

Quarterly Report on Bank Trading and Derivatives Activities

First Quarter 2019

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

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About This Report

The Office of the Comptroller of the Currency's (OCC) quarterly report on bank trading and derivatives activities is based on call report information provided by all insured U.S. commercial banks and savings associations; reports filed by U.S. financial holding companies; and other published data. A total of 1,318¹ insured U.S. commercial banks and savings associations reported trading and derivatives activities at the end of the first 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 first quarter of 2019, four large commercial banks represented 88.3 percent of the total banking industry notional amounts and 86.2 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 94th 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 \$10.0 billion in the first quarter of 2019, \$5.9 billion more (141.0 percent) than in the previous quarter and \$2.4 billion more (30.6 percent) than a year earlier (see table 1).
- Credit exposure from derivatives decreased in the first quarter of 2019 compared with the fourth quarter of 2018. NCCE decreased \$5.0 billion, or 1.6 percent, to \$335 billion (see table 5).
- Derivative notional amounts increased in the first quarter of 2019 by \$24.9 billion, or 14.1 percent, to \$201.3 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled \$149.2 trillion or 74.1 percent of total derivative notional amounts (see table 10).

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

Revenue

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

Insured U.S. commercial banks and savings associations reported \$10.0 billion in trading revenue in the first quarter of 2019, \$5.9 billion more (141.0 percent) than in the previous quarter and \$2.4 billion more (30.6 percent) than a year earlier (see table 1). The quarter-over-quarter increase in trading revenue was driven by a \$2.9 billion increase in revenue from equity derivatives as well as a \$1.9 billion increase in combined interest rate and foreign exchange (FX) 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

	1Q 2019	4Q 2018	Q/Q change	Q/Q % change	1Q 2018	Y/Y change	Y/Y % change
Interest rate and foreign exchange	\$6,334	\$4,411	\$1,923	43.6%	\$5,178	\$1,156	22.3%
Equity	\$2,895	-\$43	\$2,939	6770.7%	\$1,625	\$1,271	78.2%
Commodity and other	\$323	\$274	\$49	17.9%	\$395	-\$72	-18.2%
Credit	\$485	-\$476	\$961	202.0%	\$487	-\$2	-0.4%
Total trading revenue	\$10,037	\$4,165	\$5,872	141.0%	\$7,684	\$2,353	30.6%

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 \$24.9 billion in the first quarter of 2019 was \$19.1 billion (334.8 percent) higher than in the previous quarter. The quarter-over-quarter increase in trading revenue was driven by an \$8.7 billion increase in revenue from equity derivatives as well as a \$6.5 billion increase in combined interest rate and FX derivatives. Year-over-year holding company trading revenue increased by \$7.6 billion (44.3 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

	1Q 2019	4Q 2018	Q/Q change	Q/Q % change	1Q 2018	Y/Y change	Y/Y % change
Interest rate and foreign exchange	\$11,437	\$4,894	\$6,543	133.7%	\$9,260	\$2,177	23.5%
Equity	\$9,215	\$502	\$8,713	1735.7%	\$5,431	\$3,784	69.7%
Commodity and other	\$1,200	\$508	\$692	136.2%	\$1,177	\$23	2.0%
Credit	\$3,014	-\$185	\$3,199	-1729.2%	\$1,359	\$1,655	121.8%
Total HC trading revenue	\$24,865	\$5,719	\$19,146	334.8%	\$17,228	\$7,637	44.3%

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 first quarter of 2019, banks generated 40.4 percent of consolidated holding company trading revenue, down from 72.8 percent in the previous quarter (see figure 1).

50.0%

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 \$29 billion (1.7 percent) in the first quarter of 2019 to \$1.8 trillion, driven by a \$123 billion (12.2 percent) increase in receivables from interest rate contracts offset by a cumulative decrease of \$93 billion in FX, equity and commodity receivables (see table 3). GNFV increased \$31 billion (1.8 percent) to \$1.7 trillion during the quarter, driven by a \$116 billion (12.1 percent) increase in payables on interest rate contracts offset by a cumulative decrease of \$88 billion in FX, equity and commodity receivables.

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

	1Q 2019	4Q 2018	Q/Q Change	Q/Q % Change	1Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$1,130	\$1,007	\$123	12.2%	\$1,132	-\$2	-0.2%
Foreign exchange	\$444	\$511	-\$67	-13.2%	\$454	-\$10	-2.3%
Equity	\$117	\$132	-\$15	-11.1%	\$125	-\$7	-5.9%
Commodities	\$33	\$44	-\$11	-25.8%	\$44	-\$11	-25.5%
Credit	\$43	\$43	\$0	-0.4%	\$59	-\$15	-26.4%
Gross positive fair value	\$1,767	\$1,738	\$29	1.7%	\$1,814	-\$47	-2.6%

	1Q 2019	4Q 2018	Q/Q Change	Q/Q % Change	1Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$1,076	\$960	\$116	12.1%	\$1,081	-\$4	-0.4%
Foreign exchange	\$433	\$500	-\$67	-13.4%	\$426	\$7	1.6%
Equity	\$118	\$126	-\$8	-6.3%	\$118	-\$1	-0.4%
Commodities	\$34	\$46	-\$13	-27.1%	\$45	-\$11	-25.2%
Credit	\$45	\$43	\$2	3.8%	\$60	-\$15	-24.6%
Gross negative fair value	\$1,706	\$1,675	\$31	1.8%	\$1,730	-\$24	-1.4%

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 decreased by \$5 billion (1.6 percent) to \$335 billion in the first quarter of 2019 (see table 5). Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 81.0 percent (\$1.4 trillion) in the first quarter of 2019.

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

	1Q 2019	4Q 2018	Q/Q Change	Q/Q % Change
Gross positive fair value	\$1,767	\$1,738	\$29	1.7%
NCCE RC-R	\$335	\$341	-\$5	-1.6%
Netting benefit RC-R	\$1,432	\$1,397	\$35	2.5%
Netting benefit % RC-R	81.0%	80.4%		0.8%

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

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.

since 2008 has largely resulted from declines in the GPFV of interest rate and credit contracts. GPFV from interest rate contracts has fallen from \$5.1 trillion at the end of 2008 to \$1.1 trillion at the end of the first quarter of 2019. On March 31, 2019, exposure from credit contracts was \$43.2 billion, which is \$1.0 trillion lower (96.1 percent) than the \$1.1 trillion on December 31, 2008 (see table 3).

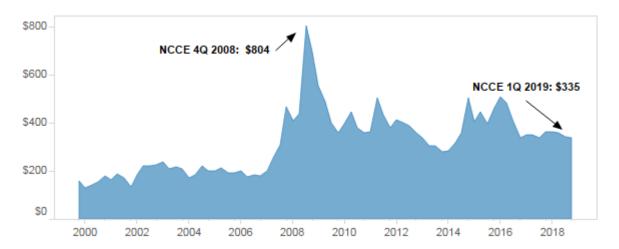


Figure 2: Net Current Credit Exposure, in Billions of Dollars

Source: Call reports, Schedule RC-R

The bulk of NCCE in the financial system is concentrated in banks and securities firms (43.5 percent) and in corporations and other counterparties (42.3 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (14.2 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
Q1 2019	43.5%	4.6%	9.6%	42.3%
Q4 2018	41.7%	5.0%	10.0%	43.2%
Q4 2017	41.7%	3.1%	7.9%	47.3%
Q4 2016	48.4%	2.0%	6.5%	43.0%
Q4 2015	53.3%	2.1%	6.0%	38.5%

Source: Call reports, Schedule RC-L

A more risk-sensitive measure of credit exposure would consider the value of collateral held against counterparty exposures. Reporting banks held collateral valued at 113.4 percent of their total NCCE at the end of the first quarter of 2019, down slightly from 113.7 percent in the fourth quarter of 2018 (see table 7). Collateral held against hedge fund exposures increased in the first quarter. Coverage remains very high at 343.8 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 %
Q1 2019	127.7%	343.8%	48.2%	88.2%	113.4%
Q4 2018	128.9%	308.0%	47.1%	91.8%	113.7%
Q4 2017	124.4%	495.5%	25.1%	89.8%	111.5%
Q4 2016	119.1%	491.5%	34.2%	67.0%	98.5%
Q4 2015	101.6%	435.5%	15.6%	66.2%	89.6%

Source: Call reports, Schedule RC-L

The majority of collateral held by banks against NCCE is very liquid with 60.0 percent held in cash (both U.S. dollar and non-dollar) and an additional 13.5 percent held in U.S. Treasuries and government agency securities (see table 8). Supervisors assess changes in the quality and liquidity of collateral held as a key early indicator of potential easing in credit terms. Examiners review the collateral management practices of derivative dealers as a regular part of their supervision activities.

