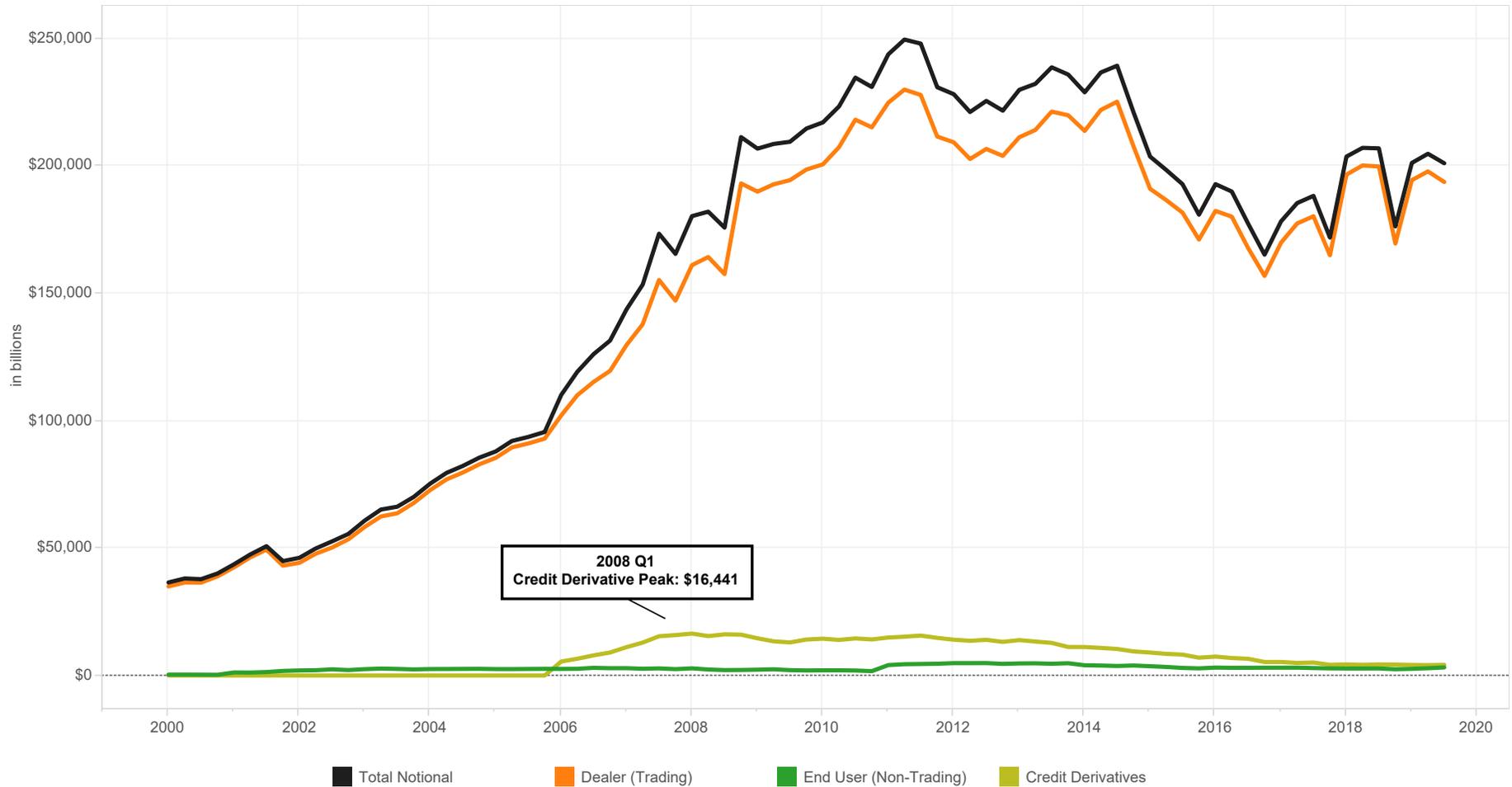
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Graph 1
Derivative Notional Amounts by Type
Insured U.S. Commercial Banks and Savings Associations

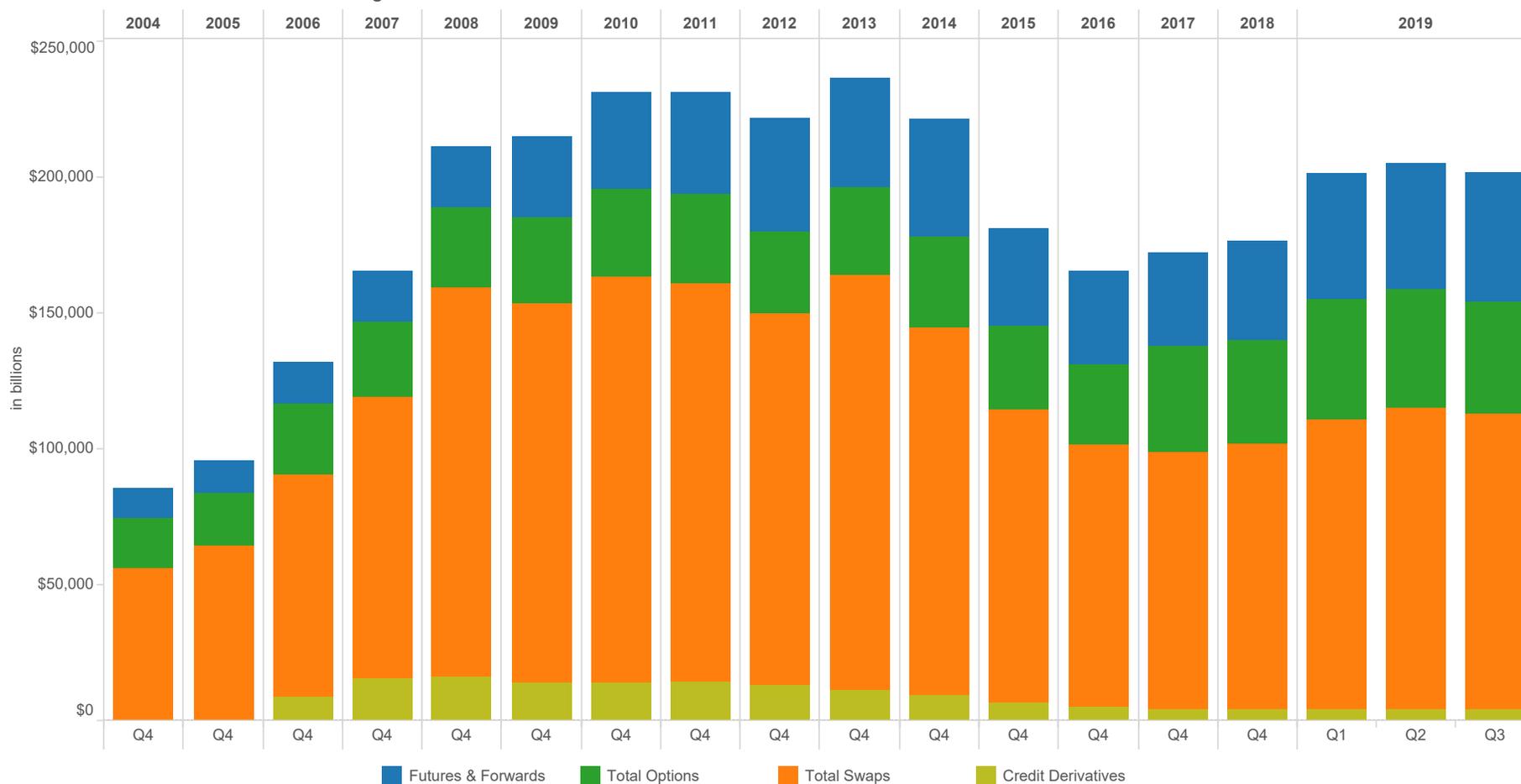


In billions of dollars

	2016				2017				2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Total Notional	\$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	\$201,141
Dealer (Trading)	182,437	180,186	167,873	156,901	169,971	177,519	180,344	165,002	196,684	200,286	199,891	169,636	194,518	197,950	193,797
End User (Non-Trading)	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	3,162
Credit Derivatives	7,418	6,853	6,562	5,293	5,304	4,935	5,090	4,186	4,345	4,179	4,342	4,270	4,145	4,074	4,183

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

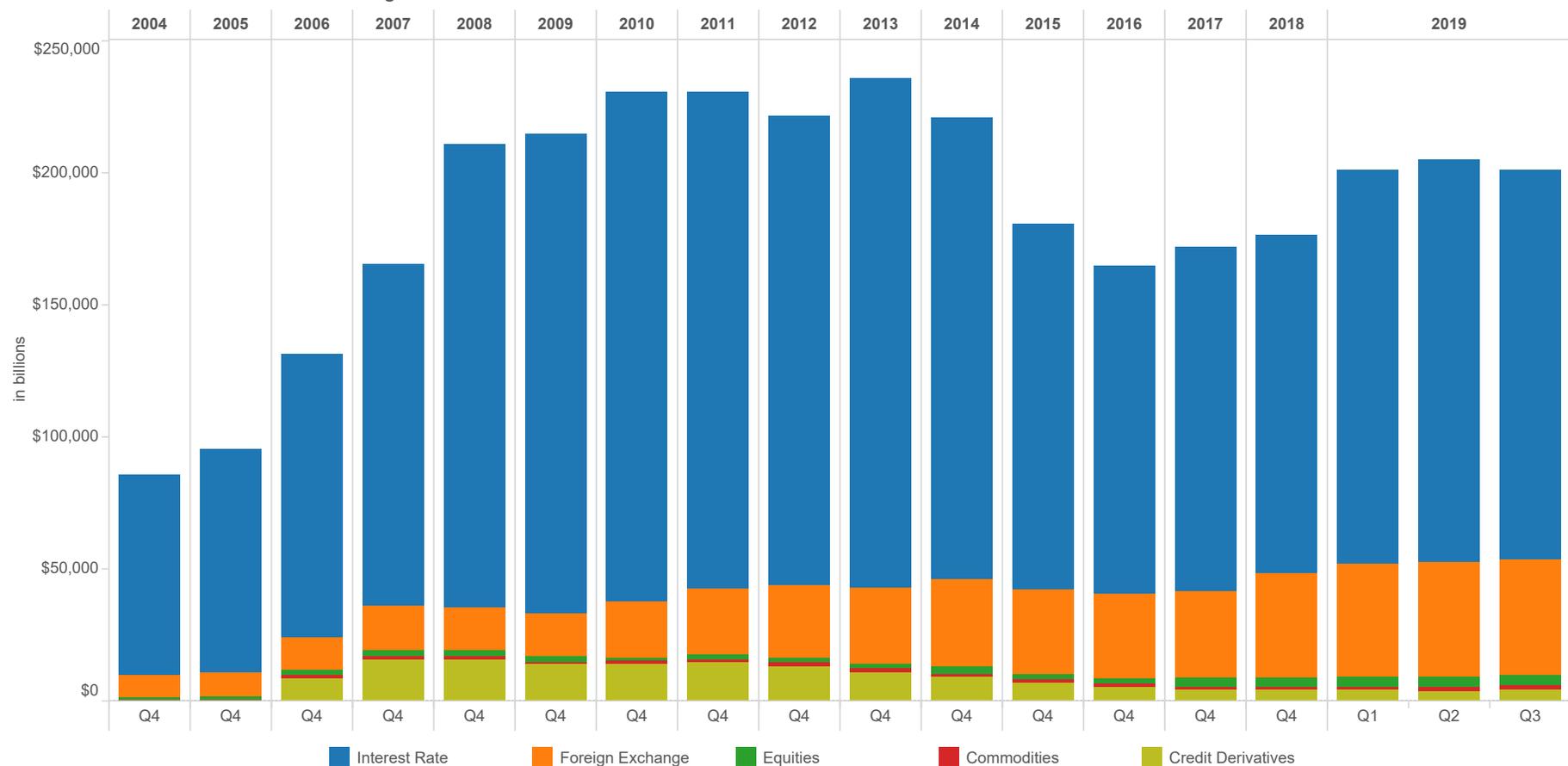
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
	Q4	Q1	Q2	Q3														
Futures & Forwards	\$11,370	\$12,057	\$14,882	\$18,867	\$22,529	\$29,652	\$35,539	\$37,469	\$41,621	\$40,027	\$43,380	\$35,691	\$34,201	\$34,162	\$36,144	\$46,165	\$46,207	\$46,958
Total Options	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	44,138	43,688	41,066
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	97,930	106,833	110,905	108,935
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	4,270	4,145	4,074	4,183
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	201,141

