

Quarterly Report on Bank Trading and Derivatives Activities

First Quarter 2021

Office of the Comptroller of the Currency
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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 1,385¹ insured U.S. commercial banks and savings associations reported trading and derivatives activities at the end of the first quarter of 2021. 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 2021, four large commercial banks represented 89.0 percent of the total banking industry notional amounts and 78.8 percent of industry net current credit exposure (NCCE) (see tables 1 and 4 in the appendix).

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

This is the 102nd 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 QuarterlyDerivatives@occ.treas.gov.

Executive Summary

- Insured U.S. commercial banks and savings associations (collectively, banks) reported trading revenue of \$10.5 billion in the first quarter of 2021, \$4.2 billion more (65.9 percent) than in the previous quarter and \$3.8 billion more (56.6 percent) than a year earlier (see table 1).
- Credit exposure from derivatives decreased in the first quarter of 2021 compared with the fourth quarter of 2020. NCCE decreased \$61.0 billion, or 12.1 percent, to \$446.0 billion (see table 5).
- Derivative notional amounts increased in the first quarter of 2021 by \$25.2 trillion, or 15.4 percent, to \$189.0 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled \$137.4 trillion or 72.7 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 \$10.5 billion in trading revenue in the first quarter of 2021, \$4.2 billion more (65.9 percent) than in the previous quarter and \$3.8 billion more (56.6 percent) than a year earlier (see table 1). The quarter-over-quarter increase in trading revenue was primarily due to increases in foreign exchange (FX), commodity, and credit trading instruments. 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 2021	4Q 2020	Q/Q Change	Q/Q % Change	1Q 2020	Y/Y Change	Y/Y % Change
Interest Rate	-\$42	\$3,616	-\$3,659	-101.2%	\$4,942	-\$4,985	-100.9%
Foreign Exchange	\$6,343	\$18	\$6,325	34631.1%	\$2,167	\$4,177	192.8%
Equity	\$2,388	\$2,480	-\$92	-3.7%	-\$1,040	\$3,428	329.7%
Commodity & Other	\$623	\$434	\$189	43.5%	\$646	-\$24	-3.7%
Credit	\$1,151	-\$243	\$1,394	573.8%	-\$35	\$1,186	3437.5%
Total Trading Revenue	\$10,462	\$6,305	\$4,157	65.9%	\$6,681	\$3,782	56.6%

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 \$27.0 billion in the first quarter of 2021 was \$8.8 billion (48.1 percent) higher than in the previous quarter. The quarter-over-quarter increase in trading revenue was primarily due to increases in foreign exchange, equity, commodity, and credit trading instruments. Year-over-year holding company trading revenue increased by \$18.0 billion (199.7 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 2021	4Q 2020	Q/Q Change	Q/Q % Change	1Q 2020	Y/Y Change	Y/Y % Change
Interest Rate	-\$1,801	\$4,963	-\$6,764	-136.3%	\$11,918	-\$13,719	-115.1%
Foreign Exchange	\$8,051	-\$628	\$8,679	1381.7%	-\$302	\$8,353	2769.2%
Equity	\$13,698	\$10,906	\$2,792	25.6%	-\$4,532	\$18,230	402.2%
Commodity & Other	\$2,665	\$1,804	\$861	47.7%	\$1,664	\$1,000	60.1%
Credit	\$4,382	\$1,181	\$3,201	271.0%	\$257	\$4,124	1603.2%
Total HC Trading Revenue	\$26,994	\$18,225	\$8,769	48.1%	\$9,006	\$17,989	199.7%