Table 8: Composition of Collateral

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

Source: Call reports, Schedule RC-L

Credit quality metrics for derivative exposures decreased in the first quarter of 2019, as banks reported net charge-offs of \$9.1 million, compared with net charge-offs of \$0.13 million in the fourth quarter of 2018 (see graph 7 in the appendix). The number of banks reporting charge-offs increased from 11 to 12 banks. Net charge-offs in the first quarter of 2019 represented 0.003 percent of the NCCE from derivative contracts. For comparison purposes, commercial and industrial (C&I) loan net charge-offs decreased \$231.6 million, or 14.2 percent, to \$1.4 billion during the quarter and were 0.07 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
1Q 2019 Average 60 Day VaR	\$148	\$113	\$73	\$97
4Q 2018 Average 60 Day VaR	\$144	\$120	\$59	\$92
Q/Q Change	\$4	-\$7	\$14	\$5
1Q 2019 Total Risk-Based Capital	\$201,483	\$156,132	\$164,145	\$33,073

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
1Q 2019 VaR Capital Requirement	\$443	\$338	\$219	\$292
4Q 2018 VaR Capital Requirement	\$432	\$359	\$177	\$275
Q/Q Change	\$11	-\$21	\$42	\$17
1Q 2019 Total Risk-Based Capital	\$201,483	\$156,132	\$164,145	\$33,073

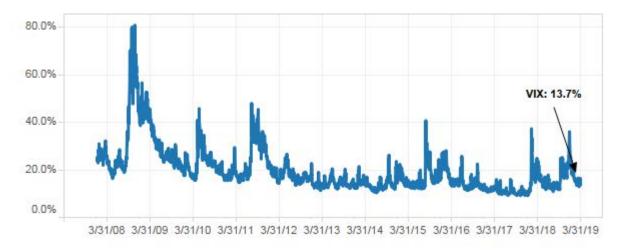
Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

Volatility Index

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

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

Figure 3: Volatility Index (VIX)

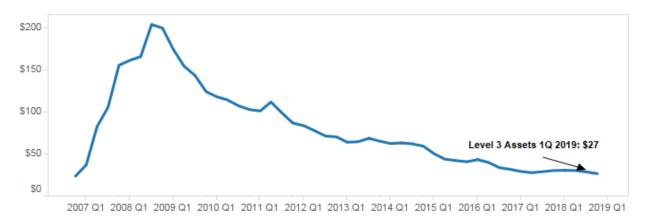


Source: Bloomberg

Level 3 Trading Assets

Another measure used to assess market risk is the volume of and changes in level 3 trading assets. Level 3 trading assets are assets whose fair value cannot be determined by using observable inputs, such as market prices. Since the peak of the financial crisis at the end of 2008, major dealers have reduced the volume of level 3 trading assets. Because banks cannot observe inputs into the models that determine the fair value of these illiquid exposures, banks use their own assumptions in determining their fair values. Level 3 assets peaked at \$204.1 billion at the end of 2008 (see figure 4). At the end of the first quarter of 2019, banks held \$27 billion of level 3 trading assets, down 7.1 percent from the previous quarter, and 12.2 percent lower than a year ago. Level 3 assets are \$177.4 billion (86.9 percent) lower than the peak level from 2008.

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



Source: Call reports, Schedule RC-Q

Notional Amounts of All Derivative Contracts

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

The notional amount of derivative contracts held by banks in the first quarter increased by \$24.9 trillion (14.1 percent) to \$201.3 trillion from the previous quarter (see table 10). The increase in the notional amount of derivative contracts by underlying risk exposure was primarily driven by a \$21.0 trillion increase in interest rate notional amounts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at \$149.2 trillion, or 74.1 percent of total derivatives (see table 10).

The increase in the notional amount of derivative contracts by contract type was driven by an increase in combined futures and forwards, and swap and options contracts (see table 11). Swap contracts remained the leading derivatives contract type at 53.1 percent of all notional amounts.

The four banks with the most derivative activity hold 88.3 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

	1Q 2019	4Q 2018	Q/Q Change	Q/Q % Change	1Q 2018	Y/Y Change	Y/Y % Change
Interest rate	\$149,183	\$128,166	\$21,017	16.4%	\$155,469	-\$6,286	-4.0%
Foreign exchange	\$42,901	\$39,221	\$3,680	9.4%	\$38,839	\$4,062	10.5%
Equity	\$3,675	\$3,374	\$301	8.9%	\$3,467	\$208	6.0%
Commodity	\$1,377	\$1,315	\$63	4.8%	\$1,646	-\$269	-16.3%
Credit derivatives	\$4,145	\$4,277	-\$132	-3.1%	\$4,345	-\$201	-4.6%
Total notional	\$201,281	\$176,353	\$24,929	14.1%	\$203,767	-\$2,485	-1.2%

Source: Call reports, Schedule RC-L

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

	1Q 2019	4Q 2018	Q/Q Change	Q/Q % Change	1Q 2018	Y/Y Change	Y/Y % Change
Futures and forwards	\$46,165	\$36,144	\$10,022	27.7%	\$45,251	\$915	2.0%
Swaps	\$106,837	\$97,923	\$8,913	9.1%	\$105,356	\$1,481	1.4%
Options	\$44,134	\$38,009	\$6,125	16.1%	\$48,814	-\$4,680	-9.6%
Credit derivatives	\$4,145	\$4,277	-\$132	-3.1%	\$4,345	-\$201	-4.6%
Total notional	\$201,281	\$176,353	\$24,928	14.1%	\$203,767	-\$2,485	-1.2%

Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives decreased \$132.0 billion (3.1 percent), to \$4.1 trillion, in the first quarter of 2019 (see table 10). Contracts referencing investment-grade firms decreased \$115.0 billion and contracts referencing sub-investment-grade firms decreased \$17.0 billion in the first 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 \$3.6 trillion (87.9 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 47.7 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are 74.9 percent of the market (see chart on right in figure 5).

Other credit derivatives: \$82

Credit options:
\$299

Total return swaps: \$120

Sub-investment grade > 5 yrs: \$119

Sub-investment grade < 1 yr: \$259

Sub-investment grade < 1 yr: \$763

Investment grade > 5 yrs: \$1,976

Figure 5: 1Q 2019 Credit Derivative Composition, in Billions of Dollars

Source: Call reports, Schedule RC-L

The notional amount for the 82 banks that net sold credit protection (i.e., assumed credit risk) was \$2.0 trillion, down \$56.1 billion (2.7 percent) from the fourth quarter of 2018 (see table 12 in the appendix). The notional amount for the 64 banks that net purchased credit protection (i.e., hedged credit risk) was \$2.1 trillion, \$75.9 billion lower (3.5 percent) than in the fourth quarter of 2018 (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 decreased in the first quarter of 2019, as shown in figure 6.



Figure 6: Quarterly Compression Activity, in Trillions of Dollars

Source: LCH Clearnet

Centrally Cleared Derivative Contracts

In the first quarter of 2015, banks began reporting their volumes of cleared and non-cleared derivative transactions, as well as risk weights for counterparties in each of these categories. In the first quarter of 2019, 42.4 percent of banks' derivative holdings were centrally cleared (see table 12). From a market factor perspective, 54.0 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 27.7 percent of credit derivative transactions were centrally cleared during the first quarter of 2019.

Centrally cleared derivative transactions were heavily concentrated at qualified central counterparties, with 91.0 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
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.

Qualified central counterparties (QCCPs): 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 meets a series of standards. See 12 CFR 3.2 for 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.

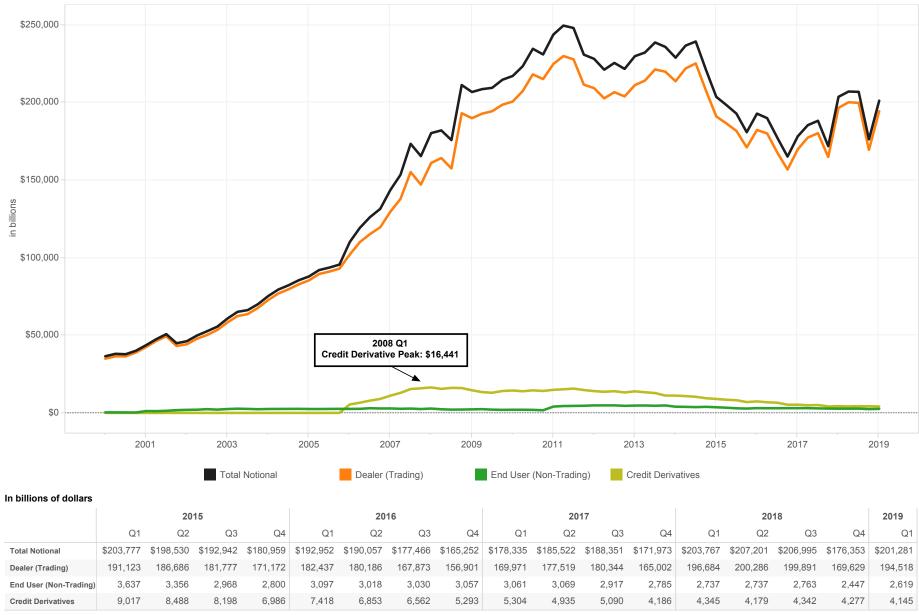
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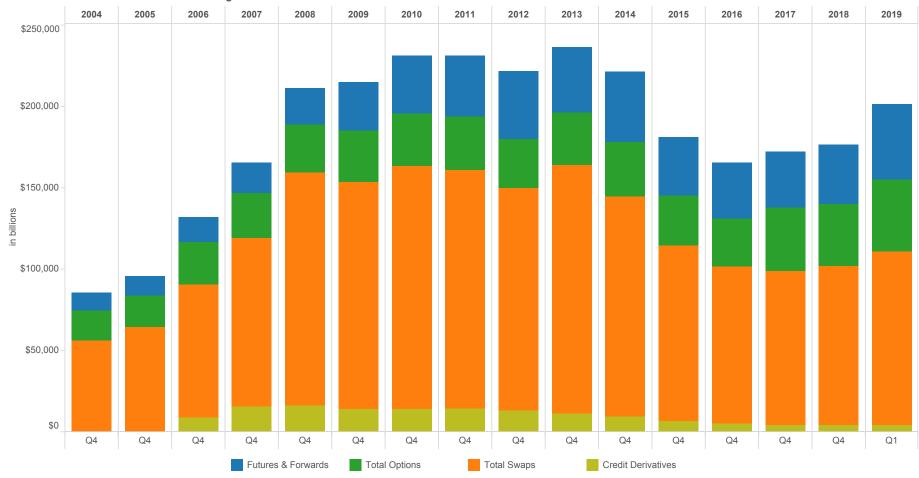
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Graph 1
Derivative Notional Amounts by Type
Insured U.S. Commercial Banks and Savings Associations