*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

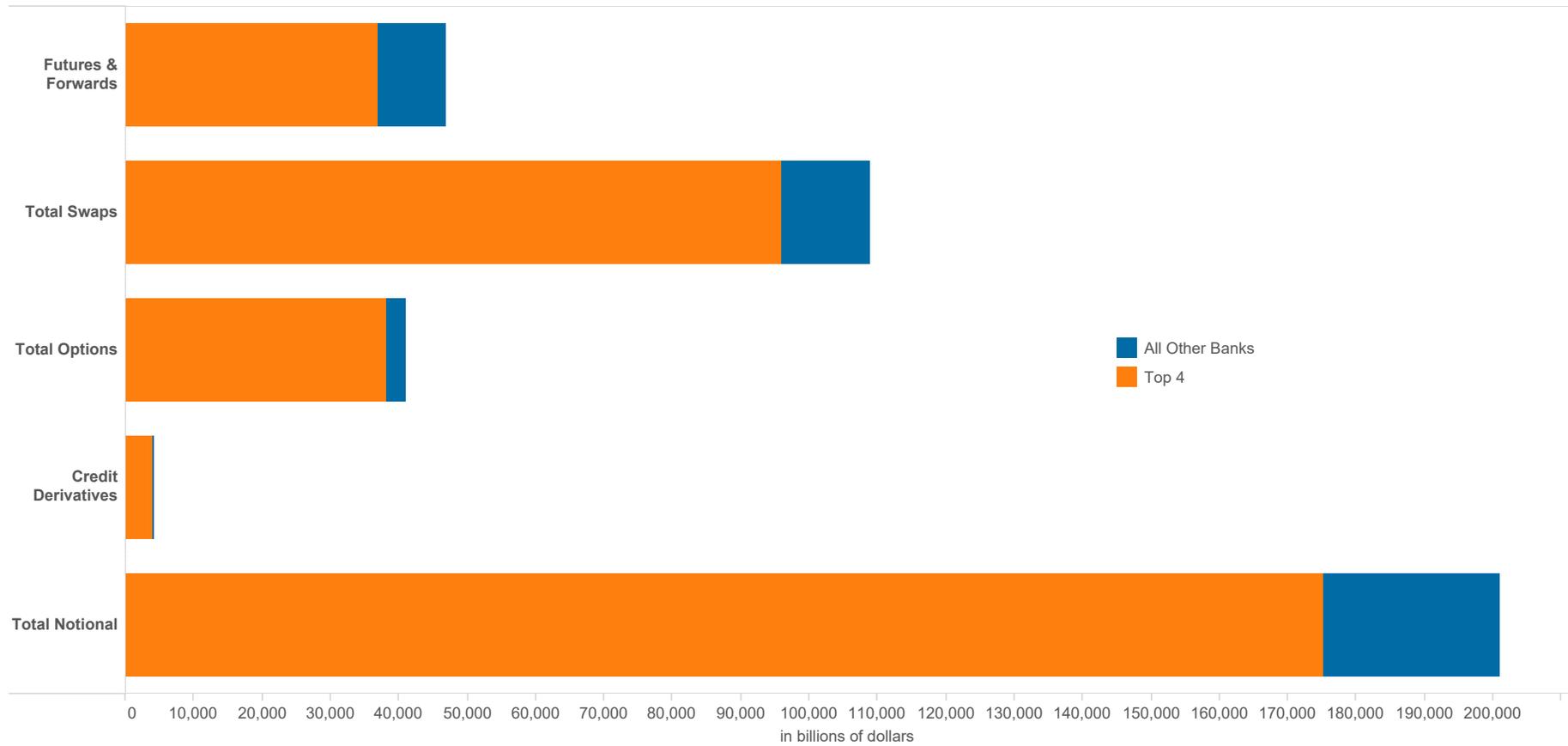


In billions of dollars

	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	Q3
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	\$128,173	\$149,183	\$151,852	\$147,079
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	44,382
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	3,835
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	1,662
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	4,270	4,145	4,074	4,183
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	201,141

*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

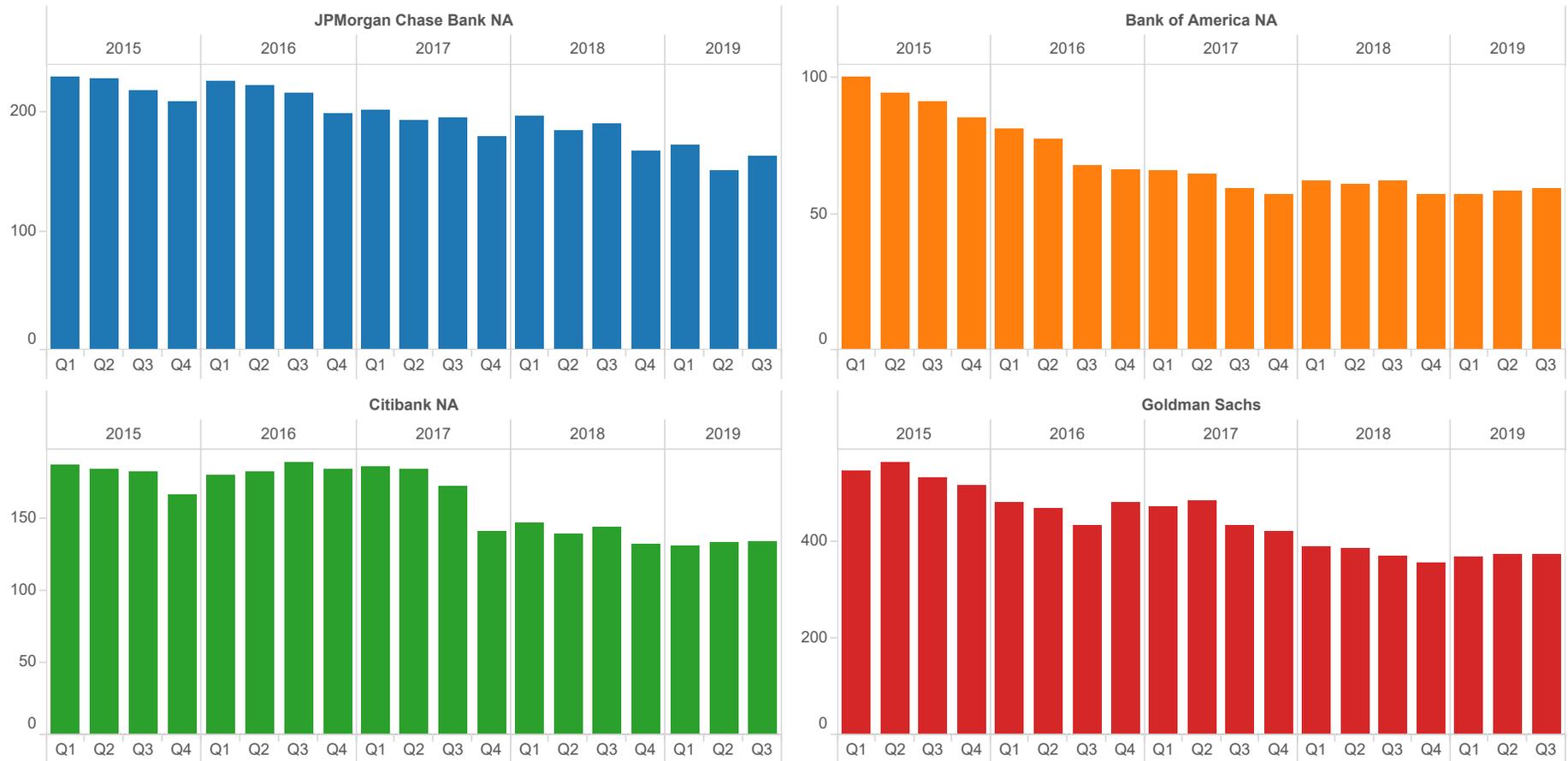


In billions of dollars

	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$37,006	\$9,952	\$46,958
Total Swaps	96,025	12,910	108,935
Total Options	38,333	2,733	41,066
Credit Derivatives	3,951	231	4,183
Total Notional	175,315	25,826	201,141

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

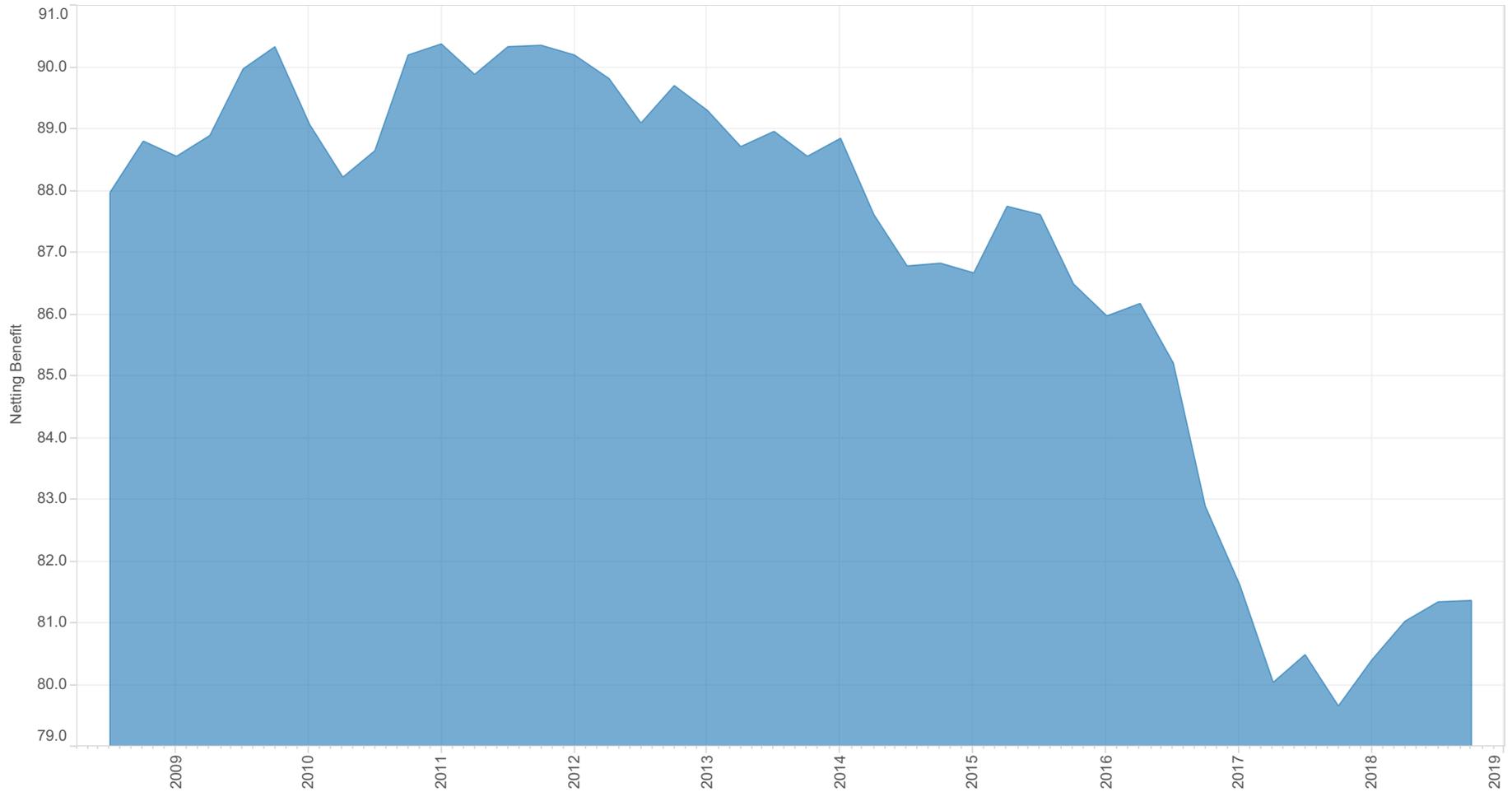
Graph 5
Credit Exposure to Risk-Based Capital (in Percentage)
Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