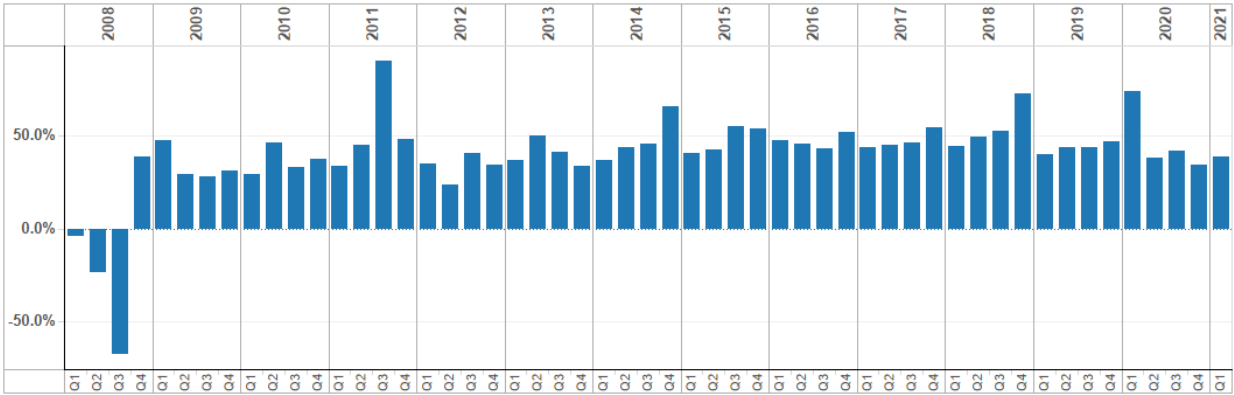
Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

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

Before the 2008 financial crisis, trading revenue at banks typically ranged from 60 percent to 80 percent of consolidated BHC trading revenue. Since the 2008 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 2021, banks generated 38.8 percent of consolidated holding company trading revenue, an increase from 34.6 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 decreased by \$402.0 billion (15.1 percent) in the first quarter of 2021 to \$2.3 trillion, driven by a \$352.0 billion (19.6 percent) decrease in receivables from interest rate contracts and a \$53.0 billion (8.8 percent) decrease in FX contracts (see table 3). GNFV decreased \$433.0 billion (16.6 percent) to \$2.2 trillion during the quarter, driven by a \$351.0 billion (20.4 percent) decrease in payables on interest rate contracts and a \$78.0 billion (12.7 percent) decrease in payables on FX contracts.

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

	1Q 2021	4Q 2020	Q/Q Change	Q/Q % Change	1Q 2020	YY Change	YY % Change
Interest rate	\$1,440	\$1,792	-\$352	-19.6%	\$1,863	-\$423	-22.7%
FX	\$548	\$601	-\$53	-8.8%	\$752	-\$204	-27.1%
Equity	\$176	\$185	-\$9	-4.9%	\$196	-\$20	-10.4%
Commodities	\$55	\$47	\$9	18.7%	\$104	-\$49	-46.7%
Credit	\$34	\$31	\$3	11.0%	\$54	-\$20	-37.0%
Gross positive fair value	\$2,253	\$2,654	-\$402	-15.1%	\$2,968	-\$715	-24.1%

	1Q 2021	4Q 2020	Q/Q Change	Q/Q % Change	1Q 2020	YY Change	YY % Change
Interest rate	\$1,371	\$1,721	-\$351	-20.4%	\$1,814	-\$444	-24.5%
FX	\$534	\$612	-\$78	-12.7%	\$768	-\$234	-30.4%
Equity	\$182	\$192	-\$9	-4.9%	\$186	-\$4	-1.9%
Commodities	\$51	\$47	\$4	9.1%	\$94	-\$43	-45.3%
Credit	\$36	\$34	\$1	3.4%	\$52	-\$16	-31.0%
Gross negative fair value	\$2,174	\$2,607	-\$433	-16.6%	\$2,914	-\$739	-25.4%

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 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 \$61.0 billion (12.1 percent) to \$446.0 billion in the first quarter of 2021 (see table 5).² Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 80.2 percent (\$1.8 trillion) in the first quarter of 2021.

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

	1Q 2021	4Q 2020	Q/Q Change	Q/Q % Change
Gross positive fair value	\$2,253	\$2,654	-\$402	-15.1%
NCCE RC-R	\$446	\$507	-\$61	-12.1%
Netting benefit RC-R	\$1,807	\$2,147	-\$340	-15.8%
Netting benefit % RC-R	80.2%	80.9%		-0.7%