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

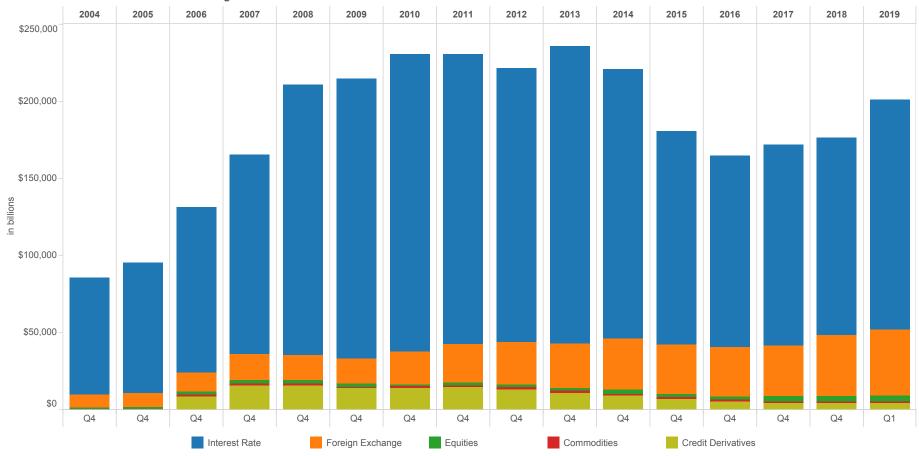


	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Q4	Q1														
Futures & Forwards	\$11,370	\$12,057	\$14,882	\$18,867	\$22,529	\$29,652	\$35,539	\$37,469	\$41,621	\$40,027	\$43,380	\$35,691	\$34,201	\$34,162	\$36,144	\$46,165
Total Options	17,754	18,858	26,277	27,727	29,747	31,884	32,078	32,505	30,375	32,305	33,081	30,889	29,373	38,841	38,009	44,134
Total Swaps	56,411	64,712	81,340	103,102	143,111	139,138	149,331	146,266	136,608	152,469	135,169	107,392	96,384	94,784	97,923	106,837
Credit Derivatives	0	0	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,277	4,145
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	201,281

*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



	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
Interest Rate	\$84,530	\$107,435	\$129,491	\$175,895	\$181,454	\$193,399	\$187,866	\$177,650	\$193,084	\$174,687	\$138,369	\$124,488	\$130,417	\$128,166	\$149,183
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
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
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
Credit Derivatives	0	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,277	4,145
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	201,281

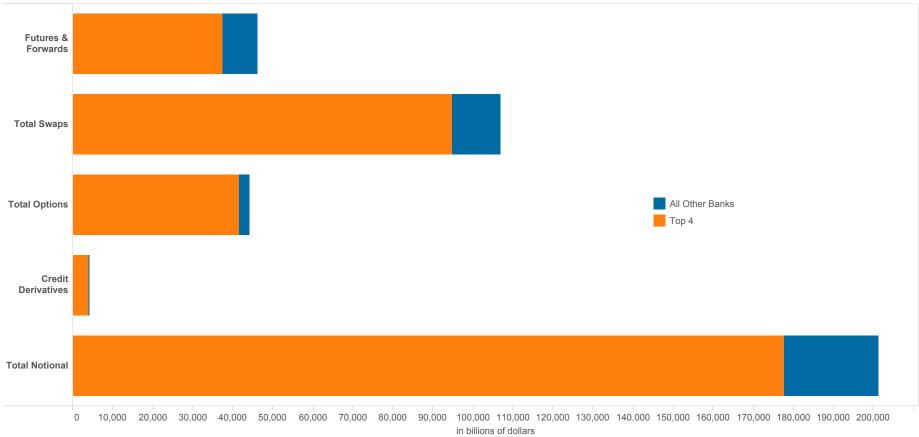
*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.

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

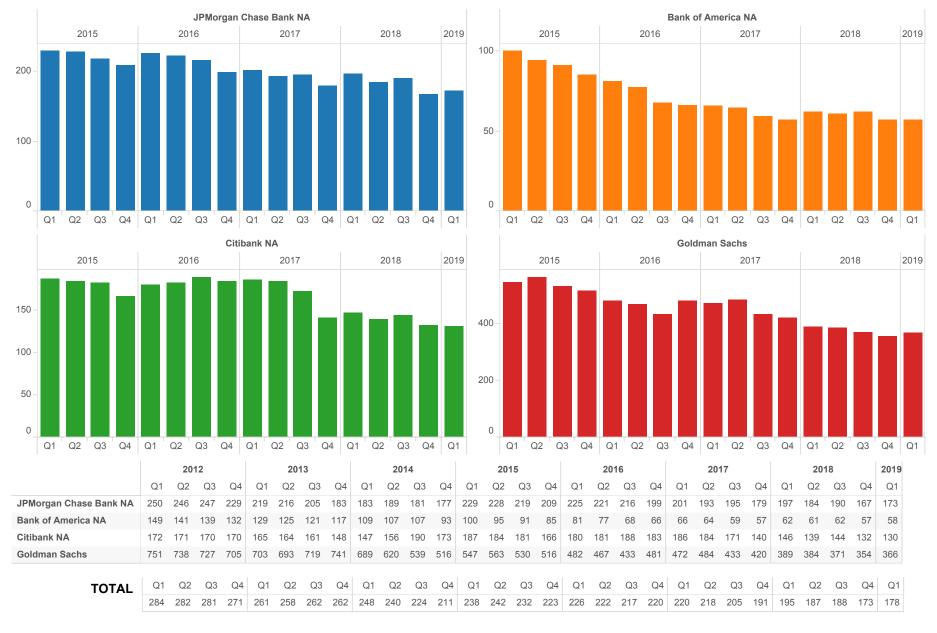
Graph 4
Four Banks Dominate in Derivatives*
Insured U.S. Commercial Banks and Savings Associations



	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$37,374	\$8,792	\$46,165
Total Swaps	94,806	12,031	106,837
Total Options	41,676	2,458	44,134
Credit Derivatives	3,923	222	4,145
Total Notional	177,779	23,503	201,281

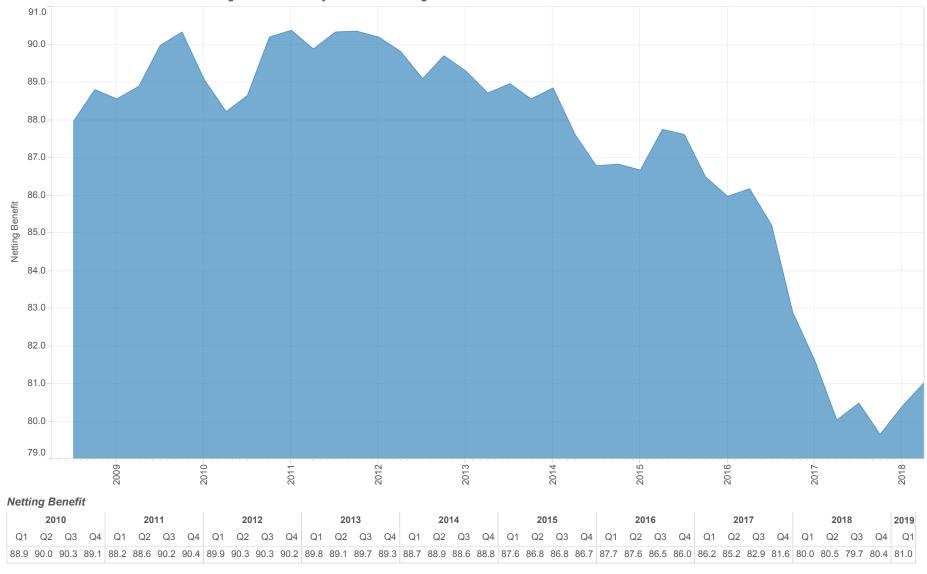
*Notional amount of total: futures, exchange-traded options, over-the-counter options, forwards, and swaps. Source: Call reports

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

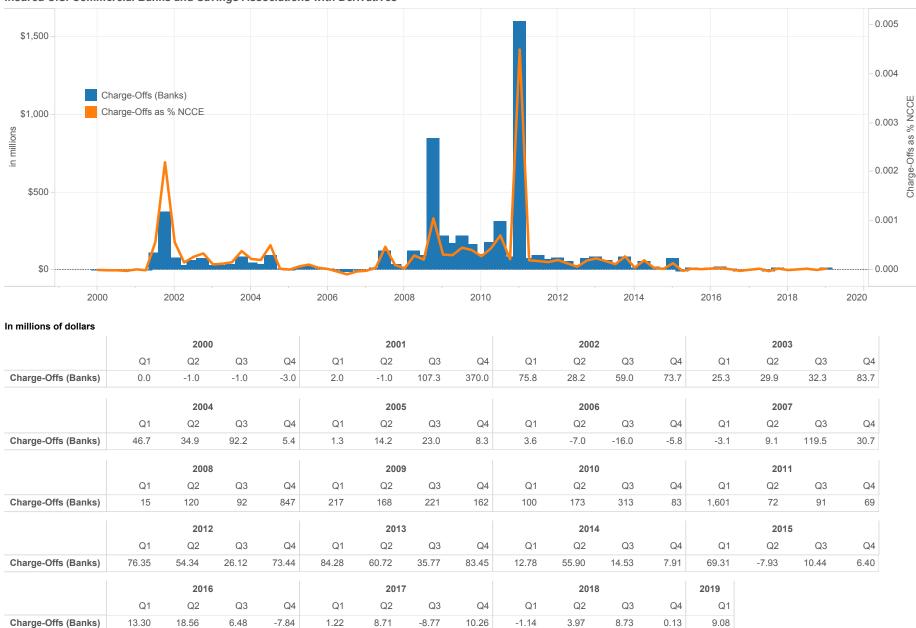


Note: The methodology to calculate the credit risk exposure to capital ratio for the Top 4 category uses a weighted average of total current credit exposure. Source: Call reports

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

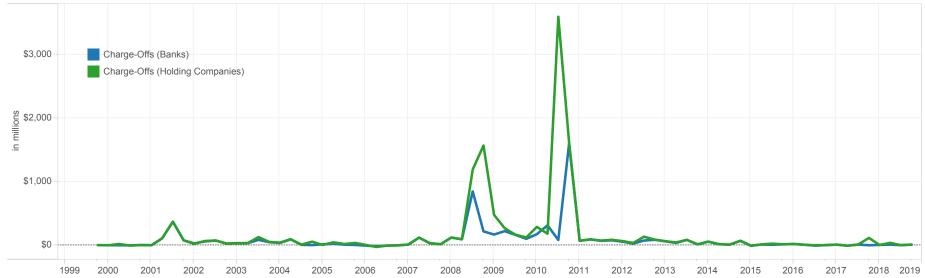


Graph 7
Quarterly Charge-Offs/(Recoveries) From Derivatives - Bank
Insured U.S. Commercial Banks and Savings Associations with Derivatives