	2012				2013				2014				2015				2016				2017				2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3																								
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	163
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	59
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	134
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	372
TOTAL	Q1	Q2	Q3	Q4	Q1	Q2	Q3																								
	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	176

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

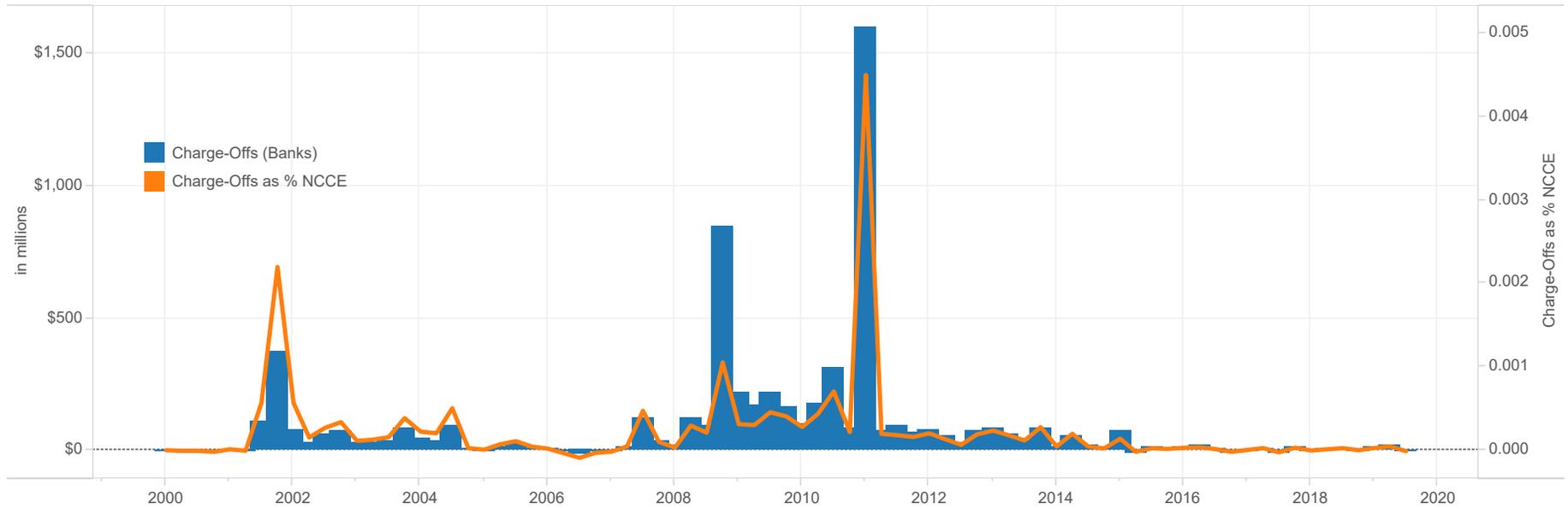


Netting Benefit

2011				2012				2013				2014				2015				2016				2017				2018				2019		
Q1	Q2	Q3	Q4	Q1	Q2	Q3																												
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	81.4

*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

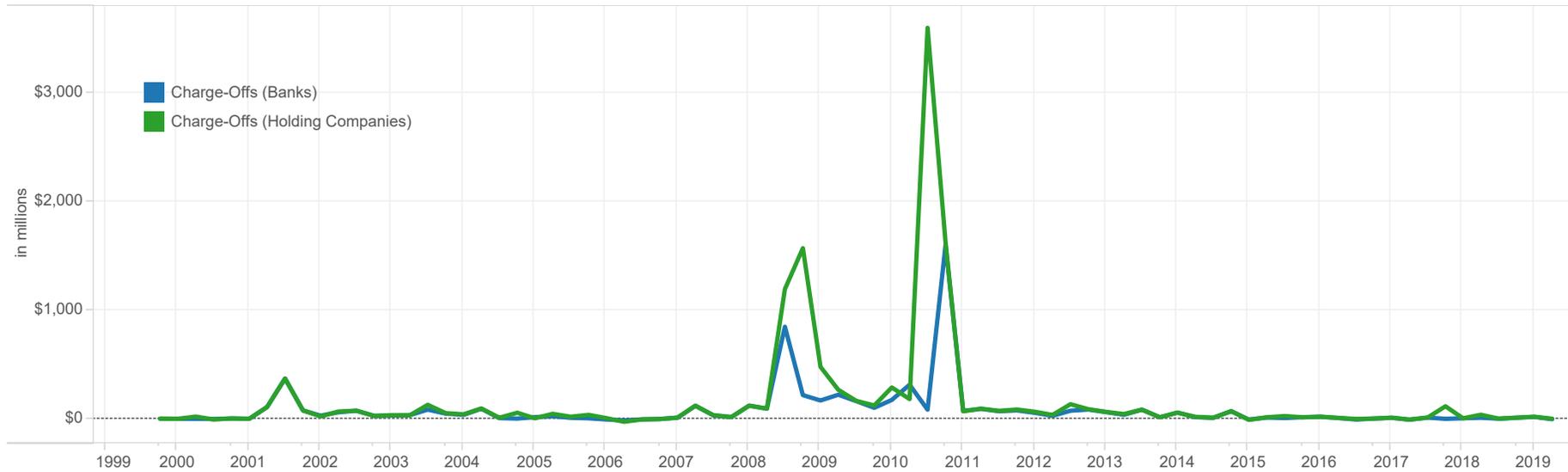


In millions of dollars

	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	Q3	
Charge-Offs (Banks)	13.30	18.56	6.48	-7.84	1.22	8.71	-8.77	10.26	-1.14	3.97	8.80	0.06	9.11	17.23	-4.78	

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

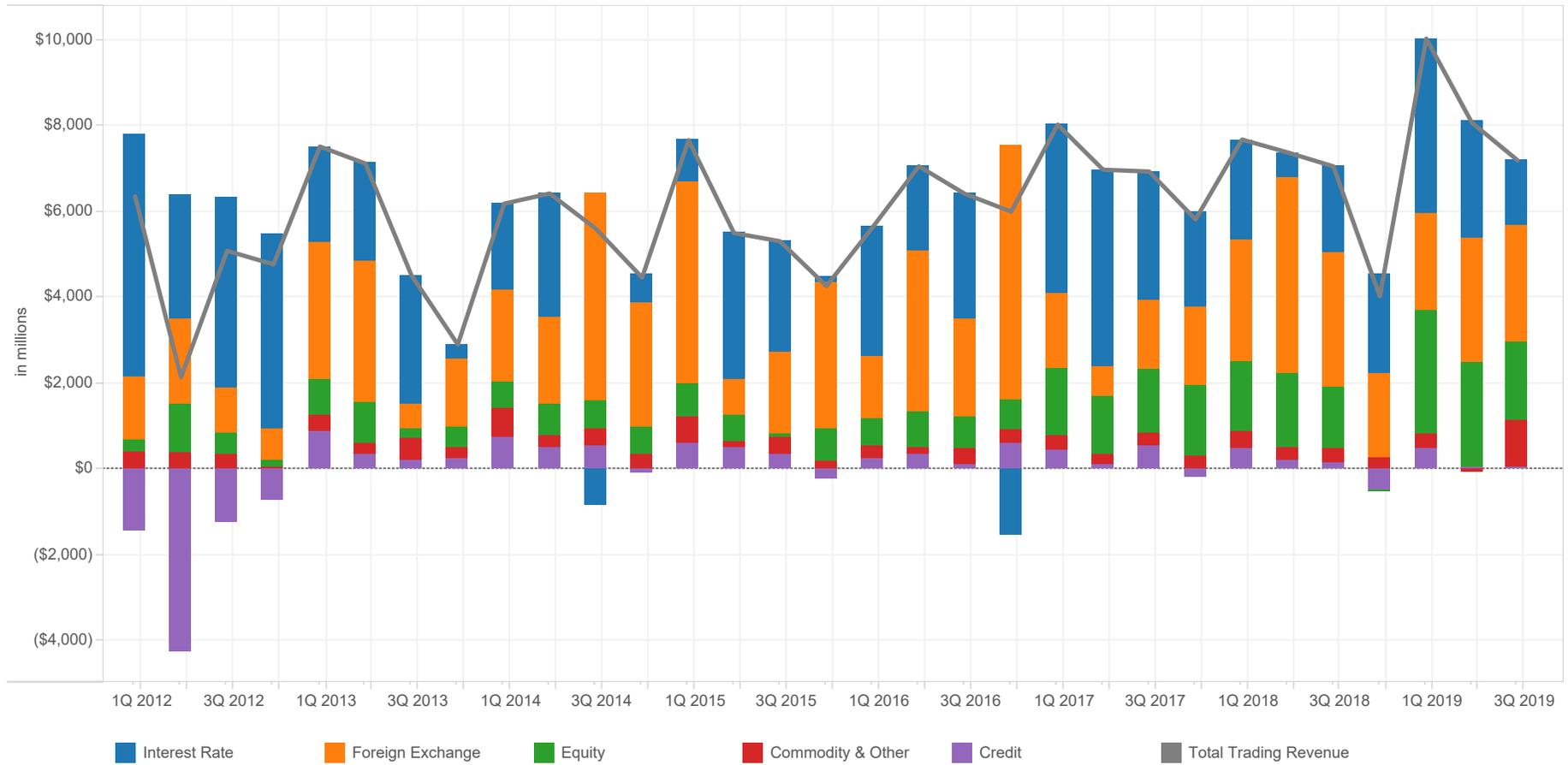


In millions of dollars

	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	Q3	
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	8.8	0.1	9.1	17.2	-4.8	
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	-0.3	