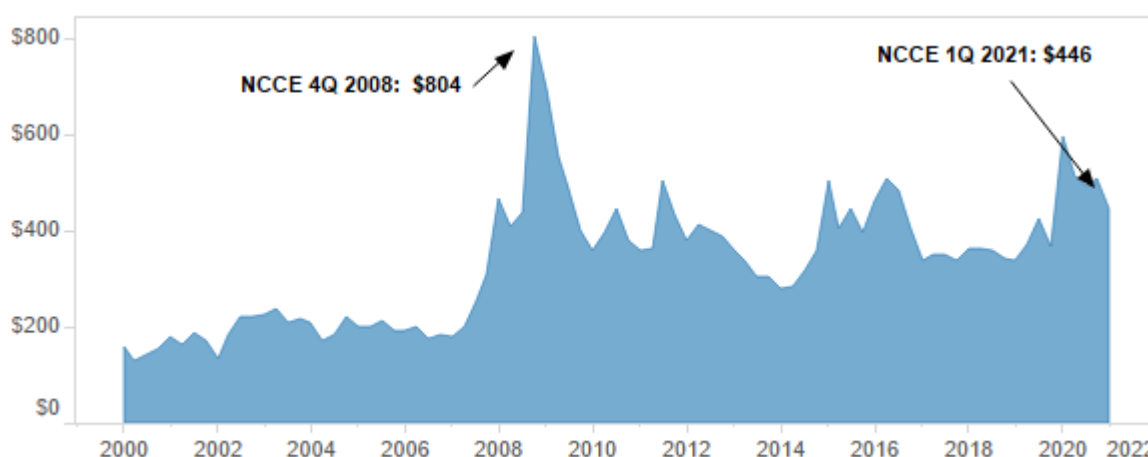
Source: Call reports, Schedules RC-L and RC-R

NCCE peaked at \$804.0 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 decline in NCCE since 2008 has largely resulted from declines in the GPFV of interest rate and credit contracts. After a large

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.

increase in NCCE during the first quarter of 2020 as markets responded to the financial impact of the COVID-19 global pandemic, NCCE ended the first quarter of 2021 lower at \$446.0 billion as more normal market activity resumed.

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 (37.5 percent) and in corporations and other counterparties (53.5 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (9.0 percent in total).

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

	Banks and securities firms	Hedge funds	Sovereign governments	Corporate and all other counterparties
1Q 2021	37.5%	2.3%	6.7%	53.5%
4Q 2020	39.8%	2.2%	8.2%	49.9%
4Q 2019	44.2%	2.5%	9.2%	44.1%
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 91.0 percent of their total NCCE at the end of the first quarter of 2021, up from 86.9 percent in the fourth quarter of 2020 (see table 7). Collateral held against hedge fund exposures increased in the first quarter to 490.2 percent. Bank exposures to hedge funds are secured, because banks take initial margin on transactions with hedge funds, in addition to fully securing any current credit exposure. Collateral coverage of corporate and sovereign exposures is much less than coverage of financial institutions and hedge funds.

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 %
1Q 2021	110.9%	490.2%	57.1%	63.8%	91.0%
4Q 2020	107.5%	467.6%	52.1%	59.5%	86.9%
4Q 2019	130.0%	485.9%	48.3%	91.8%	114.5%
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 67.8 percent held in cash (both U.S. dollar and Cash other currencies) and an additional 8.0 percent held in U.S. Treasuries and U.S. 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. government agency	Corp bonds	Equity securities	All other collateral
1Q 2021	41.3%	26.5%	6.6%	1.4%	1.6%	7.8%	14.8%
4Q 2020	39.5%	28.6%	7.8%	1.7%	1.1%	7.2%	14.1%
4Q 2019	34.4%	24.5%	11.6%	1.7%	2.3%	7.6%	17.7%
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

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 2021 average 60-day VaR	\$306	\$127	\$57	\$173
4Q 2020 average 60-day VaR	\$385	\$118	\$42	\$134
Q/Q change	-\$79	\$9	\$15	\$39
1Q 2021 total risk-based capital	\$260,288	\$164,921	\$181,994	\$37,271

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 2021 VaR capital requirement	\$917	\$380	\$171	\$518
4Q 2020 VaR capital requirement	\$1,155	\$353	\$167	\$401
Q/Q change	-\$238	\$27	\$4	\$117
1Q 2021 total risk-based capital	\$260,288	\$164,921	\$181,994	\$37,271