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

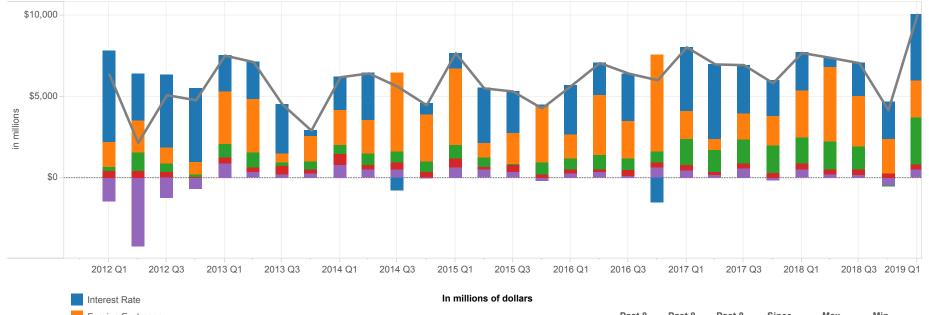
Graph 8
Quarterly Charge-Offs/(Recoveries) From Derivatives - Holding Company
Insured U.S. Commercial Banks and Savings Associations with Derivatives Compared with Holding Companies



	2000				200	01			200	2			200	3			200	4		
	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
		200	5			200	06			200	7			200	18			200	9	
	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
		201	0			20	11			201	2			201	3			201	4	
	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
		201	5			20	16			201	7			201	8		2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1			
Charge-Offs (Banks)	69.3	-7.9	10.4	6.4	13.3	18.6	6.5	-7.8	1.2	8.7	-8.8	10.3	-1.1	4.0	8.7	0.1	9.1			
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			

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



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

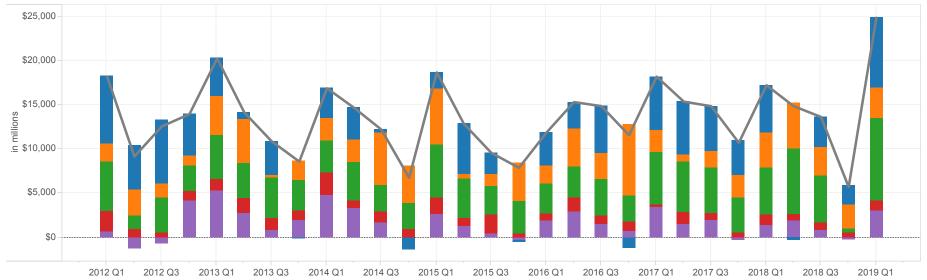
	1Q 2019	Past 8 Quarter Average	Past 8 Quarter High	Past 8 Quarter Low	Since 2000 Average	Max Since 2000	Min Since 2000
Interest Rate	4,078	2,780	4,586	-5,282	1,776	9,291	587
Foreign Exchange	2,256	2,309	4,569	-1,069	1,947	5,941	697
Equity	2,895	1,523	2,895	-1,059	670	2,895	-43
Commodity & Other	323	310	395	-307	238	789	211
Credit	485	202	566	-10,237	-153	2,727	-476
Total Trading Revenue	10,037	7,123	10,037	-10,580	4,479	10,217	4,165

In millions of dollars

		201	5			201	16			201	17			201	8		2019
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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	2,105	2,256
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
Commodity & Other	587	129	402	198	271	161	353	296	330	211	300	324	395	286	346	274	323
Credit	624	530	357	-222	263	342	118	634	447	128	566	-178	487	215	141	-476	485
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	4,165	10,037

*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





Commodity & Other

Credit

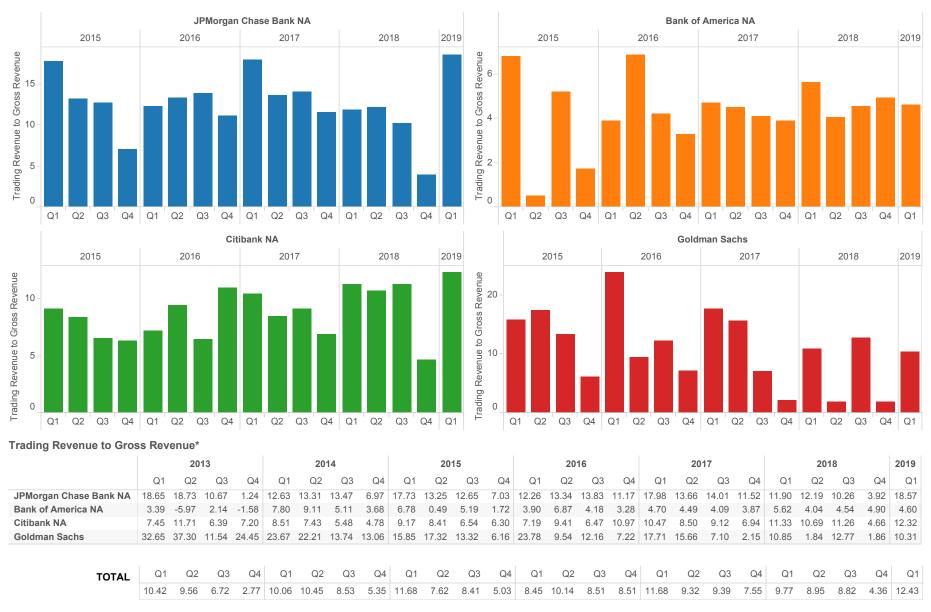
Total Trading Revenue

In millions of dollars

		201	15			201	16			201	17			201	18		2019
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Interest Rate	\$1,893	\$5,662	\$2,403	(\$243)	\$3,808	\$2,965	\$5,359	(\$1,193)	\$6,055	\$6,019	\$5,124	\$4,006	\$5,360	(\$340)	\$3,386	\$2,155	\$7,961
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	2,739	3,476
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
Commodity & Other	1,833	871	2,146	412	738	1,491	969	1,003	299	1,317	769	568	1,177	779	874	508	1,200
Credit	2,603	1,294	452	-317	1,880	2,940	1,482	742	3,381	1,523	1,996	-310	1,359	1,848	826	-185	3,014
Total Trading Revenue	18,680	12,860	9,590	7,887	11,892	15,327	14,868	11,579	18,198	15,376	14,861	10,721	17,228	14,866	13,650	5,719	24,865

^{*}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



^{*}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

439

FX&GOLD: > 5 yrs

582

762

689

594

Interest Rate 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 \$150,000 \$100,000 oilliq u \$50,000 \$0 Q4 Q1 IR: < 1 yr IR: 1-5 vr IR: > 5 yrs FX & Gold 2001 2013 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2014 2015 2016 2017 2018 2019 \$40,000 \$30,000 \$20,000 \$10,000 Q4 Q1 FX&GOLD: < 1 yr FX&GOLD: 1-5 yr FX&GOLD: > 5 yrs In billions of dollars 2008 2011 2012 2013 2014 2017 2018 2019 2002 2003 2004 2005 2006 2007 2009 2010 2015 2016 Q4 Q1 IR: < 1 yr \$12,982 \$13,581 \$15,921 \$18,483 \$29,552 \$39,085 \$58,618 \$81,236 \$90,843 \$87,812 \$82,948 \$77,758 \$71,808 \$55,054 \$55,061 \$72,589 \$71,491 \$87,925 IR: 1-5 yr 14,328 20,404 25,893 27,683 31,386 37,222 47,456 33,970 33,497 32,750 30,191 44,157 33,727 49,406 43,261 36,154 36,680 38,987 IR: > 5 yrs 9,735 13,117 16,492 19,825 23,273 27,724 36,868 26,374 24,307 24,168 21,175 24,630 22,214 32,981 29,762 23,565 23,244 24,261 FX&GOLD: < 1 yr 4,078 4,510 5,384 11,660 10,640 10,490 14,629 17,632 18,386 18,372 22,145 23,912 24,380 28,892 32,627 5,728 7,730 24,130 FX&GOLD: 1-5 yr 857 1,146 1,317 1,381 1,452 1,639 2,195 2,473 2,462 3,117 2,910 2,341 2,587 3,986 4,454 4,805 4,219 4,364

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

622

1,082

1,347

1,290

1,503

1,480

1,029

969

1,648

2,420

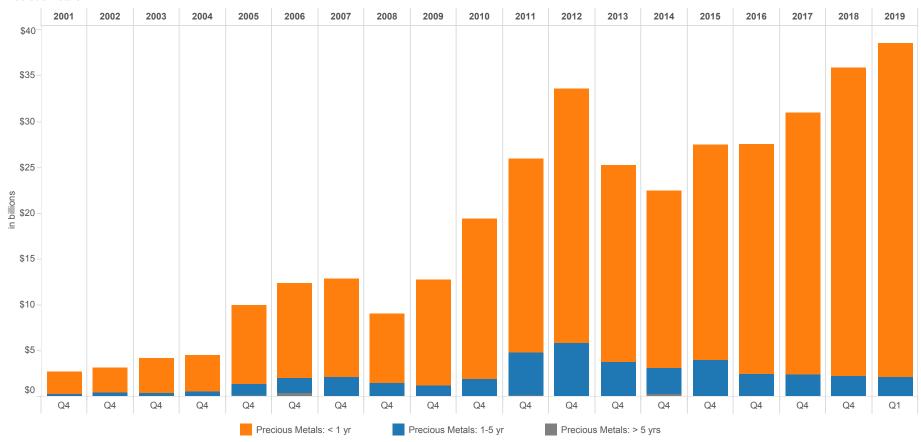
2.525

2.096

2,182

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

Precious Metals

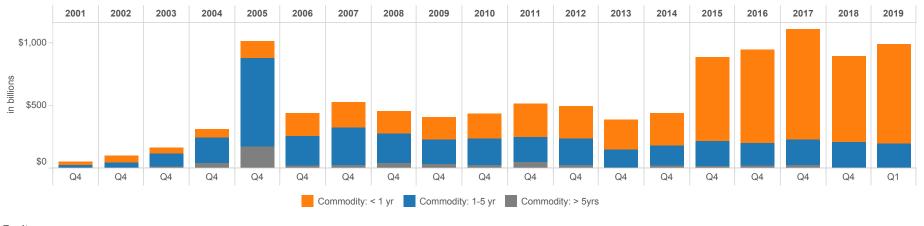


In billions of dollars

	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
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
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
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