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

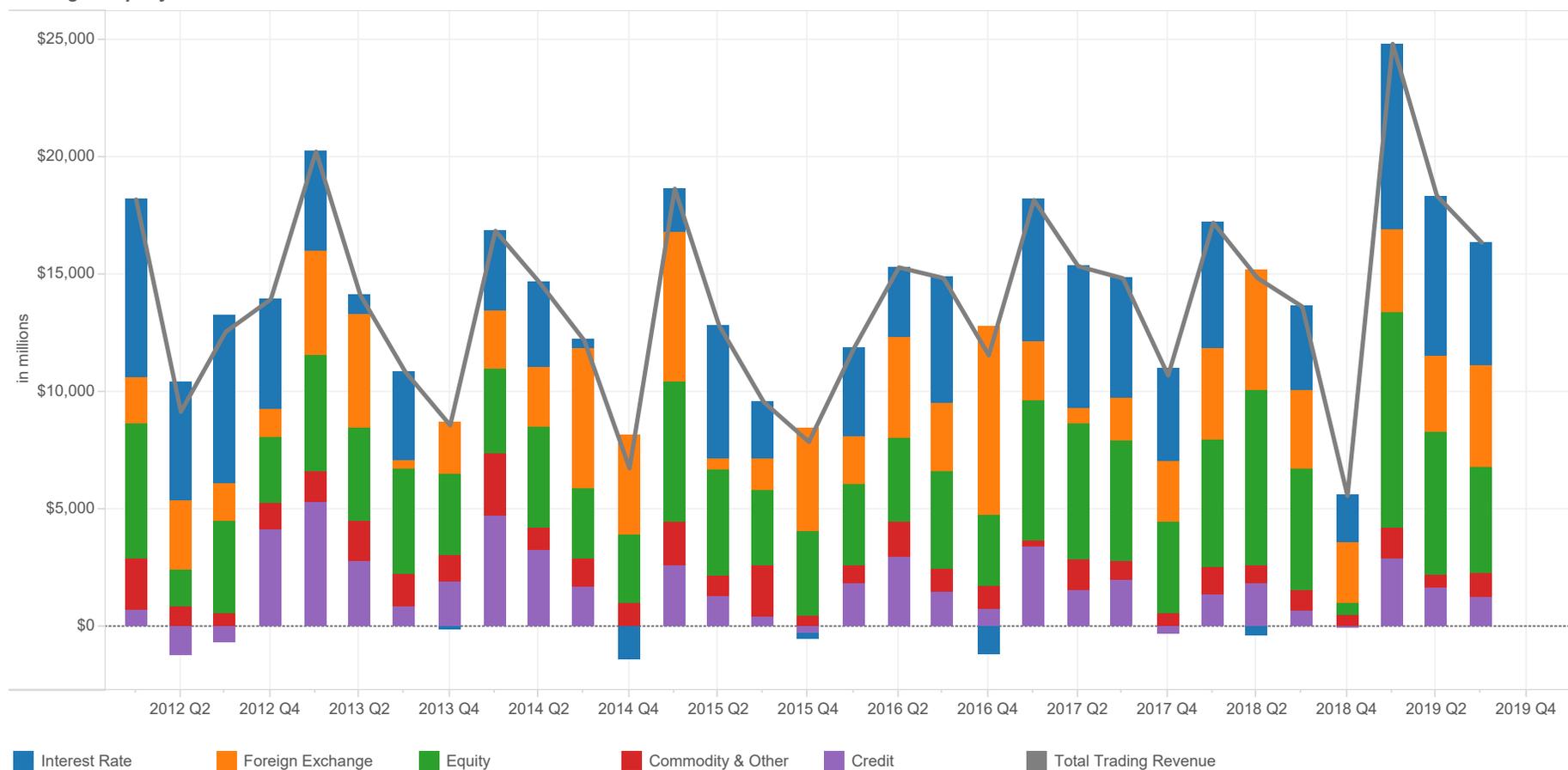


In millions of dollars

	2015				2016				2017				2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
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	\$1,523
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	2,718
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	1,805
Commodity & Other	587	129	402	198	271	161	353	296	330	211	300	324	395	286	346	274	323	-43	1,109
Credit	624	530	357	-222	263	342	118	634	447	128	566	-178	487	215	141	-476	485	30	43
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	4,030	10,035	8,081	7,198

*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

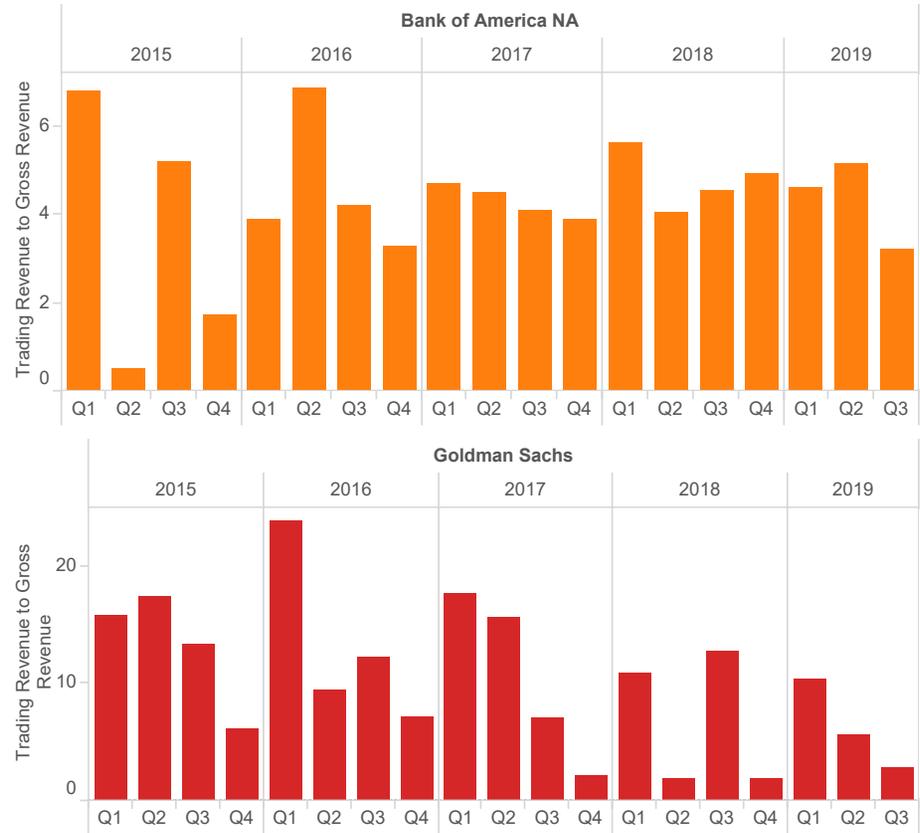
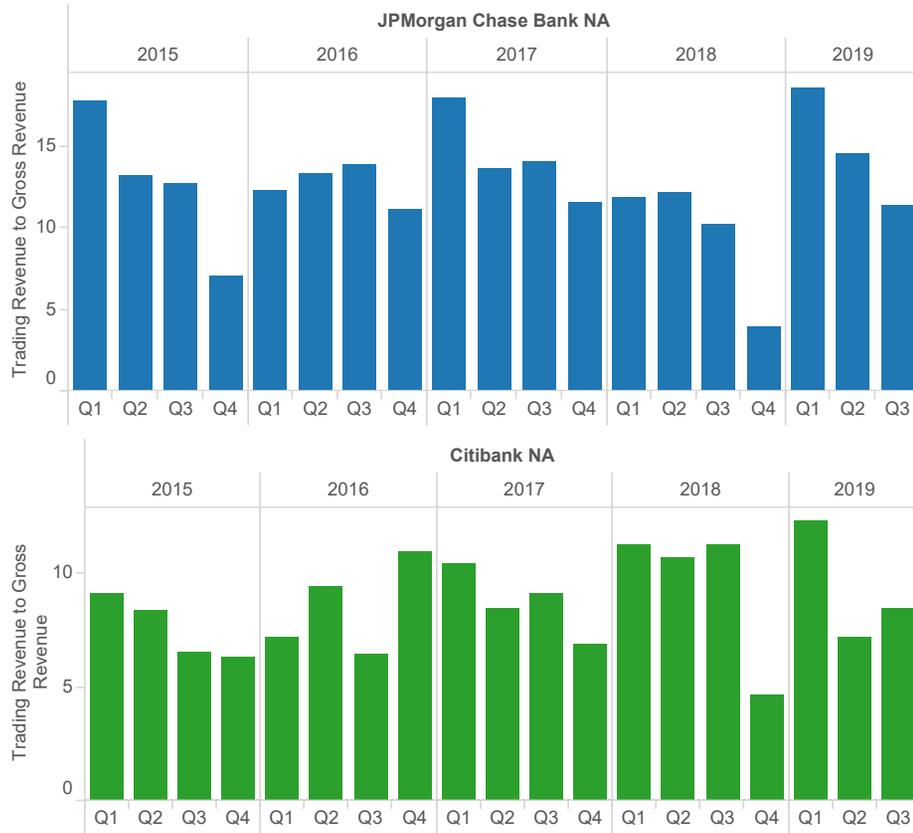


In millions of dollars

	2015				2016				2017				2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
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	\$5,361	(\$336)	\$3,550	\$1,997	\$7,957	\$6,803	\$5,236
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	3,473	3,290	4,342
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	6,083	4,547
Commodity & Other	1,833	871	2,146	412	738	1,491	969	1,003	299	1,317	769	568	1,177	779	874	508	1,298	512	1,046
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	666	-25	2,913	1,689	1,217
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	17,229	14,870	13,653	5,586	24,855	18,378	16,389

*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



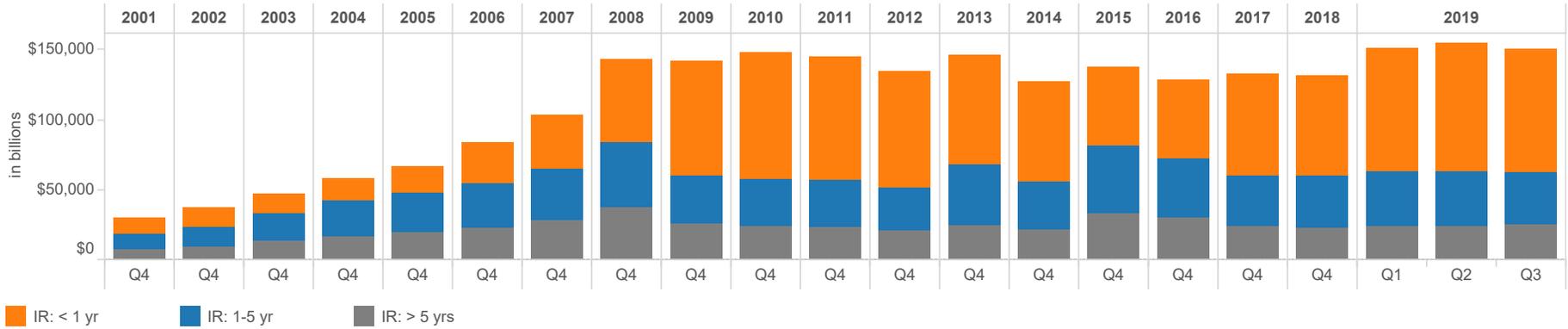
Trading Revenue to Gross Revenue*

	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
JPMorgan Chase Bank NA	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	11.30
Bank of America NA	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	3.20
Citibank NA	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	8.48
Goldman Sachs	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	5.65	2.81
TOTAL	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	9.53	7.93