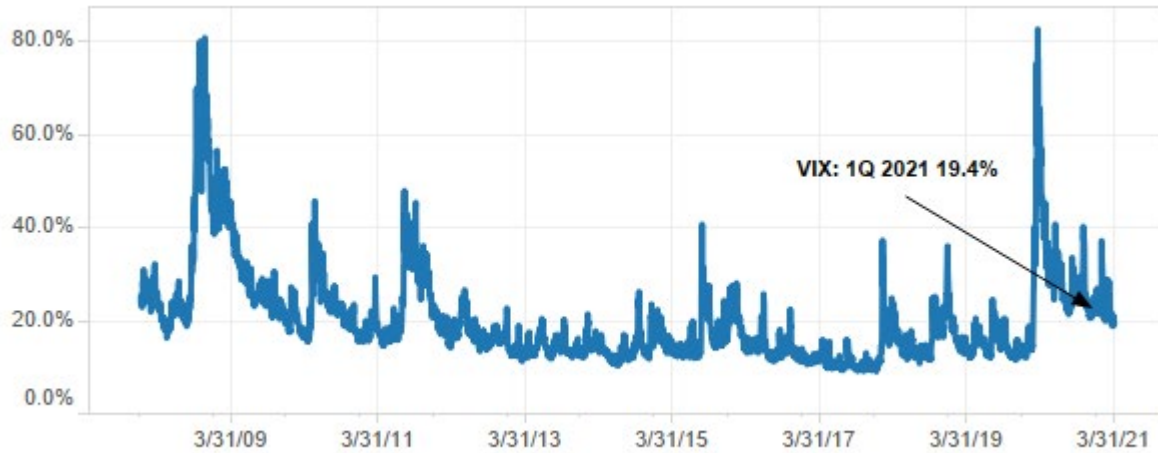
Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

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. Higher volatility as represented by the VIX is associated with increased equity trading volume, which drives increased bank and holding company equity trading revenue. The figure illustrates that there was an extended period of low volatility following the end of the 2008 financial crisis that continued until late in the first quarter of 2020. In mid-March 2020 volatility spiked as financial markets reacted to fears over the potential impact of the COVID-19 global pandemic. The VIX exceeded its previous high from the 2008 financial crisis before settling back to a more normal but still somewhat elevated level of 19.4 percent at the end of the first quarter of 2021.

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

Figure 3: Volatility Index (VIX)

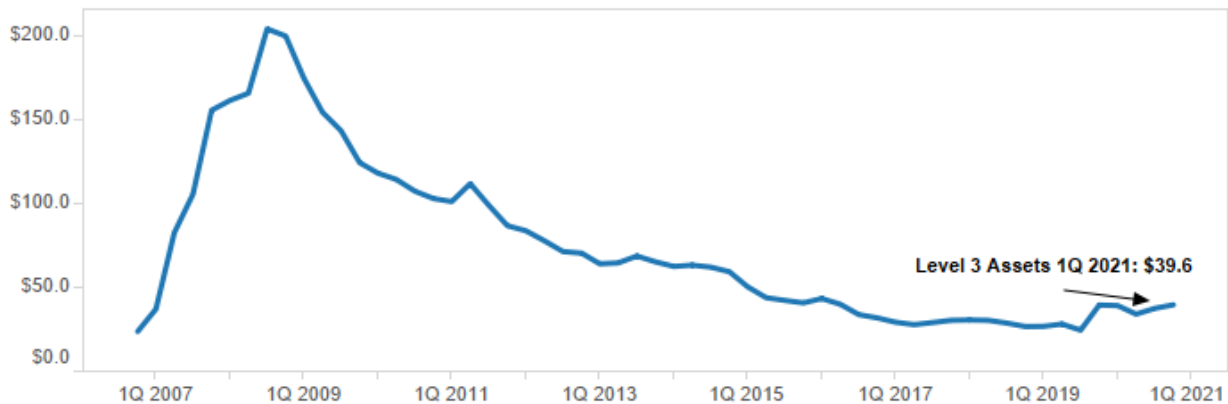


Source: Bloomberg

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 the model inputs that determine the fair value of these exposures are not derived from observable market transactions, banks use their own model 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 first quarter of 2021, banks held \$39.6 billion of level 3 trading assets, up 5.7 percent from the previous quarter, and 0.3 percent higher than a year ago. Level 3 trading assets are \$164.5 billion (80.6 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 first quarter increased by \$25.2 trillion (15.4 percent) to \$189.0 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 increases in interest rate and FX contracts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at \$137.4 trillion, or 72.7 percent of total derivatives (see table 10).