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

Commodity



Equity

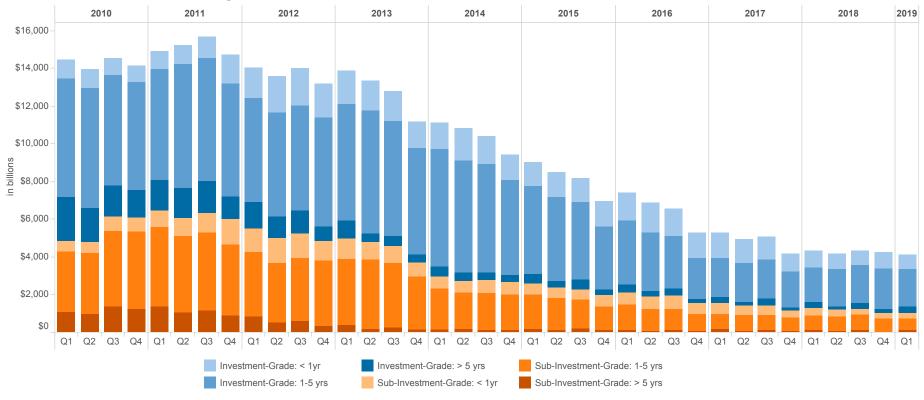


In billions of dollars

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

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



		20	14			20	15			20	16			20	17			20	18		2019
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Investment-Grade: < 1yr	\$1,414	\$1,707	\$1,478	\$1,375	\$1,256	\$1,292	\$1,270	\$1,380	\$1,471	\$1,549	\$1,451	\$1,348	\$1,343	\$1,234	\$1,216	\$934	\$880	\$805	\$764	\$844	\$763
Investment-Grade: 1-5 yrs	6,227	5,909	5,722	5,007	4,649	4,450	4,108	3,328	3,400	3,101	2,765	2,170	2,072	2,073	2,085	1,897	1,839	1,995	1,988	2,173	1,976
Investment-Grade: > 5 yrs	577	448	433	382	508	359	520	281	457	262	385	214	309	195	345	186	331	184	338	204	367
Total Investment Grade	\$8,218	\$8,064	\$7,633	\$6,764	\$6,413	\$6,101	\$5,898	\$4,990	\$5,328	\$4,911	\$4,601	\$3,732	\$3,724	\$3,502	\$3,647	\$3,016	\$3,050	\$2,984	\$3,089	\$3,221	\$3,106
		20	14			20	15			20	16			20	17			20	18		2019
	Q1	20 Q2	14 Q3	Q4	Q1	20 Q2	15 Q3	Q4	Q1	20 Q2	16 Q3	Q4	Q1	20 Q2	17 Q3	Q4	Q1	20 Q2	18 Q3	Q4	2019 Q1
Sub-Investment-Grade: < 1yr	Q1 \$619			Q4 \$658	Q1 \$596			Q4 \$607	Q1 \$622			Q4 \$581	Q1 \$582			Q4 \$375	Q1 \$400			Q4 \$304	
Sub-Investment-Grade: < 1yr Sub-Investment-Grade: 1-5 yrs	\$619	Q2	Q3			Q2	Q3			Q2	Q3			Q2	Q3			Q2	Q3		Q1
,	\$619	Q2 \$642	Q3 \$671	\$658	\$596	Q2 \$562	Q3 \$569	\$607	\$622	Q2 \$683	Q3 \$683	\$581	\$582	Q2 \$509	Q3 \$480	\$375	\$400	Q2 \$335	Q3 \$318	\$304	Q1 \$259

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 1Q 2019 Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts Insured U.S. Commercial Banks and Savings Associations



	Interes	st Rate	Foreign Exchange		Equity		Precious Metals			Cre		Other		
									Investment Grade		Non-Investment Grade			
Bank Name	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-
Dalik Name	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter
JPMorgan Chase Bank NA	31,568	25,241	87	10,103	784	1,658	0	18	457	557	135	257	74	609
Citibank NA	20,307	9,168	255	13,598	31	505	4	8	236	1,215	63	293	75	95
Bank of America NA	9,779	4,532	82	5,168	170	389	0	0	180	229	55	130	0	20
Goldman Sachs	7,523	26,498	39	4,685	0	25	0	0	0	92	0	75	0	4
HSBC NA	3,229	592	34	1,247	0	84	0	8	3	17	7	34	0	1
Wells Fargo Bank NA	7,347	2,339	0	402	41	104	0	1	0	2	0	23	8	42
Morgan Stanley Bank NA	0	8	0	40	0	1	0	0	0	6	0	2	0	0
Grand Total	79,755	68,378	498	35,243	1,025	2,765	4	35	876	2,118	261	813	157	771
	1,845 1,19		1	3,432	0	26	0	0	1	14	0	19	1	60
ALL OTHER														

Total Centrally Cleared	Over- the- Counter	Total Notional
33,105	38,441	71,547
20,971	24,881	45,852
10,267	10,469	20,735
7,563	31,380	38,943
3,273	1,982	5,255
7,397	2,912	10,309
0	57	57
82,576	110,122	192,698
1,847	4,747	6,594

TOTAL	81,599	69,574	498	38,675	1,025	2,790	4	35	877	2,132	261	832	158	831	

84,423	114,868	199.291

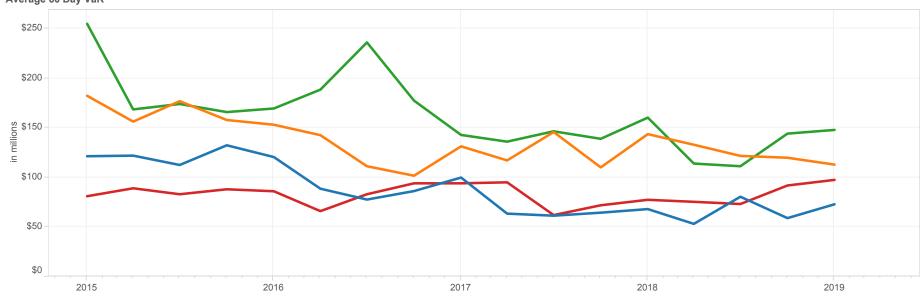
% of Total

	Interes	st Rate	Foreign E	xchange	Equity		Precious Metals			Cre	dit		Oth	ner
									Investment Grade		Non-Investment Grade			
Bank Name	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-
Dalik Name	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter
JPMorgan Chase Bank NA	56%	44%	1%	99%	32%	68%	0%	100%	45%	55%	35%	65%	11%	89%
Citibank NA	69%	31%	2%	98%	6%	94%	33%	67%	16%	84%	18%	82%	44%	56%
Bank of America NA	68%	32%	2%	98%	30%	70%			44%	56%	30%	70%	0%	100%
Goldman Sachs	22%	78%	1%	99%	0%	100%			0%	100%	0%	100%	0%	100%
HSBC NA	85%	15%	3%	97%	0%	100%	0%	100%	13%	87%	17%	83%	0%	100%
Wells Fargo Bank NA	76%	24%	0%	100%	28%	72%	0%	100%	8%	92%	2%	98%	16%	84%
Morgan Stanley Bank NA	3%	97%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%

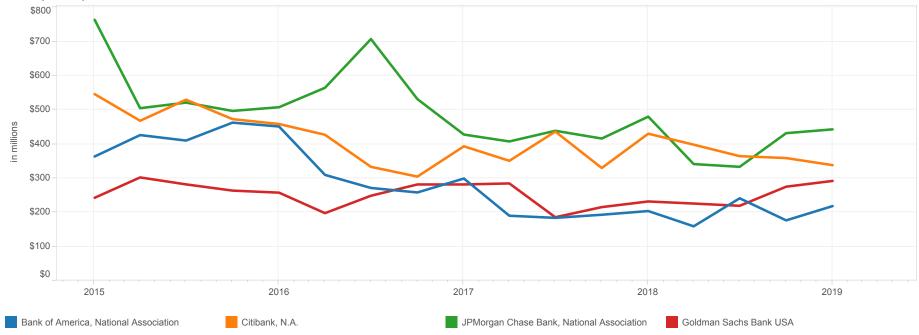
Total	Total
Centrally	Over-the-
Cleared	Counter
as a % of	as a % of
Total	Total
Notional	Notional
46%	54%
46%	54%
50%	50%
19%	81%
62%	38%
72%	28%
0%	100%