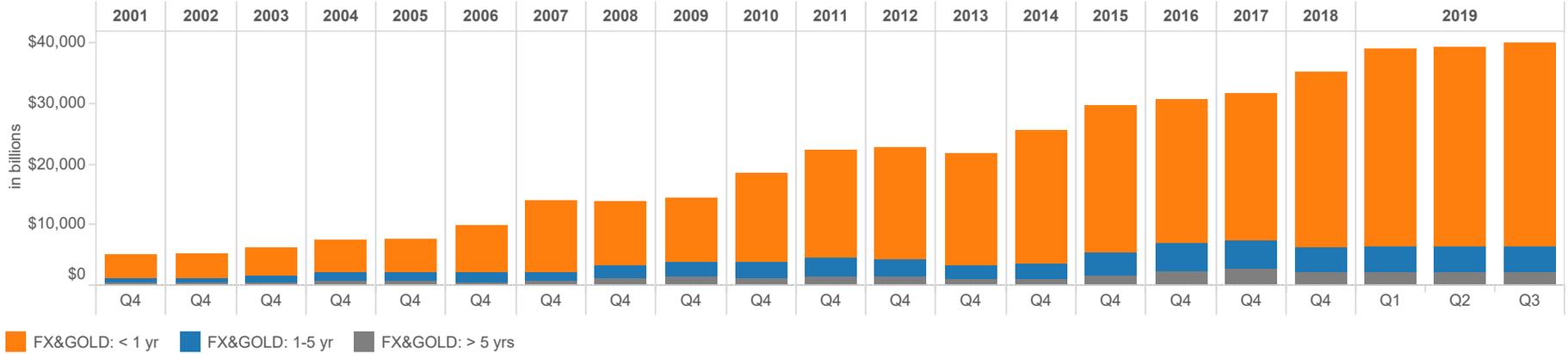
*The trading revenue figures are for cash and derivative activities. Revenue figures are quarterly, not year-to-date numbers.
 Note: Gross revenue equals interest income plus non-interest income.
 Source: Call reports

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



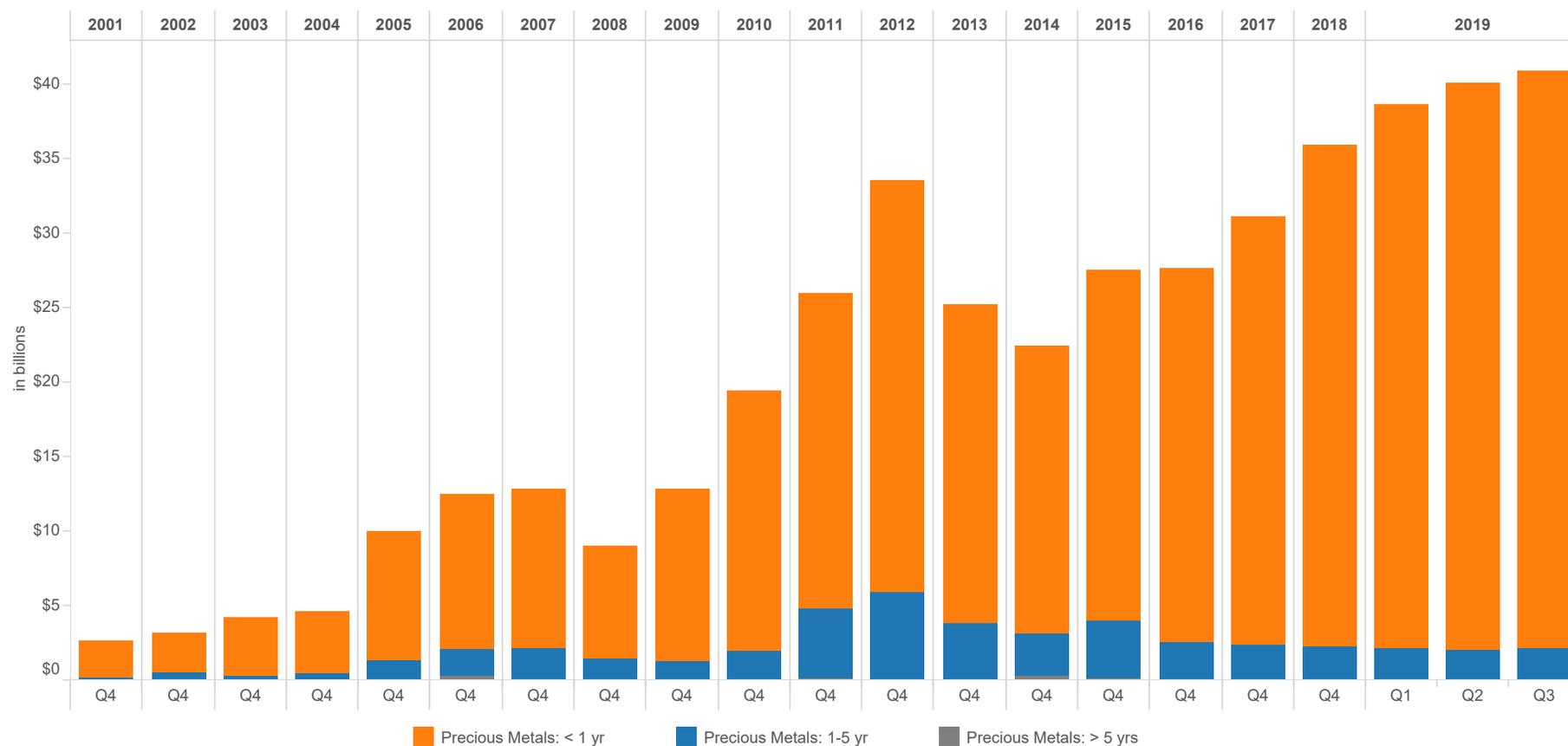
In billions of dollars

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
	Q4	Q1	Q2	Q3															
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	\$90,565	\$88,724
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	37,507
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	24,491
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	33,602
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	4,280
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	2,149

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



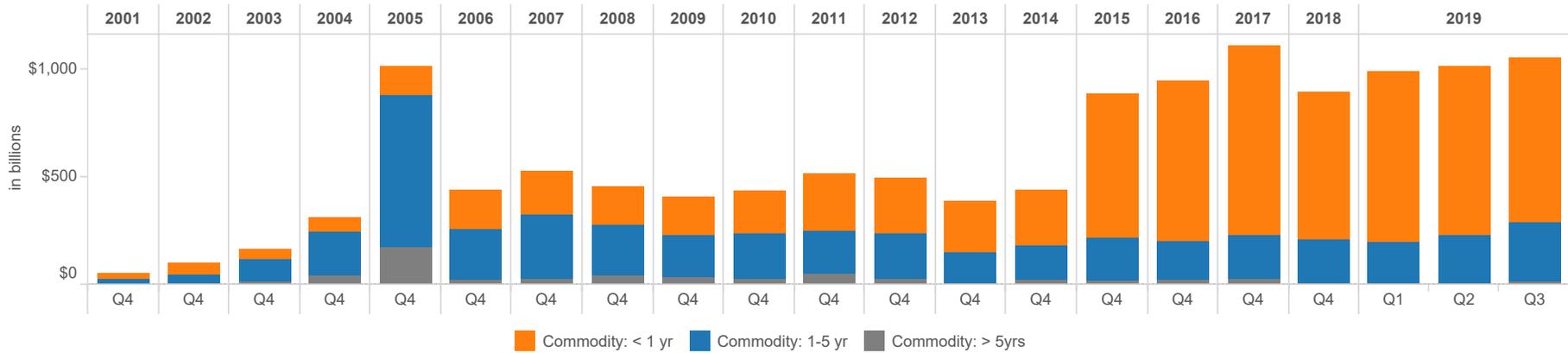
In billions of dollars

	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	Q3
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	\$38.71
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	2.14
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	0.00

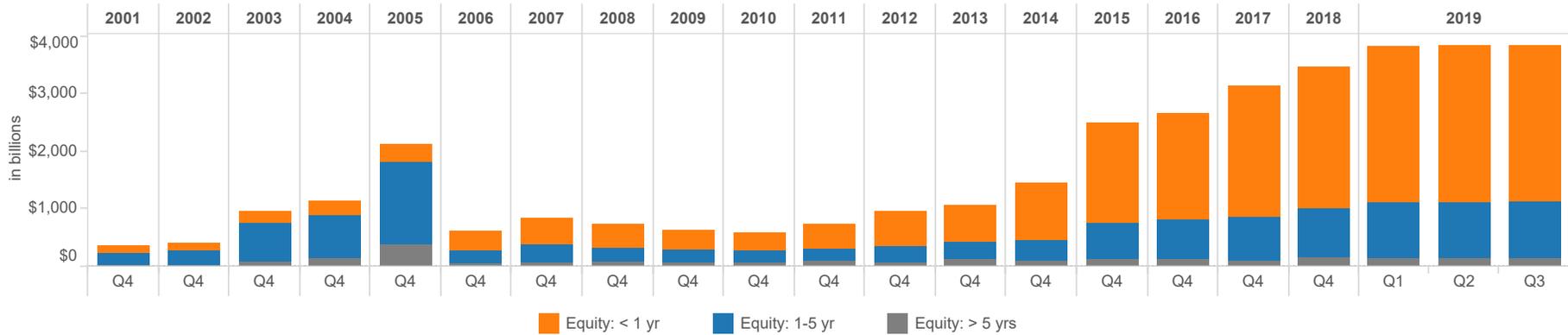
Note: Figures exclude FX contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.
Source: Call reports

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

Commodity



Equity

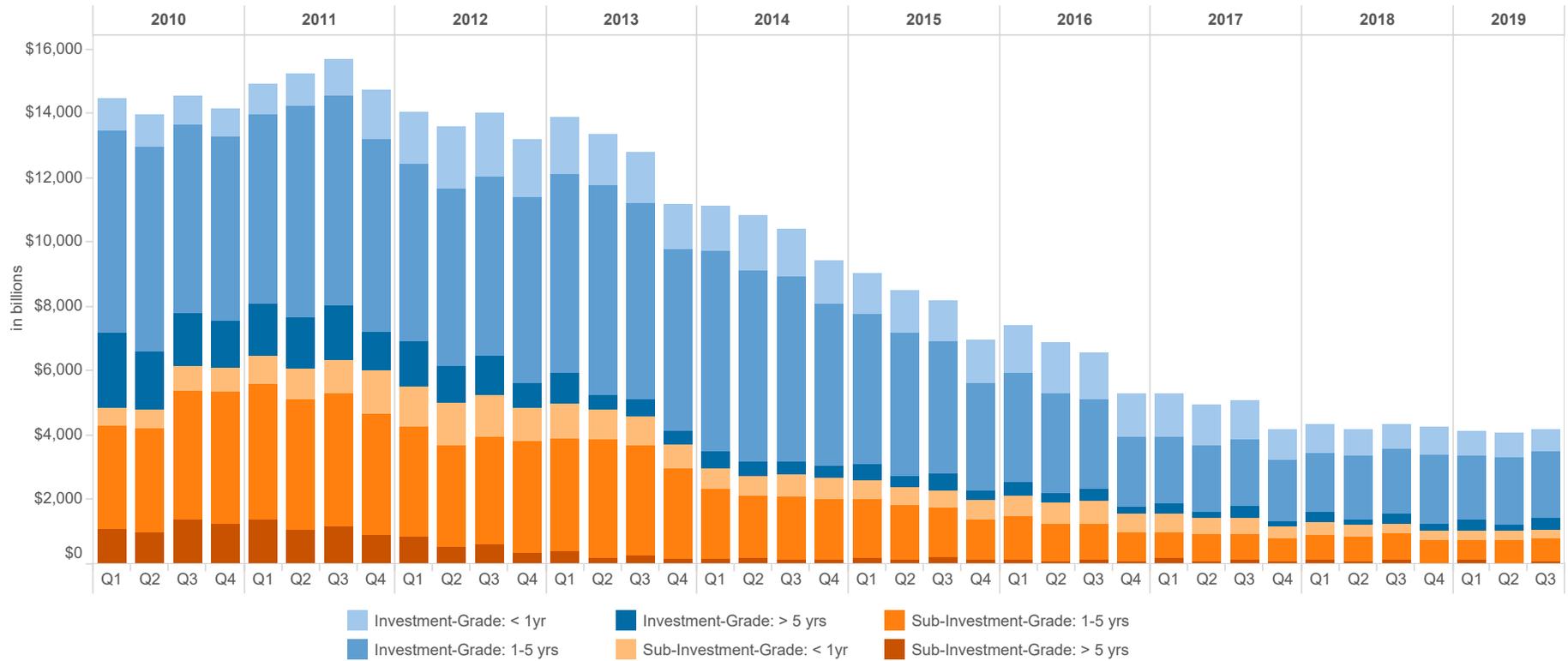


In billions of dollars

	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	Q3
Commodity: < 1 yr	\$55	\$43	\$64	\$133	\$185	\$206	\$179	\$176	\$203	\$261	\$261	\$235	\$257	\$668	\$750	\$883	\$688	\$790	\$790	\$767
Commodity: 1-5 yr	35	103	205	707	235	297	233	198	209	209	208	144	164	197	179	202	198	191	219	283
Commodity: > 5yrs	9	14	40	175	20	25	43	33	25	46	28	6	20	22	23	25	9	8	10	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	2,687
Equity: 1-5 yr	249	674	736	1,428	221	297	256	228	191	210	262	291	352	628	677	733	864	958	972	995
Equity: > 5 yrs	25	84	140	383	45	70	72	82	85	94	82	136	101	130	123	113	139	143	149	148