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

	1Q 2021	4Q 2020	Q/Q Change	Q/Q % Change	1Q 2020	Y/Y Change	Y/Y % Change
Interest rate	\$137,432	\$116,000	\$21,432	18.5%	\$146,027	-\$8,596	-5.9%
FX	\$42,609	\$39,596	\$3,013	7.6%	\$42,181	\$427	1.0%
Equity	\$4,005	\$3,775	\$230	6.1%	\$3,662	\$343	9.4%
Commodity	\$1,582	\$1,395	\$188	13.5%	\$1,644	-\$61	-3.7%
Credit derivatives	\$3,361	\$3,034	\$327	10.8%	\$3,986	-\$625	-15.7%
Total notional	\$188,988	\$163,799	\$25,190	15.4%	\$197,501	-\$8,512	-4.3%

Source: Call reports, Schedule RC-L

The increase in the total notional amount of derivative contracts by contract type was primarily driven by increases in swaps and futures and forwards contracts (see table 11). Swap contracts remained the leading derivatives contract type at 57.0 percent of all notional amounts.

The four banks with the most derivative activity hold 89.0 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 more information).

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

	1Q 2021	4Q 2020	Q/Q Change	Q/Q % Change	1Q 2020	Y/Y Change	Y/Y % Change
Futures and forwards	\$40,934	\$32,350	\$8,584	26.5%	\$46,804	-\$5,870	-12.5%
Swaps	\$107,718	\$96,423	\$11,295	11.7%	\$110,599	-\$2,881	-2.6%
Options	\$36,975	\$31,991	\$4,984	15.6%	\$36,111	\$864	2.4%
Credit derivatives	\$3,361	\$3,034	\$327	10.8%	\$3,986	-\$625	-15.7%
Total notional	\$188,988	\$163,799	\$25,190	15.4%	\$197,501	-\$8,512	-4.3%

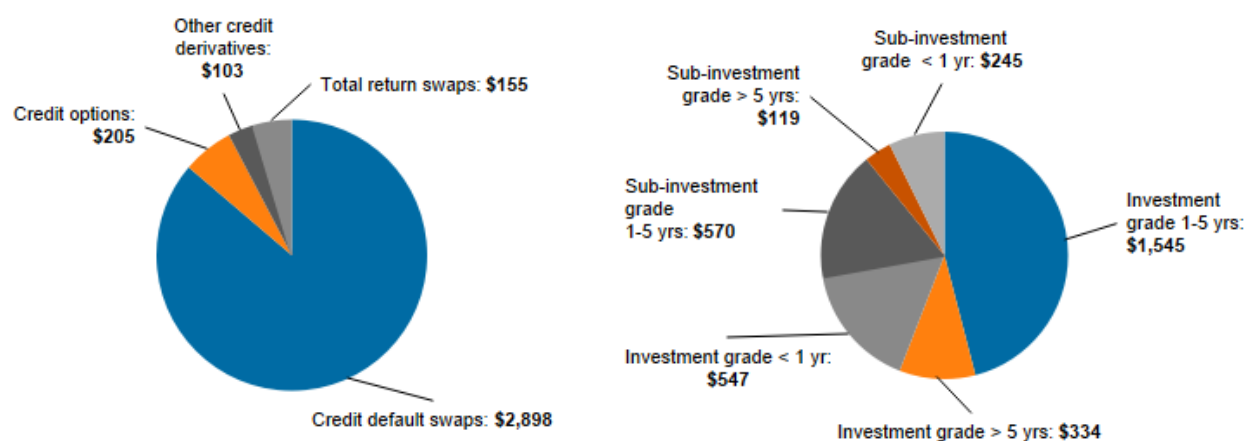
Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives increased \$327.0 billion (10.8 percent), to \$3.4 trillion, in the first quarter of 2021 (see table 10). Contracts referencing investment-grade firms increased \$191.0 billion and contracts referencing sub-investment-grade firms increased \$135.0 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 the chart on the left of figure 5, credit default swaps are the dominant product, at \$2.9 trillion (86.2 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 \$1.5 trillion or 46.0 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are \$2.4 trillion or 72.2 percent of the market (see the chart on the right in figure 5).