Source: Call reports, Schedule RC-R

Graph 16 Average 60 Day VaR







NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

		LEGAL ENTITY	TOTAL	TOTAL	TOTAL FUTURES	TOTAL OPTIONS	TOTAL FORWARDS	TOTAL SWAPS	TOTAL OPTIONS	TOTAL CREDIT DERIVATIVES	SPOT
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	(EXCH TR)	(EXCH TR)	(OTC)	(OTC)	(OTC)	(OTC)	FX
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$1,101,374	\$2,890,091	\$12,219,549	\$31,407,699	\$10,081,222	\$1,338,356	\$703,288
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	782,105	880,018	8,824,265	29,578,122	9,323,474	1,831,022	935,202
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	1,190,954	3,801,289	7,135,587	22,788,029	11,995,017	174,227	346,763
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	263,409	168,045	5,856,457	11,031,925	2,537,072	579,513	431,354
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,667,769	11,039,117	188,982	232,095	3,991,759	5,218,143	1,370,233	37,905	5,934
6	HSBC NA	1IE8VN30JCEQV1H4R804	177,494	5,458,824	136,224	4,216	1,088,875	3,737,452	374,726	117,331	42,675
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	225,137	2,264,710	4,801	0	2,212,464	19,152	28,293	0	73,929
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	271,195	1,063,628	25,264	45	271,256	746,104	20,794	165	118,773
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	467,322	457,138	14,371	1,300	62,504	266,680	103,863	8,420	496
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	380,593	406,616	5,067	5,383	19,099	336,255	31,094	9,719	771
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	121,427	301,799	0	0	281,757	19,186	857	0	3,838
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,366	297,878	2,140	0	211,268	76,774	7,495	201	319
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	214,042	246,288	3,754	13,691	20,611	155,685	47,186	5,361	106
14	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	301,450	204,138	0	0	2,406	201,170	562	0	0
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	306,751	161,602	410	0	2,605	153,333	672	4,581	184
16	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	161,403	161,206	3,656	0	9,624	124,791	20,033	3,102	360
17	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	147,398	108,976	1,008	229	6,459	72,437	23,422	5,421	449
18	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	139,878	108,508	1,652	0	4,836	87,256	14,390	373	589
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	128,089	92,431	967	40	4,169	69,653	12,784	4,818	20
20	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	39,779	83,336	751	190	75,165	5,323	1,904	3	0
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	119,582	79,643	0	0	1,979	58,191	19,472	0	82
22	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	140,568	72,800	251	0	22,268	23,526	18,479	8,276	2,875
23	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	219,793	60,630	124	0	6,439	46,040	7,353	674	51
24	COMPASS BANK	C90VT034M03BN29IRA40	92,635	47,460	3,462	0	1,750	32,051	9,541	657	0
25	HUNTINGTON NATIONAL BANK		108,053	43,905	180	0	3,324	36,613	1,446	2,343	7
TOD 25 (COMMERCIAL BANKS, SAS & TCs WITH DERIVA	TIVES	\$11,257,394	\$200,539,455	\$3.730.907	\$7,996,632	\$42.336.477	\$106,291,589	\$36.051.382	\$4,132,468	\$2.668.064
	COMMERCIAL BANKS, SAS & TCS WITH DERIVATION OF THE COMMERCIAL BANKS, SAS WI		5,009,419	742,004	\$3,730,907 4,421	\$7,996,632 670	93,624	545,282	\$36,051,362 85,547	12,460	1,498
	COMMERCIAL BANKS, SAS & TCS WITH DERIVAT		16,266,813	201,281,459	3,735,327	7,997,302	42,430,101	106,836,871	36,136,929	4,144,928	2,669,561
TOTAL	OWNINERCIAL DAINNS, SAS & TOS WITH DERIVAT	IVES	10,200,013	201,261,439	3,135,321	1,771,302	42,430,101	100,030,871	30,130,929	4,144,920	2,009,001

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

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS (HOLDING COMPANIES) TOP 25 HOLDING COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

		LEGAL								CREDIT	
		ENTITY	TOTAL	TOTAL	FUTURES	OPTIONS	FORWARDS	SWAPS	OPTIONS	DERIVATIVES	SPOT
RANK	HOLDING COMPANY	INDENTIFIER	ASSETS	DERIVATIVES	(EXCH TR)	(EXCH TR)	(OTC)	(OTC)	(OTC)	(OTC)	FX
1	JPMORGAN CHASE & CO.	8I5DZWZKVSZI1NUHU748	\$2,737,188	\$58,748,422	\$1,125,380	\$3,133,382	\$12,761,902	\$30,593,227	\$9,768,170	\$1,366,361	\$691,378
2	CITIGROUP INC.	6SHGI4ZSSLCXXQSBB395	1,958,413	51,482,576	955,586	2,176,765	10,321,826	27,526,054	9,043,788	1,458,557	935,684
3	GOLDMAN SACHS GROUP, INC., THE	784F5XWPLTWKTBV3E584	925,362	50,771,518	2,027,008	4,762,553	8,063,480	21,840,276	12,951,074	1,127,127	343,969
4	BANK OF AMERICA CORPORATION	9DJT3UXIJIZJI4WXO774	2,377,362	37,916,534	1,285,644	1,163,513	9,237,398	21,154,937	4,114,228	960,814	411,040
5	MORGAN STANLEY	IGJSJL3JD5P30I6NJZ34	875,964	34,992,111	1,386,630	1,616,899	4,885,225	17,755,842	8,882,192	465,323	82,104
6	WELLS FARGO & COMPANY	PBLD0EJDB5FW0LXP3B76	1,887,792	11,365,559	197,266	247,340	4,454,160	5,062,676	1,368,051	36,066	5,901
7	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	279,310	8,464,723	368,158	529,858	1,089,065	5,977,496	382,817	117,331	42,675
8	MIZUHO AMERICAS LLC		39,954	6,424,676	14,521	2,511	361,515	5,966,145	78,868	1,116	8,149
9	SMBC AMERICAS HOLDINGS, INC.		22,878	4,571,266	203,310	1,437,225	712,375	1,572,572	645,555	229	3,768
10	STATE STREET CORPORATION	549300ZFEEJ2IP5VME73	228,332	2,257,488	4,801	0	2,212,464	11,930	28,293	0	73,929
11	BANK OF NEW YORK MELLON CORPORATION, THE	WFLLPEPC7FZXENRZV188	346,205	1,064,190	26,451	108	292,171	724,501	20,794	165	118,906
12	BARCLAYS US LLC	213800H14XVWOV87OI72	155,685	791,931	28,633	347,041	336,507	23,472	0	56,278	41
13	RBC US GROUP HOLDINGS LLC		123,887	521,173	141,353	153,784	19,371	205,994	355	315	250
14	U.S. BANCORP	N1GZ7BBF3NP8GI976H15	475,775	457,984	14,371	1,300	61,791	268,239	103,863	8,420	496
15	PNC FINANCIAL SERVICES GROUP, INC., THE	CFGNEKW0P8842LEUIA51	392,854	402,731	5,099	5,383	22,078	329,359	31,094	9,719	771
16	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	125,614	384,574	8,796	4,352	233,344	75,833	6,665	55,583	0
17	MUFG AMERICAS HOLDINGS CORPORATION	5493004K1ECE43Q0BX47	170,708	312,592	4,473	394	223,138	76,890	7,495	201	319
18	TD GROUP US HOLDINGS LLC	549300ARWZ5E3L64UH29	384,067	303,456	75,037	3,613	15,478	208,765	562	0	0
19	NORTHERN TRUST CORPORATION	549300GLF98S992BC502	121,869	300,549	0	0	281,757	17,936	857	0	3,838
20	SUNTRUST BANKS, INC.	7E1PDLW1JL6TS0BS1G03	220,667	242,087	3,754	13,691	20,611	152,718	45,951	5,361	106
21	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	373,191	218,790	410	0	12,514	200,613	672	4,581	184
22	CITIZENS FINANCIAL GROUP, INC.	2138004JDDA4ZQUPFW65	161,724	161,206	3,656	0	9,624	124,791	20,033	3,102	360
23	DB USA CORPORATION	529900RO45LRDMWLRI57	133,145	136,281	4,601	88,378	19,476	22,705	0	1,121	0
24	BNP PARIBAS USA, INC.	RKPI3RZGV1V1FJTH5T61	120,526	129,791	117	5	110,314	17,609	1,746	0	19
25	FIFTH THIRD BANCORP	THRNG6BD57P9QWTQLG42	167,853	115,453	1,008	229	6,857	77,007	24,558	5,794	449
		-					·	·	·		
TOP 25	HOLDING COMPANIES WITH DERIVATIVES		\$14,806,327	\$272,537,660	\$7,886,062	\$15,688,325	\$55,764,441	\$139,987,587	\$47,527,681	\$5,683,563	\$2,724,336

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

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

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

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

DISTRIBUTION OF DERIVATIVE CONTRACTS TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

		LEGAL			PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
		ENTITY	TOTAL	TOTAL	EXCH TRADED	отс		FOREIGN EXCH	EQUITY	OTHER	CREDIT
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	CONTRACTS	CONTRACTS	CONTRACTS	CONTRACTS	CONTRACTS	CONTRACTS	DERIVATIVES
					(%)	(%)	(%)	(%)	(%)	(%)	(%)
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	6.8	93.2	73.2	20.1	3.0	1.4	2.3
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	3.2	96.8	63.6	30.3	1.8	0.7	3.6
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	10.6	89.4	88.8	10.8	0.1	0.0	0.4
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	2.1	97.9	68.7	25.6	2.7	0.1	2.8
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,667,769	11,039,117	3.8	96.2	93.2	3.7	2.2	0.6	0.3
6	HSBC NA	1IE8VN30JCEQV1H4R804	177,494	5,458,824	2.6	97.4	72.5	23.2	1.5	0.6	2.1
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	225,137	2,264,710	0.2	99.8	1.0	97.8	0.0	1.2	0.0
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	271,195	1,063,628	2.4	97.6	28.1	71.9	0.0	0.0	0.0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	467,322	457,138	3.4	96.6	85.1	12.7	0.0	0.3	1.8
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	380,593	406,616	2.6	97.4	90.5	4.3	1.3	1.5	2.4
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	121,427	301,799	0.0	100.0	4.6	95.2	0.2	0.0	0.0
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,366	297,878	0.7	99.3	96.9	2.8	0.1	0.1	0.1
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	214,042	246,288	7.1	92.9	79.2	3.7	14.0	0.8	2.2
14	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	301,450	204,138	0.0	100.0	97.8	2.2	0.0	0.0	0.0
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	306,751	161,602	0.3	99.7	89.2	1.1	0.0	6.9	2.8
16	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	161,403	161,206	2.3	97.7	90.7	7.4	0.0	0.0	1.9
17	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	147,398	108,976	1.1	98.9	73.8	12.6	2.4	6.3	5.0
18	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	139,878	108,508	1.5	98.5	88.2	5.3	0.0	6.2	0.3
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	128,089	92,431	1.1	98.9	92.4	1.3	0.0	1.1	5.2
20	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	39,779	83,336	1.1	98.9	95.7	0.5	0.2	3.6	0.0
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	119,582	79,643	0.0	100.0	99.1	0.9	0.0	0.0	0.0
22	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	140,568	72,800	0.3	99.7	17.6	70.2	0.9	0.0	11.4
23	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	219,793	60,630	0.2	99.8	98.0	0.9	0.0	0.0	1.1
24	COMPASS BANK	C90VT034M03BN29IRA40	92,635	47,460	7.3	92.7	93.5	3.3	1.8	0.0	1.4
25	HUNTINGTON NATIONAL BANK		108,053	43,905	0.4	99.6	80.1	5.4	0.8	8.3	5.3
TOP 25 C	COMMERCIAL BANKS, SAS & TCs WITH DERIVATIVES		\$11,257,394	\$200,539,455	\$11,727,539	\$188,811,916	\$148,504,590	\$42,858,325	\$3,672,089	\$1,371,983	\$4,132,468
OTHER C	OMMERCIAL BANKS, SAS & TCs WITH DERIVATIVES		5,009,419	742,004	5,091	736,913	678,671	42,311	3,155	5,407	12,460
TOTAL F	OR COMMERCIAL BANKS, SAS & TCs WITH DERIVATIVE	S	16,266,813	201,281,459	11,732,630	189,548,829	149,183,262	42,900,636	3,675,244	1,377,390	4,144,928
				(0.1)	(0.1)	(0.1)	(a)	(0.1)	(0.1)	(0.1)	(0.1)
TOD 05 0				(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	COMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMER			99.6	5.8	93.8	73.8	21.3	1.8	0.7	2.1
	OMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMER			0.4	0.0	0.4	0.3	0.0	0.0	0.0	0.0
TOTAL F	OR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COM	IMERCIAL BANKS, SAS & TCS WITH D	EKIVATIVES	100.0	5.8	94.2	74.1	21.3	1.8	0.7	2.1