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

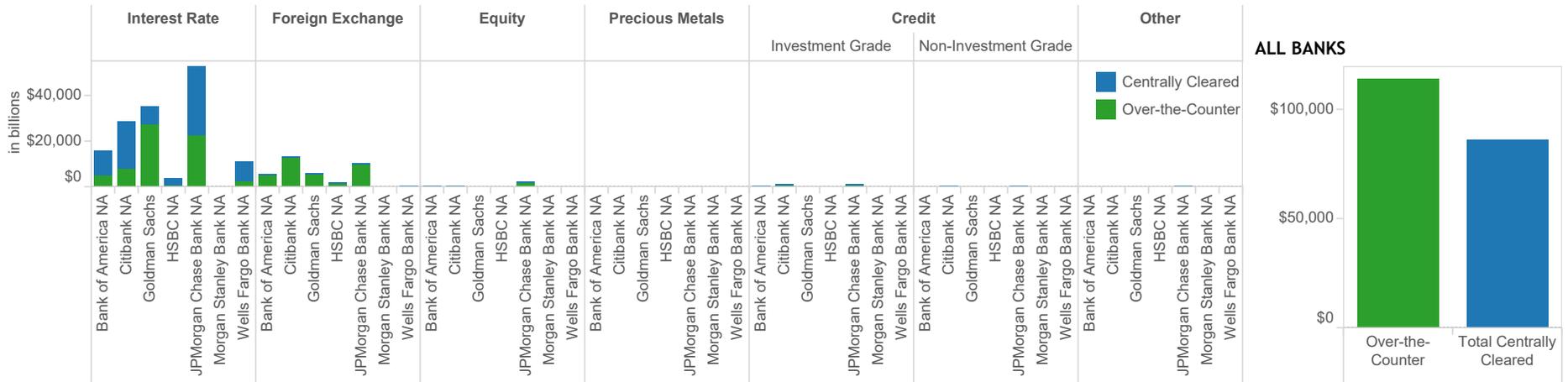


In billions of dollars

	2015				2016				2017				2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3												
Investment-Grade: < 1yr	\$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	\$837	\$763	\$758	\$675
Investment-Grade: 1-5 yrs	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	2,084
Investment-Grade: > 5 yrs	508	359	520	281	457	262	385	214	309	195	345	186	331	184	338	204	367	189	330
Total Investment Grade	\$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	\$3,214	\$3,106	\$3,030	\$3,089
	2015				2016				2017				2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3												
Sub-Investment-Grade: < 1yr	\$596	\$562	\$569	\$607	\$622	\$683	\$683	\$581	\$582	\$509	\$480	\$375	\$400	\$335	\$318	\$304	\$259	\$283	\$275
Sub-Investment-Grade: 1-5 yrs	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	708
Sub-Investment-Grade: > 5 yrs	194	152	213	119	155	101	157	111	159	93	149	77	133	69	133	61	119	60	111
Total Sub-Investment Grade	\$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	\$1,093

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
3Q 2019 Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts
Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

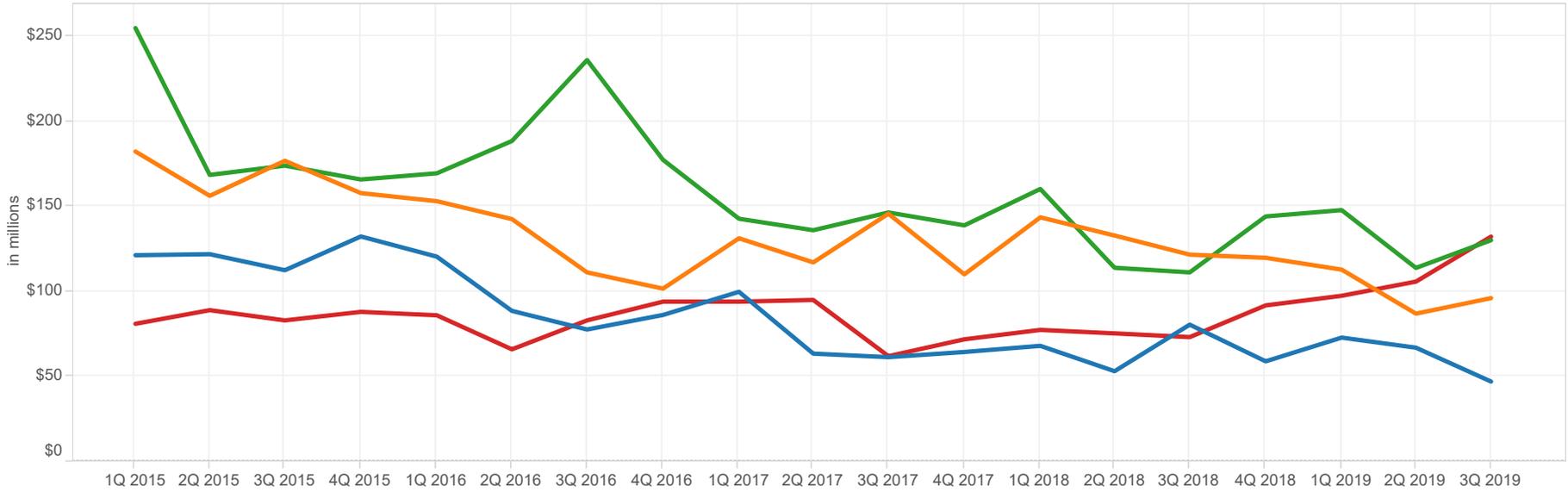
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared	Over-the-Counter	Total Notional
	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter									
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter					
JPMorgan Chase Bank NA	29,997	22,865	123	10,150	770	1,639	0	21	457	532	148	241	77	634	31,572	36,083	67,655
Citibank NA	20,268	8,211	275	13,221	45	532	3	9	240	1,263	73	329	82	105	20,985	23,669	44,654
Bank of America NA	11,005	4,672	81	5,263	171	377	0	0	175	165	56	119	0	27	11,489	10,623	22,112
Goldman Sachs	7,996	27,621	75	6,092	0	29	0	0	0	95	0	76	0	5	8,070	33,918	41,988
HSBC NA	3,102	540	40	1,502	0	85	0	7	3	20	11	29	0	2	3,157	2,186	5,343
Wells Fargo Bank NA	8,486	2,496	0	424	40	113	0	2	0	4	0	24	1	63	8,528	3,126	11,653
Morgan Stanley Bank NA	0	12	0	35	0	1	0	0	0	5	0	2	0	0	0	56	56
Grand Total	80,854	66,416	595	36,687	1,026	2,776	3	38	875	2,085	289	821	160	836	83,800	109,660	193,460
ALL OTHER	2,135	1,317	2	2,748	0	27	0	0	1	20	0	19	2	63	2,139	4,193	6,332
TOTAL	82,988	67,733	596	39,435	1,026	2,803	3	38	876	2,104	289	840	161	899	85,940	113,853	199,793