Figure 5: 1Q 2021 Credit Derivative Composition, in Billions of Dollars



Source: Call reports, Schedule RC-L

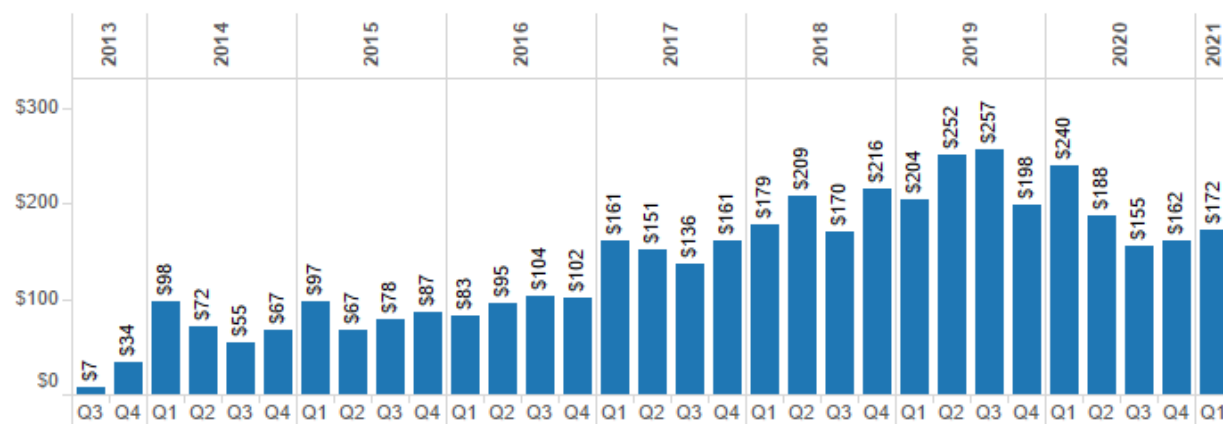
The notional amount for the 103 banks that net sold credit protection (i.e., assumed credit risk) was \$1.6 trillion, up \$153.7 billion (10.6 percent) from the fourth quarter of 2020 (see table 12 in the appendix). The notional amount for the 77 banks that net purchased credit protection (i.e., hedged credit risk) was \$1.8 trillion, \$173.08 billion higher (10.9 percent) than in the fourth quarter of 2020 (see table 12 in the appendix).

Compression Activity

Notional amounts of banks' derivative contracts have generally declined since 2013 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 first quarter of 2021, as shown in figure 6.

Figure 6: Quarterly Compression Activity, in Trillions of Dollars



Source: LCH Cleamnet

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 2021, 38.2 percent of banks’ derivative holdings were centrally cleared (see table 12). From a market factor perspective, 48.6 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 39.3 percent of credit derivative transactions were centrally cleared during the first quarter of 2021.

Centrally cleared derivative transactions were heavily concentrated at qualifying central counterparties, with 91.5 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	FX	Equity	Precious metals	Credit	Other	Total
1Q 2021	48.6%	2.0%	24.3%	2.9%	39.3%	12.3%	38.2%
4Q 2020	45.3%	1.9%	24.3%	2.1%	36.8%	12.4%	35.0%
3Q 2020	49.2%	1.9%	24.9%	2.8%	39.2%	12.9%	38.9%
2Q 2020	50.7%	1.9%	25.7%	2.0%	36.0%	12.0%	40.3%
1Q 2020	52.9%	2.0%	26.5%	2.1%	34.4%	11.8%	42.3%
4Q 2019	46.7%	1.7%	24.8%	2.8%	26.4%	11.5%	37.1%
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%	42.5%

Source: Call reports, Schedule RC-R

Glossary of Terms

Bilateral netting: A legally enforceable arrangement between a bank and a counterparty that creates a single legal obligation covering all included individual contracts. This 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 a CCP either 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.