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

Note: "Other" is defined as the sum of commodity and equity contracts. Note: Numbers may not add up to total due to rounding. Source: Call reports, Schedule RC-L

CREDIT EQUIVALENT EXPOSURES TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

						BILATERALLY		TOTAL CREDIT	(%)
		LEGAL			TOTAL	NETTED CURRENT	POTENTIAL	EXPOSURE T	OTAL CREDIT
		ENTITY	TOTAL		RISK-BASED	CREDIT	FUTURE	FROM ALL	EXPOSURE
RANK	BANK NAME	INDENTIFIER		DERIVATIVES	CAPITAL	EXPOSURE	EXPOSURE	CONTRACTS	TO CAPITAL
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$201,483	\$132,753	\$215,223	\$347,976	173
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	156,132	61,474	141,902	203,376	130
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	33,073	54,673	66,338	121,011	366
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	164,145	40,116	54,306	94,422	58
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,667,769	11,039,117	165,836	13,567	32,144	45,711	28
6	HSBC NA	1IE8VN30JCEQV1H4R804	177,494	5,458,824	23,248	5,602	20,900	26,502	114
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	225,137	2,264,710	18,064	5,015	9,013	14,028	78
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	271,195	1,063,628	19,800	3,671	5,621	9,292	47
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	467,322	457,138	46,354	1,782	5,429	7,211	16
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	380,593	406,616	37,457	3,455	195	3,650	10
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	121,427	301,799	9,934	913	2,188	3,101	31
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,366	297,878	14,063	781	481	1,262	9
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	214,042	246,288	22,645	1,281	2,638	3,919	17
14	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	301,450	204,138	28,057	330	977	1,307	5
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	306,751	161,602	28,923	1,011	3,056	4,067	14
16	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	161,403	161,206	17,459	589	1,074	1,664	10
17	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	147,398	108,976	16,951	836	1,786	2,622	15
18	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	139,878	108,508	15,748	545	768	1,312	8
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	128,089	92,431	13,613	345	424	769	6
20	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	39,779	83,336	3,510	5	12	17	0
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	119,582	79,643	12,455	220	147	367	3
22	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	140,568	72,800	16,569	187	1,890	2,077	13
23	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	219,793	60,630	23,462	274	212	486	2
24	COMPASS BANK	C90VT034M03BN29IRA40	92,635	47,460	9,601	246	182	428	4
25	HUNTINGTON NATIONAL BANK		108,053	43,905	11,477	492	843	1,335	12
TOD 25 0	ONMATOCIAL DANKS CAS 9 TO MITH DEDUKA	TIVES	¢11 0F7 004	¢200 F20 4FF	¢1 110 050	¢220.475	dE/7 747	¢007.040	04
	OMMERCIAL BANKS, SAS & TCs WITH DERIVATION		\$11,257,394	\$200,539,455	\$1,110,059	\$330,165	\$567,747	\$897,912	81
	OMMERCIAL BANKS, SAS & TCs WITH DERIVAT		5,009,419	742,004	550,011	5,098	5,578	10,676	2
TOTAL AN	MOUNT FOR COMMERCIAL BANKS, SAS & TCs \	WITH DEKIVATIVES	16,266,813	201,281,459	1,660,071	335,263	573,325	908,588	55

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.

Source: Call reports, Schedule RC-R.

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.

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

					TOTAL	%	TOTAL	%
		LEGAL			HELD FOR	HELD FOR	NOT FOR	NOT FOR
		ENTITY	TOTAL	TOTAL	TRADING	TRADING	TRADING	TRADING
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	& MTM	& MTM	MTM	MTM
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$57,415,506	99.5	\$284,429	0.5
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	49,288,223	99.8	99,761	0.2
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	46,889,082	100.0	21,794	0.0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	19,333,669	97.4	523,239	2.6
TOD 4 00	DAMAEDOLAL DANKO CA. A TO MITH DEDIV	ATIMEC	ΦE (02 ((0	ф177 770 001	#170 00/ 400	00.5	#000 000	0.5
	DMMERCIAL BANKS, SAs & TCs WITH DERIV		\$5,693,669	\$177,778,821	\$172,926,480	99.5	\$929,223	0.5
OTHER C	COMMERCIAL BANKS, SAs & TCs WITH DERIV	VATIVES	10,573,144	23,502,638	21,591,349	92.7	1,689,479	7.3
TOTAL A	MOUNT FOR COMMERCIAL BANKS, SAs & TO	Cs WITH DERIVATIVES	16,266,813	201,281,459	194,517,829	98.7	2,618,702	1.3

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

GROSS FAIR VALUES OF DERIVATIVE CONTRACTS TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

					TRAD	DING	NOT FOR	TRADING	CREDIT DE	RIVATIVES
		LEGAL			GROSS	GROSS	GROSS	GROSS	GROSS	GROSS
		ENTITY	TOTAL	TOTAL	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	FAIR VALUE*	FAIR VALUE**	FAIR VALUE*	FAIR VALUE**	FAIR VALUE*	FAIR VALUE**
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$534,183	\$504,209	\$2,154	\$1,824	\$15,108	\$16,105
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	394,652	384,031	870	761	16,866	17,439
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	514,980	506,200	265	217	3,797	4,027
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	156,115	142,894	11,786	16,274	5,598	5,689
TOP 4 CO	DMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES		\$5,693,669	\$177,778,821	\$1,599,930	\$1,537,334	\$15,075	\$19,076	\$41,369	\$43,260
OTHER C	OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES		10,573,144	23,502,638	99,136	95,908	9,955	8,205	1,783	1,868
TOTAL AN	MOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVA	TIVES	16,266,813	201,281,459	1,699,066	1,633,242	25,030	27,281	43,152	45,128

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

TRADING REVENUES FROM CASH INSTRUMENTS AND DERIVATIVES TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

NOTE: REVENUE FIGURES ARE FOR THE QUARTER (NOT YEAR-TO-DATE)

RANK	BANK NAME	LEGAL ENTITY INDENTIFIER	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	\$2,292,334	\$59,038,291	\$5,288	\$1,192	\$924	\$2,319	\$285	\$568
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	2,273	1,331	461	307	101	73
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	246	629	(112)	(63)	0	(208)
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	984	287	321	239	41	96
TOP 4 C	OMMERCIAL BANKS, SAS & TCs WITH DERIVATIVES		\$5,693,669	\$177,778,821	\$8,791	\$3,439	\$1,594	\$2,802	\$427	\$529
OTHER (COMMERCIAL BANKS, SAS & TCs WITH DERIVATIVES		10,573,144	23,502,638	1,246	639	662	93	(104)	(44)
TOTAL A	MOUNT FOR COMMERCIAL BANKS, SAS & TCs WITH	DERIVATIVES	16,266,813	201,281,459	10,037	4,078	2,256	2,895	323	485

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

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 MARCH 31, 2019, MILLIONS OF DOLLARS

RANK BANK NAME	LEGAL ENTITY INDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	INT RATE MATURITY < 1 YR	INT RATE MATURITY 1 - 5 YRS	INT RATE MATURITY > 5 YRS	INT RATE ALL MATURITIES	FX and GOLD MATURITY < 1 YR	FX and GOLD MATURITY 1 - 5 YRS	FX and GOLD MATURITY > 5 YRS	FX and GOLD ALL MATURITIES
1 JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59.038.291	\$29,506,981	\$17.941.892	\$9,359,886	\$56,808,759	\$7.034.212	\$2,129,605	\$1,025,492	\$10,189,309
2 CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	22,631,077	3,815,843	3,027,814	29,474,734	12,837,240	747,925	268,308	13,853,473
3 GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	21,006,044	6,994,656	6,020,928	34,021,628	3,475,060	690,625	558,565	4,724,250
4 BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	6,693,570	4,887,276	2,731,031	14,311,877	4,568,560	495,920	186,241	5,250,721
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DE	RIVATIVES	\$5,693,669	\$177,778,821	\$79,837,672	\$33,639,667	\$21,139,659	\$134,616,998	\$27,915,072	\$4,064,075	\$2,038,606	\$34,017,753
OTHER COMMERCIAL BANKS, SAs & TCs WITH D	ERIVATIVES	10,573,144	23,502,638	8,087,781	5,347,169	3,121,197	16,556,147	4,711,609	300,322	143,305	5,155,236
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAS	& TCs WITH DERIVATIVES	16,266,813	201,281,459	87,925,453	38,986,836	24,260,856	151,173,145	32,626,681	4,364,397	2,181,911	39,172,989

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

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY (PRECIOUS METALS) TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