% of Total

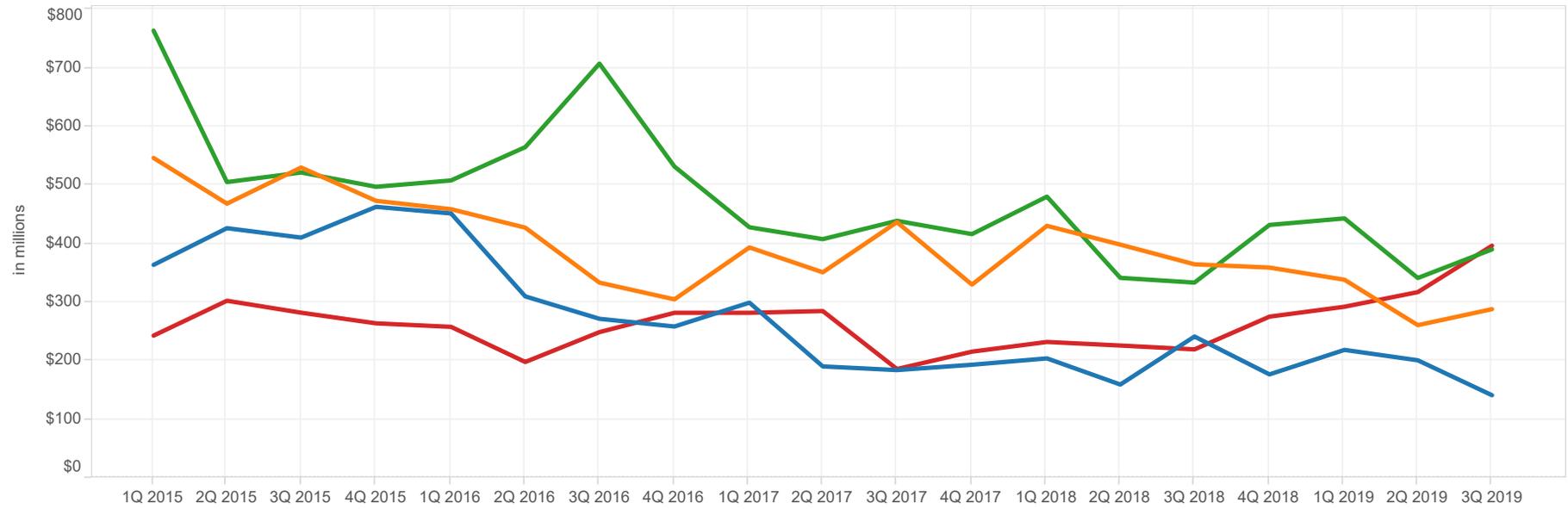
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared as a % of Total Notional	Total Over-the-Counter as a % of Total Notional
	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter								
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter				
JPMorgan Chase Bank NA	57%	43%	1%	99%	32%	68%	0%	100%	46%	54%	38%	62%	11%	89%	47%	53%
Citibank NA	71%	29%	2%	98%	8%	92%	24%	76%	16%	84%	18%	82%	44%	56%	47%	53%
Bank of America NA	70%	30%	2%	98%	31%	69%	0%	100%	51%	49%	32%	68%	0%	100%	52%	48%
Goldman Sachs	22%	78%	1%	99%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	19%	81%
HSBC NA	85%	15%	3%	97%	0%	100%	0%	100%	13%	87%	27%	73%	0%	100%	59%	41%
Wells Fargo Bank NA	77%	23%	0%	100%	26%	74%	0%	100%	3%	97%	2%	98%	2%	98%	73%	27%
Morgan Stanley Bank NA	0%	100%	0%	100%	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
SEPTEMBER 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	\$2,367,127	\$55,245,618	\$1,084,751	\$2,919,526	\$10,145,975	\$30,438,767	\$9,315,231	\$1,341,368	\$613,100
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	788,413	989,270	8,562,857	29,313,709	7,554,461	1,928,452	420,931
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	1,229,484	4,377,156	8,901,225	24,322,679	10,053,990	174,459	489,806
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	310,635	215,721	5,982,519	11,949,503	2,907,811	506,984	503,845
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,708,548	12,532,251	223,279	192,024	4,748,861	5,703,146	1,625,336	39,605	6,235
6	HSBC NA	1IE8VN30JCEQV1H4R804	182,096	5,547,474	138,372	5,589	1,119,734	3,789,982	374,277	119,521	58,519
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	241,364	2,452,512	8,085	0	2,394,221	21,346	28,860	0	87,735
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4NONFVK49	304,096	1,098,676	14,295	38	278,625	784,620	20,933	165	72,863
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	477,394	557,359	22,303	1,760	83,036	323,506	117,158	9,596	1,069
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	395,783	449,127	4,364	2,978	27,306	369,037	35,239	10,203	1,156
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	123,824	289,555	0	0	273,300	15,517	737	0	23,272
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,715	278,333	2,304	0	175,925	95,764	4,291	50	390
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	221,424	261,928	3,738	22,054	21,737	158,551	49,793	6,054	396
14	TD BANK NATIONAL ASSN	O3D0JEWDFUSOSEEKG89	311,038	222,373	0	0	2,590	218,733	1,049	0	0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	164,652	197,192	7,647	0	17,364	154,223	15,300	2,657	109
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	318,177	177,095	1,561	0	4,178	165,942	834	4,580	170
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	43,032	159,819	938	285	149,766	6,399	2,421	10	0
18	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	127,543	146,543	1,336	163	35,928	87,424	15,572	6,120	35
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	169,489	120,582	894	188	6,944	78,924	27,945	5,687	409
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	145,184	119,669	1,257	0	5,905	94,715	17,294	498	1,555
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	125,041	98,176	0	0	3,042	75,849	19,286	0	123
22	MORGAN STANLEY BANK NA	G1MLHISON3213QPILB75	138,262	69,957	40	0	19,968	23,881	18,472	7,596	884
23	HUNTINGTON NATIONAL BANK	2WHM8VNH63UN14OL754	108,790	65,105	189	0	4,342	47,163	10,584	2,827	9
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	229,886	52,940	154	0	7,390	38,611	5,965	820	21
25	BBVA USA	C90VT034M03BN29IRA40	91,975	52,462	4,470	0	1,813	37,097	8,266	816	0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,627,163	\$200,264,073	\$3,848,509	\$8,726,751	\$42,974,551	\$108,315,089	\$32,231,105	\$4,168,069	\$2,282,634
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,932,965	877,196	3,428	1,003	131,465	619,825	106,854	14,622	1,736
TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	3,851,937	8,727,753	43,106,016	108,934,914	32,337,958	4,182,691	2,284,370

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
SEPTEMBER 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.	8I5DZWZKVSZI1NUHU748	\$2,764,661	\$54,947,787	\$1,133,405	\$3,294,891	\$10,614,373	\$29,522,131	\$9,018,432	\$1,364,555	\$598,808
2	GOLDMAN SACHS GROUP, INC., THE	784F5XWPLTWKTBV3E584	1,007,335	49,999,530	1,776,435	5,516,696	8,277,319	22,389,482	10,867,690	1,171,908	343,406
3	CITIGROUP INC.	6SHGI4ZSSLCXXQSBB395	2,014,802	49,387,390	944,005	2,424,384	9,999,232	27,217,818	7,347,513	1,454,438	416,266
4	BANK OF AMERICA CORPORATION	9DJT3UXIJIZJI4WXO774	2,426,330	39,268,066	1,456,597	1,344,995	8,943,559	22,140,013	4,493,981	888,921	386,665
5	MORGAN STANLEY	IGJSJL3JD5P30I6NJZ34	902,604	36,204,406	1,084,563	1,658,963	5,439,628	19,022,978	8,500,880	497,394	51,716
6	WELLS FARGO & COMPANY	PBLD0EJDB5FWOLXP3B76	1,943,950	12,864,321	229,193	217,985	5,217,073	5,542,177	1,621,152	36,741	6,235
7	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	270,980	8,232,188	358,232	541,668	1,120,990	5,709,925	381,851	119,521	58,519
8	MIZUHO AMERICAS LLC		49,978	6,725,361	16,029	3,432	507,389	6,045,939	149,369	3,203	8,683
9	SMBC AMERICAS HOLDINGS, INC.		22,580	4,933,133	151,938	1,564,545	978,396	1,563,570	673,972	711	7,608
10	STATE STREET CORPORATION	549300ZFEEJ2IP5VME73	244,609	2,445,290	8,085	0	2,394,221	14,124	28,860	0	87,735
11	BANK OF NEW YORK MELLON CORPORATION, THE	WFLLPEPC7FZXENRZV188	373,275	1,107,484	15,159	183	307,652	763,392	20,933	165	72,885
12	BARCLAYS US LLC	213800H14XWVOV87OI72	160,711	703,581	16,219	352,150	265,736	20,020	0	49,456	38
13	U.S. BANCORP	N1GZ7BBF3NP8GI976H15	487,671	568,660	22,303	1,760	83,276	334,568	117,157	9,596	1,069
14	RBC US GROUP HOLDINGS LLC		127,048	492,780	105,067	164,533	3,905	218,317	580	378	334
15	PNC FINANCIAL SERVICES GROUP, INC., THE	CFGNEKWOP8842LEUIA51	409,007	445,797	4,401	3,007	32,523	360,424	35,239	10,203	1,156
16	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	118,456	361,630	6,762	1,969	191,325	88,662	8,922	63,991	33
17	MUFG AMERICAS HOLDINGS CORPORATION	5493004K1ECE43Q0BX47	173,232	296,134	4,290	643	191,001	95,860	4,291	50	390
18	NORTHERN TRUST CORPORATION	549300GLF98S992BC502	124,356	287,805	0	0	273,300	13,767	737	0	23,272
19	SUNTRUST BANKS, INC.	7E1PDLW1JL6TS0BS1G03	227,580	261,002	3,738	22,054	25,005	155,586	48,564	6,054	396
20	TD GROUP US HOLDINGS LLC	549300ARWZ5E3L64UH29	393,604	256,838	14,439	3,230	12,113	226,007	1,049	0	0
21	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	378,810	243,599	1,561	0	14,424	222,200	834	4,580	170
22	CITIZENS FINANCIAL GROUP, INC.	2138004JDDA4ZQUPFW65	164,975	197,192	7,647	0	17,364	154,223	15,300	2,657	109
23	BNP PARIBAS USA, INC.	RKPI3RZGV1V1FJTH5T61	136,107	173,045	87	1	152,540	18,658	1,759	0	10
24	BOK FINANCIAL CORPORATION	GRI2NT5QHYW751NMR949	43,279	159,819	938	285	149,766	6,399	2,421	10	0
25	REGIONS FINANCIAL CORPORATION	CW05CS5KW59QTC0DG824	128,436	143,443	1,336	163	35,928	84,324	15,572	6,120	35
TOP 25 HOLDING COMPANIES WITH DERIVATIVES			\$15,094,376	\$270,706,282	\$7,362,430	\$17,117,537	\$55,248,040	\$141,930,565	\$43,357,058	\$5,690,653	\$2,065,539

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

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
SEPTEMBER 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	\$2,367,127	\$55,245,618	7.2	92.8	70.5	22.0	3.4	1.7	2.4
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	3.6	96.4	63.2	29.8	2.0	0.9	3.9
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	11.4	88.6	86.2	13.4	0.1	0.0	0.4
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	2.4	97.6	70.4	24.7	2.5	0.1	2.3
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,708,548	12,532,251	3.3	96.7	93.6	3.4	2.1	0.6	0.3
6	HSBC NA	11E8VN30JCEQV1H4R804	182,096	5,547,474	2.6	97.4	68.2	27.4	1.5	0.8	2.2
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	241,364	2,452,512	0.3	99.7	1.1	97.8	0.0	1.1	0.0
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4NONFVK49	304,096	1,098,676	1.3	98.7	30.5	69.4	0.1	0.0	0.0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	477,394	557,359	4.3	95.7	86.3	11.6	0.0	0.3	1.7
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	395,783	449,127	1.6	98.4	90.2	4.3	1.3	1.9	2.3
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	123,824	289,555	0.0	100.0	5.4	94.4	0.2	0.0	0.0
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,715	278,333	0.8	99.2	96.4	3.4	0.1	0.0	0.0
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	221,424	261,928	9.8	90.2	78.4	4.4	13.9	1.0	2.3
14	TD BANK NATIONAL ASSN	03D0JEWFDUFUS0SEK89	311,038	222,373	0.0	100.0	98.3	1.7	0.0	0.0	0.0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	164,652	197,192	3.9	96.1	92.1	6.5	0.0	0.0	1.3
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	318,177	177,095	0.9	99.1	88.4	1.6	0.0	7.5	2.6
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	43,032	159,819	0.8	99.2	97.2	0.3	0.1	2.5	0.0
18	REGIONS BANK	EQTWLN1G7ODGC2MGLV11	127,543	146,543	1.0	99.0	94.0	0.9	0.0	0.9	4.2
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	169,489	120,582	0.9	99.1	75.0	11.2	2.4	6.8	4.7
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	145,184	119,669	1.1	98.9	89.4	5.2	0.0	5.0	0.4
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	125,041	98,176	0.0	100.0	99.3	0.7	0.0	0.0	0.0
22	MORGAN STANLEY BANK NA	G1MLHISON32I3QPILB75	138,262	69,957	0.1	99.9	25.1	62.8	1.3	0.0	10.9
23	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	108,790	65,105	0.3	99.7	86.6	3.6	0.6	4.9	4.3
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	229,886	52,940	0.3	99.7	97.3	1.2	0.0	0.0	1.5
25	BBVA USA	C90VT034M03BN29IRA40	91,975	52,462	8.5	91.5	94.4	3.0	1.0	0.0	1.6
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,627,163	\$200,264,073	\$12,575,260	\$187,688,814	\$146,276,890	\$44,331,073	\$3,832,219	\$1,655,822	\$4,168,069
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,932,965	877,196	4,431	872,766	802,064	51,035	3,237	6,238	14,622
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	12,579,690	188,561,579	147,078,954	44,382,109	3,835,456	1,662,059	4,182,691
				(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				99.6	6.3	93.3	72.7	22.0	1.9	0.8	2.1
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				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	6.3	93.7	73.1	22.1	1.9	0.8	2.1
<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
SEPTEMBER 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	\$2,367,127	\$55,245,618	\$223,038	\$168,793	\$194,599	\$363,392	163	
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	155,735	72,559	136,027	208,586	134	
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	33,950	66,765	59,568	126,333	372	
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	166,062	45,271	53,200	98,471	59	
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,708,548	12,532,251	164,736	18,656	29,694	48,350	29	
6	HSBC NA	1IE8VN30JCEQV1H4R804	182,096	5,547,474	23,678	7,081	21,370	28,451	120	
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	241,364	2,452,512	18,157	6,347	9,329	15,676	86	
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4NONFVK49	304,096	1,098,676	19,366	4,839	5,765	10,604	55	
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	477,394	557,359	48,043	2,990	7,546	10,536	22	
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	395,783	449,127	38,318	5,508	-424	5,084	13	
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	123,824	289,555	10,276	1,543	2,335	3,877	38	
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,715	278,333	14,484	1,399	257	1,656	11	
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	221,424	261,928	23,408	2,127	2,865	4,992	21	
14	TD BANK NATIONAL ASSN	03D0JEWDFUS0SEEKG89	311,038	222,373	28,020	256	996	1,252	4	
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	164,652	197,192	17,696	1,238	1,335	2,573	15	
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YMOOVDV0K75	318,177	177,095	30,564	2,268	3,494	5,762	19	
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	43,032	159,819	3,657	8	12	21	1	
18	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	127,543	146,543	13,718	750	553	1,303	9	
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	169,489	120,582	18,807	1,604	2,032	3,636	19	
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	145,184	119,669	16,025	1,309	1,121	2,430	15	
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	125,041	98,176	12,482	557	170	727	6	
22	MORGAN STANLEY BANK NA	G1MLHISON32I3QPILB75	138,262	69,957	16,953	172	1,757	1,929	11	
23	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	108,790	65,105	11,721	1,065	903	1,968	17	
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	229,886	52,940	25,294	665	232	897	4	
25	BBVA USA	C90VT034M03BN29IRA40	91,975	52,462	9,553	471	171	641	7	
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,627,163	\$200,264,073	\$1,143,741	\$414,241	\$534,907	\$949,148	83	
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,932,965	877,196	527,382	10,559	6,946	17,505	3	
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	1,671,123	424,800	541,853	966,653	58	