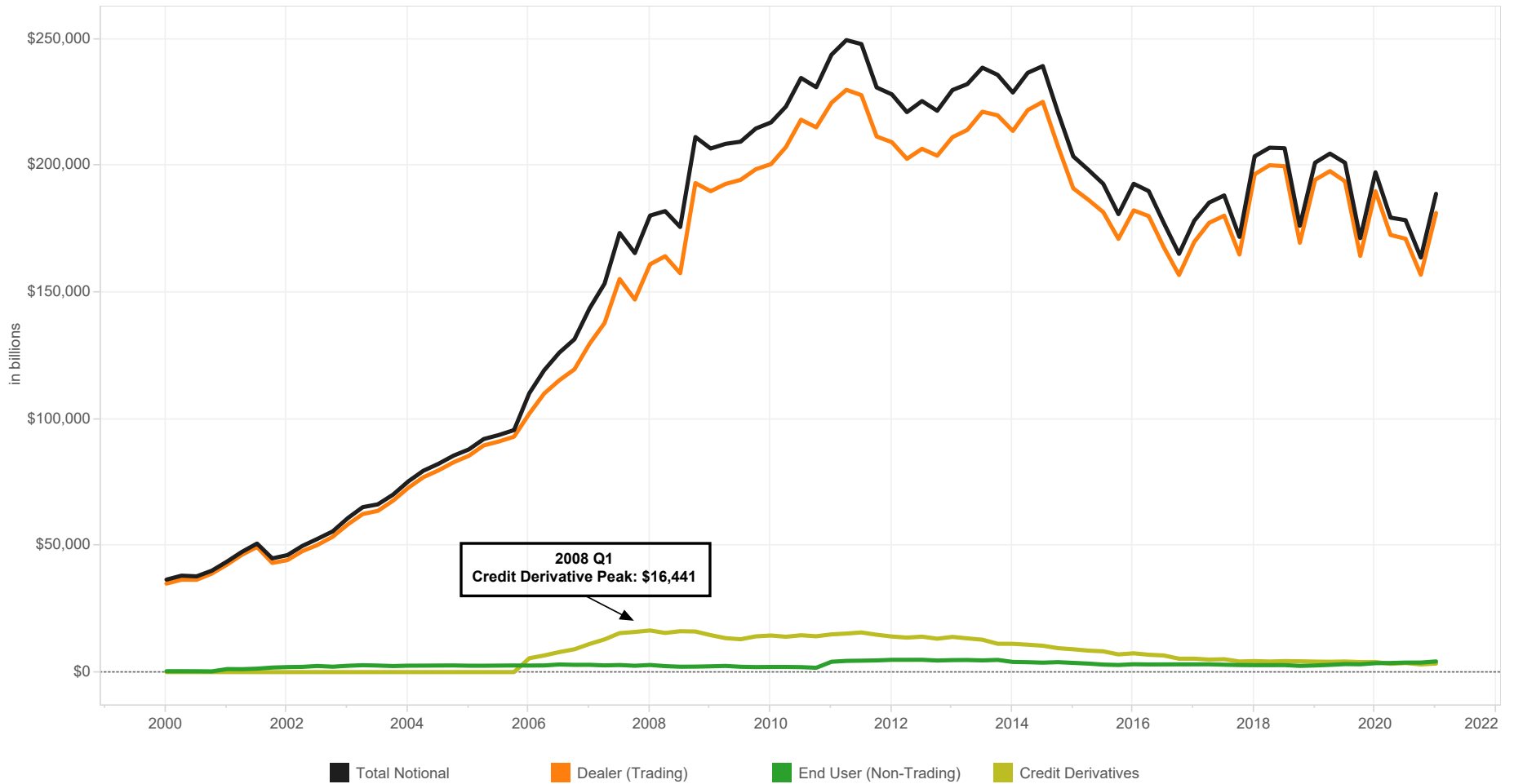
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Graph 1
Derivative Notional Amounts by Type
Insured U.S. Commercial Banks and Savings Associations