		LEGAL			PREC METALS	PREC METALS	PREC METALS	PREC METALS
		ENTITY	TOTAL	TOTAL	MATURITY	MATURITY	MATURITY	ALL
RANK	C BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$16,621	\$888	\$0	\$17,509
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	11,180	511	0	11,691
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	0	0	0	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	0	0	0	0
TOP 4	COMMERCIAL BANKS, SAs & TCs WITH DERI	VATIVES	\$5,693,669	\$177,778,821	\$27,801	\$1,399	\$0	\$29,200
OTHE	R COMMERCIAL BANKS, SAS & TCs WITH DER	IVATIVES	10,573,144	23,502,638	8,653	720	0	9,373
TOTA	L FOR COMMERCIAL BANKS, SAs & TCs WITH	DERIVATIVES	16,266,813	201,281,459	36,454	2,119	0	38,573

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

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 MARCH 31, 2019, MILLIONS OF DOLLARS

		LEGAL			OTHER COMM	OTHER COMM	OTHER COMM	OTHER COMM	EQUITY	EQUITY	EQUITY	EQUITY
		ENTITY	TOTAL	TOTAL	MATURITY	MATURITY	MATURITY	ALL	MATURITY	MATURITY	MATURITY	ALL
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$599,298	\$79,402	\$4,494	\$683,194	\$1,727,078	\$618,196	\$96,686	\$2,441,960
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	124,356	41,750	3,599	169,705	377,334	134,689	23,620	535,643
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	3,070	1,237	0	4,307	9,650	13,087	1,977	24,714
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	15,665	4,342	37	20,044	451,172	104,282	3,214	558,668
TOP 4 C	DMMERCIAL BANKS, SAS & TCs WITH DERIVA	ATIVES	\$5,693,669	\$177,778,821	\$742,389	\$126,731	\$8,130	\$877,250	\$2,565,234	\$870,254	\$125,497	\$3,560,985
OTHER (OMMERCIAL BANKS, SAs & TCs WITH DERIV	/ATIVES	10,573,144	23,502,638	47,285	64,031	251	111,568	149,356	87,536	17,579	254,471
TOTAL F	OR COMMERCIAL BANKS, SAS & TCs WITH D	ERIVATIVES	16,266,813	201,281,459	789,674	190,762	8,381	988,818	2,714,590	957,790	143,076	3,815,456

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

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 MARCH 31, 2019, MILLIONS OF DOLLARS

	LEGAL					CREDIT DERI				CREDIT DER SUB-INVESTM		
	ENTITY	TOTAL	TOTAL	TOTAL CREDIT	MATURITY	MATURITY	MATURITY	ALL	MATURITY	MATURITY	MATURITY	ALL
RANK BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	DERIVATIVES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES
1 JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$59,038,291	\$1,338,356	\$217,393	\$643,343	\$155,315	\$1,016,051	\$78,298	\$198,741	\$45,266	\$322,305
2 CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	51,219,006	1,831,022	335,718	1,005,172	131,233	1,472,123	98,652	234,115	26,132	358,899
3 GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	47,085,103	174,227	22,069	57,721	19,148	98,938	10,357	52,978	11,954	75,289
4 BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	20,436,421	579,513	172,712	213,674	43,276	429,662	56,483	79,383	13,985	149,851
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DEF	RIVATIVES	\$5,693,669	\$177,778,821	\$3,923,118	\$747,892	\$1,919,910	\$348,972	\$3,016,774	\$243,790	\$565,217	\$97,337	\$906,344
OTHER COMMERCIAL BANKS, SAS & TCs WITH DE	RIVATIVES	10,573,144	23,502,638	221,810	15,580	56,103	17,620	89,303	15,447	95,588	21,473	132,507
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs &	TCs WITH DERIVATIVES	16,266,813	201,281,459	4,144,928	763,472	1,976,013	366,592	3,106,077	259,237	660,805	118,810	1,038,851

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

DISTRIBUTION OF CREDIT DERIVATIVE CONTRACTS HELD FOR TRADING TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

						TOTAL C	REDIT		PUR	CHASED			S	OLD	
1		LEGAL			TOTAL	DERIVA	TIVES	CREDIT	TOTAL		OTHER	CREDIT	TOTAL		OTHER
1		ENTITY	TOTAL	TOTAL	CREDIT			DEFAULT	RETURN	CREDIT	CREDIT	DEFAULT	RETURN	CREDIT	CREDIT
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES		PURCHASED	SOLD	SWAPS	SWAPS	OPTIONS	DERIVATIVES	SWAPS			DERIVATIVES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$2,292,334	\$57,699,935	\$1,338,356	\$677,635	\$660,721	\$628,765	\$26,034	\$18,017	\$4,819	\$618,619	\$21,189	\$20,700	\$213
2	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,430,122	49,387,984	1,831,022	937,704	893,318	848,458	20,706	68,540	0	810,711	6,676	75,931	0
3	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	195,860	46,910,876	174,227	94,945	79,282	85,771	2,768	6,271	135	70,027	2,828	6,334	93
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	1,775,353	19,856,908	579,513	296,377	283,136	233,334	9,290	53,753	0	220,868	13,694	48,574	0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,667,769	11,001,212	37,905	23,306	14,599	3,883	0	100	19,323	2,828	0	0	11,771
6	HSBC NA	1IE8VN30JCEQV1H4R804	177,494	5,341,493	117,331	62,265	55,065	55,860	6,406	0	0	53,726	1,339	0	0
7	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	225,137	2,264,710	0	0	0	0	0	0	0	0	0	0	0
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	271,195	1,063,463	165	165	0	165	0	0	0	0	0	0	0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	467,322	448,718	8,420	3,133	5,287	756	0	0	2,377	30	0	0	5,257
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	380,593	396,898	9,719	2,984	6,735	15	0	0	2,969	0	0	0	6,735
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	121,427	301,799	0	0	0	0	0	0	0	0	0	0	0
12	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	133,366	297,677	201	201	0	201	0	0	0	0	0	0	0
13	SUNTRUST BANK	IYDOJBGJWY9T8XKCSX06	214,042	240,927	5,361	3,130	2,230	927	2,196	0	8	0	2,196	0	35
14	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	301,450	204,138	0	0	0	0	0	0	0	0	0	0	0
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	306,751	157,021	4,581	1,902	2,679	0	0	0	1,902	0	0	0	2,679
16	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	161,403	158,104	3,102	0	3,102	0	0	0	0	0	0	0	3,102
17	FIFTH THIRD BANK	QFROUN1UWUYU0DVIWD51	147,398	103,554	5,421	985	4,436	0	0	0	985	0	0	0	4,436
18	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	139,878	108,135	373	193	180	193	0	0	0	87	93	0	0
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	128,089	87,613	4,818	1,291	3,527	43	0	0	1,248	43	0	0	3,484
20	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	39,779	83,333	3	0	3	0	0	0	0	3	0	0	0
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	119,582	79,643	0	0	0	0	0	0	0	0	0	0	0
22	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	140,568	64,524	8,276	8,022	254	7,412	0	610	0	254	0	0	0
23	BRANCH BANKING&TRUST CO	JJKC32MCHWDI71265Z06	219,793	59,956	674	84	590	0	0	0	84	0	0	0	590
24	COMPASS BANK	C90VT034M03BN29IRA40	92,635	46,803	657	8	649	8	0	0	0	649	0	0	0
25	HUNTINGTON NATIONAL BANK		108,053	41,563	2,343	1,515	828	0	0	0	1,515	0	0	0	828
TOD 05 0			*** 057 004	*****	******	40 445 047	** ** ***	** ** ***	+17.000	****	405.045	** ***	***	4454 500	***
	DMMERCIAL BANKS, SAS & TCs WITH DERIVATIVES		\$11,257,394	\$196,406,987	\$4,132,468	\$2,115,847	\$2,016,621	\$1,865,792	\$67,399	\$147,291	\$35,365	\$1,777,846	\$48,014	\$151,539	\$39,222
	OMMERCIAL BANKS, SAS & TCs WITH DERIVATIVES	44.711.50	5,009,419	729,544	12,460	7,091	5,369	26	4,453	0	2,612	477	-	0	4,891
TOTAL AN	MOUNT FOR COMMERCIAL BANKS, SAS & TCS WITH DERIV	ATIVES	16,266,813	197,136,531	4,144,928	2,122,937	2,021,990	1,865,817	71,852	147,291	37,977	1,778,323	48,016	151,539	44,113
l					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 C/	DMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMERCIA	AL BANKS, SAs & TCs WITH DERIVATI	VES		99.7	51.0	48.7	45.0	1.6	3.6	0.9	42.9	1.2	3.7	0.9
OTHER CO	DMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIA	AL BANKS, SAs & TCs WITH DERIVATI	VES		0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1
TOTAL AN	OUNT FOR COMMERCIAL BANKS, SAS & TCs: % OF TOTA	L COMMERCIAL BANKS, SAs & TCs WI	TH DERIVATIVE	S	100.0	51.2	48.8	45.0	1.7	3.6	0.9	42.9	1.2	3.7	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

DERIVATIVES DATA REPORTED BY FFIEC 051 FILERS COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES MARCH 31, 2019, MILLIONS OF DOLLARS

Call Report Schedule SU A. Gross Notional Amount of Derivatives	1019	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17
Total gross notional amount of interest rate derivatives held for trading	\$1,149	\$623	\$751	\$736	\$684	\$542	\$729	\$749	\$655
Total gross notional amount of all other derivatives held for trading	\$24	\$2	\$2	\$5	\$7	\$5	\$5	\$6	\$2
Total gross notional amount of interest rate derivatives not held for trading	\$8,996	\$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	\$178	\$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	\$5,827	\$4,147	\$4,459	\$4,584	\$4,471	\$3,847	\$4,657	\$5,024	\$4,758
b. Foreign exchange rate and gold	\$5	\$3	\$4	\$5	\$429	\$0	\$0	\$0	\$0
c. Credit (investment grade reference asset)	\$41	\$35	\$17	\$14	\$14	\$13	\$14	\$8	\$4
d. Credit (non-investment grade reference asset)	\$25	\$12	\$12	\$12	\$11	\$11	\$11	\$11	\$11
e. Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
g. Other	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5
f. Precious metals (except gold)	\$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	\$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
c. Credit (investment grade reference asset)	\$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
e. Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
f. Precious metals (except gold)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
g. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Current credit exposure across all derivative contracts covered by the regulatory capital rules	\$66	\$49	\$78	\$126	\$64	\$44	\$57	\$49	\$39

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