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
TABLE 5

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
SEPTEMBER 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	7H6GLXDRUGOFU57RNE97	\$2,367,127	\$55,245,618	\$53,432,988	99.1	\$471,262	0.9
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32WEFA76	1,472,915	49,137,162	47,093,001	99.8	115,709	0.2
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	48,859,483	99.9	25,051	0.1
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	20,816,707	97.4	549,482	2.6
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$170,202,179	99.3	\$1,161,504	0.7
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	23,594,592	92.2	2,000,303	7.8
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	193,796,771	98.4	3,161,807	1.6

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

Note: Numbers may not 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
SEPTEMBER 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	\$2,367,127	\$55,245,618	\$645,617	\$624,663	\$2,765	\$2,389	\$15,381	\$16,557
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	493,157	486,664	1,441	1,300	20,380	21,030
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	735,538	725,257	320	235	3,840	4,339
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	187,040	176,008	17,952	22,206	5,606	5,751
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$2,061,352	\$2,012,592	\$22,478	\$26,130	\$45,207	\$47,677
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	135,660	127,916	12,710	11,052	1,789	1,830
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	2,197,012	2,140,508	35,188	37,182	46,996	49,507

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
SEPTEMBER 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	7H6GLXDRUGQFU57RNE97	\$2,367,127	\$55,245,618	\$3,503	\$886	\$938	\$1,150	\$249	\$280
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32WEFA76	1,472,915	49,137,162	1,600	1,270	314	141	104	(229)
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	71	(1,241)	1,139	105	0	68
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	686	(143)	298	349	84	98
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$5,860	\$772	\$2,689	\$1,745	\$437	\$217
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	1,338	751	29	60	672	(174)
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	7,198	1,523	2,718	1,805	1,109	43

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
SEPTEMBER 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	7H6GLXDRUGOFU57RNE97	\$2,367,127	\$55,245,618	\$27,518,852	\$16,046,554	\$9,296,711	\$52,862,117	\$7,032,335	\$2,176,560	\$1,064,662	\$10,273,557
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	22,254,023	3,381,955	2,842,824	28,478,802	12,700,252	606,568	189,482	13,496,302
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	22,193,853	7,283,152	6,139,346	35,616,351	4,918,193	693,419	554,706	6,166,318
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	7,616,357	5,188,457	2,871,889	15,676,703	4,648,498	492,811	202,703	5,344,012
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$79,583,085	\$31,900,118	\$21,150,770	\$132,633,973	\$29,299,278	\$3,969,358	\$2,011,553	\$35,280,189
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	9,141,356	5,606,607	3,339,787	18,087,749	4,302,880	310,478	137,381	4,750,738
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	88,724,441	37,506,725	24,490,557	150,721,722	33,602,158	4,279,836	2,148,934	40,030,927

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
SEPTEMBER 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	7H6GLXDRUGQFU57RNE97	\$2,367,127	\$55,245,618	\$20,435	\$820	\$0	\$21,255
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32WEFA76	1,472,915	49,137,162	10,720	451	0	11,171
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	0	0	0	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	8	148	0	156
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$31,163	\$1,419	\$0	\$32,582
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	7,546	726	0	8,272
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	38,709	2,145	0	40,854
<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
SEPTEMBER 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	7H6GLXDRUGQFU57RNE97	\$2,367,127	\$55,245,618	\$587,119	\$118,294	\$5,027	\$710,440	\$1,705,825	\$598,928	\$105,007	\$2,409,760
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	118,605	63,529	4,401	186,535	406,446	148,397	21,377	576,220
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	3,369	1,868	0	5,237	16,420	11,276	1,789	29,485
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	11,636	15,073	14	26,723	411,728	130,856	5,808	548,392
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$720,729	\$198,764	\$9,442	\$928,935	\$2,540,419	\$889,457	\$133,981	\$3,563,857
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	46,446	84,439	869	131,755	146,846	105,175	13,540	265,561
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	767,175	283,203	10,311	1,060,690	2,687,265	994,632	147,521	3,829,418

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
SEPTEMBER 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	\$2,367,127	\$55,245,618	\$1,341,368	\$227,142	\$634,455	\$146,154	\$1,007,751	\$81,592	\$207,291	\$44,734	\$333,617
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	49,137,162	1,928,452	297,322	1,115,877	110,111	1,523,310	110,478	272,251	22,413	405,142
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	49,058,993	174,459	18,904	64,186	14,046	97,136	8,432	55,706	13,185	77,323
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,812,976	21,873,173	506,984	111,121	207,428	40,081	358,630	56,057	78,110	14,187	148,354
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$5,864,849	\$175,314,946	\$3,951,263	\$654,489	\$2,021,946	\$310,392	\$2,986,827	\$256,559	\$613,358	\$94,519	\$964,436
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			10,695,279	25,826,323	231,428	20,044	62,496	19,975	102,515	18,447	94,390	16,076	128,913
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	201,141,269	4,182,691	674,533	2,084,442	330,367	3,089,342	275,006	707,748	110,595	1,093,349

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
SEPTEMBER 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	\$2,367,127	\$53,904,250	\$1,341,368	\$682,193	\$659,175	\$612,242	\$28,279	\$37,264	\$4,408	\$597,073	\$16,615	\$45,440	\$47
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,472,915	47,208,710	1,928,452	1,003,085	925,367	898,777	23,167	81,141	0	858,404	9,227	57,736	0
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	211,831	48,884,534	174,459	97,485	76,974	91,664	2,134	3,593	94	71,076	2,134	3,716	48
4	BANK OF AMERICA NA	B4TYDEB6GKMZ0031MB27	1,812,976	21,366,189	506,984	264,528	242,456	224,182	11,564	28,782	0	206,469	14,152	21,835	0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCFXT09	1,708,548	12,492,646	39,605	25,433	14,172	5,146	0	800	19,487	3,969	0	0	10,203
6	HSBC NA	11E8VN30JCEQV1H4R804	182,096	5,427,953	119,521	66,931	52,590	53,379	13,552	0	0	51,317	1,273	0	0
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	241,364	2,452,512	0	0	0	0	0	0	0	0	0	0	0
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	304,096	1,098,511	165	165	0	165	0	0	0	0	0	0	0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	477,394	547,763	9,596	3,735	5,861	1,158	0	0	2,578	0	0	0	5,861
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	395,783	438,924	10,203	3,163	7,040	0	0	0	3,163	0	0	0	7,040
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFVH30	123,824	289,555	0	0	0	0	0	0	0	0	0	0	0
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,715	278,283	50	50	0	50	0	0	0	0	0	0	0
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	221,424	255,873	6,054	3,470	2,584	919	2,543	0	9	0	2,543	0	41
14	TD BANK NATIONAL ASSN	03D0JEWFDUFUS0SEK89	311,038	222,373	0	0	0	0	0	0	0	0	0	0	0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	164,652	194,535	2,657	0	2,657	0	0	0	0	0	0	0	2,657
16	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM00VDV0K75	318,177	172,515	4,580	1,641	2,939	0	0	0	1,641	0	0	0	2,939
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	43,032	159,809	10	1	8	1	0	0	0	8	0	0	0
18	REGIONS BANK	EQTW1K1G7ODGC2MGLV11	127,543	140,423	6,120	1,890	4,230	42	0	0	1,848	42	0	0	4,188
19	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	169,489	114,895	5,687	1,342	4,345	0	0	0	1,342	0	0	0	4,345
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	145,184	119,171	498	192	306	192	0	0	0	213	93	0	0
21	MANUFACTURERS&TRADERS TR CO	WWW2V0FCW3A0EE3ZJN75	125,041	98,176	0	0	0	0	0	0	0	0	0	0	0
22	MORGAN STANLEY BANK NA	G1MLHISON32I3QPILB75	138,262	62,361	7,596	7,336	260	6,733	0	603	0	260	0	0	0
23	HUNTINGTON NATIONAL BANK	2WHM8VNH63UN14OL754	108,790	62,278	2,827	1,981	846	0	0	0	1,981	0	0	0	846
24	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	229,886	52,120	820	83	737	0	0	0	83	0	0	0	737
25	BBVA USA	C90VT034M03BN29IRA40	91,975	51,646	816	8	809	8	0	0	0	809	0	0	0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$11,627,163	\$196,096,004	\$4,168,069	\$2,164,713	\$2,003,357	\$1,894,657	\$81,238	\$152,183	\$36,634	\$1,789,641	\$46,036	\$128,727	\$38,952
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			4,932,965	862,574	14,622	7,686	6,936	143	3,879	0	3,664	738	2	0	6,195
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			16,560,128	196,958,578	4,182,691	2,172,399	2,010,292	1,894,800	85,117	152,183	40,298	1,790,379	46,038	128,727	45,148
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	51.8	47.9	45.3	1.9	3.6	0.9	42.8	1.1	3.1	0.9
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					100.0	51.9	48.1	45.3	2.0	3.6	1.0	42.8	1.1	3.1	1.1

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
SEPTEMBER 30, 2019, MILLIONS OF DOLLARS

Call Report Schedule SU											
A. Gross Notional Amount of Derivatives	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17
Total gross notional amount of interest rate derivatives held for trading	\$2,524	\$913	\$1,131	\$623	\$751	\$736	\$684	\$542	\$729	\$749	\$655
Total gross notional amount of all other derivatives held for trading	\$30	\$37	\$24	\$2	\$2	\$5	\$7	\$5	\$5	\$6	\$2
Total gross notional amount of interest rate derivatives not held for trading	\$18,291	\$11,135	\$9,020	\$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	\$546	\$273	\$242	\$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
g. 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

*Beginning September 30, 2019, the eligibility to file the FFIEC 051 Call Report expanded from banks with total assets less than \$1 billion to include banks with less than \$5 billion in total assets.

**Beginning September 30, 2019, banks filing the FFIEC 051 Call Report complete this information from schedule RC-R in the June and December reports only.