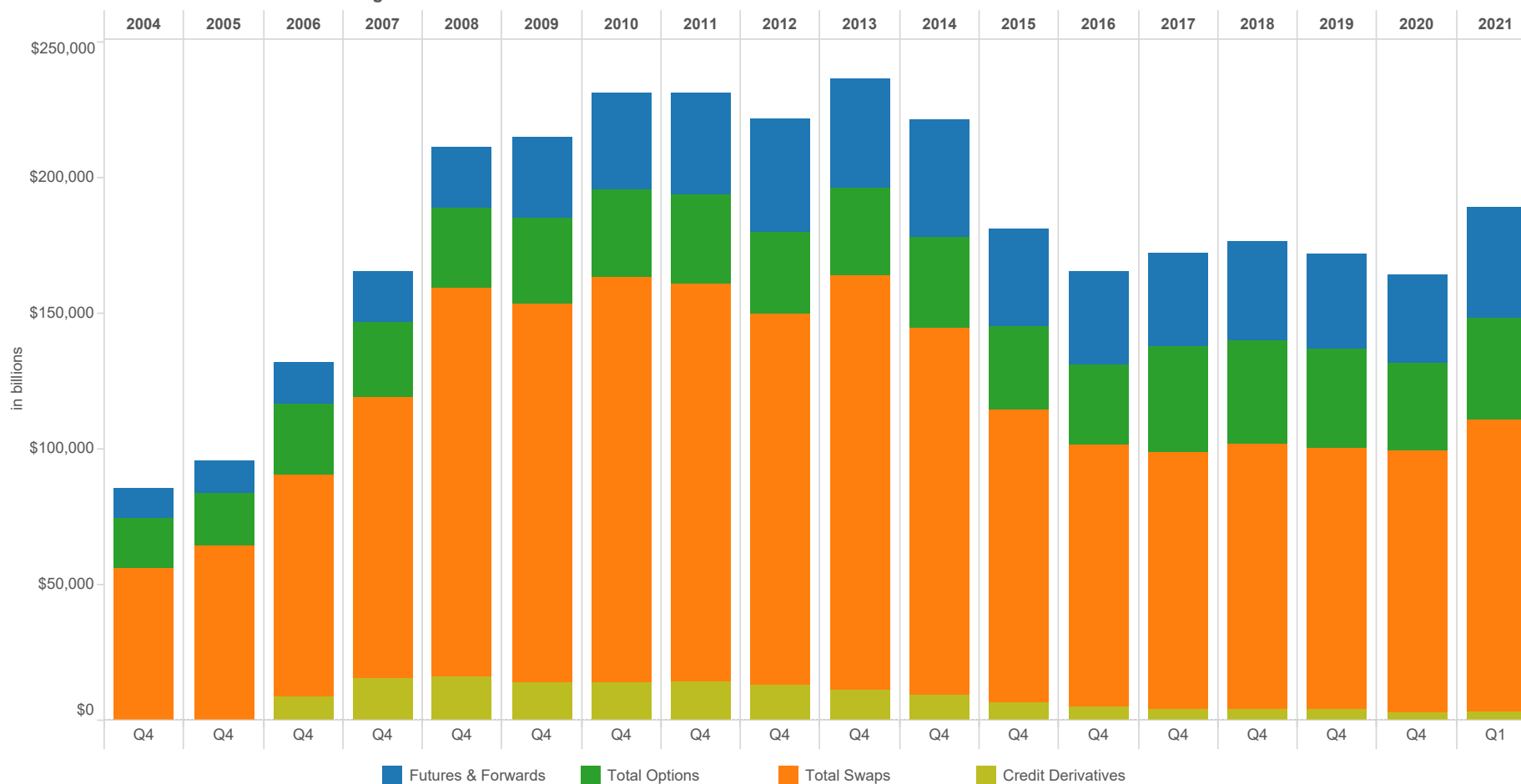


In billions of dollars

	2017				2018				2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Total Notional	\$178,335	\$185,522	\$188,351	\$171,973	\$203,795	\$207,202	\$206,995	\$176,353	\$201,282	\$204,874	\$201,256	\$171,462	\$197,501	\$179,572	\$178,579	\$163,799	\$188,988
Dealer (Trading)	169,971	177,519	180,344	165,002	196,712	200,286	199,891	169,636	194,518	197,950	193,912	164,441	189,995	172,723	171,242	156,997	181,420
End User (Non-Trading)	3,061	3,069	2,917	2,785	2,737	2,737	2,763	2,447	2,619	2,850	3,162	3,077	3,519	3,594	3,757	3,768	4,208
Credit Derivatives	5,304	4,935	5,090	4,186	4,345	4,179	4,342	4,270	4,145	4,074	4,183	3,945	3,986	3,255	3,581	3,034	3,361

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, Schedule RC-L

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



In billions of dollars

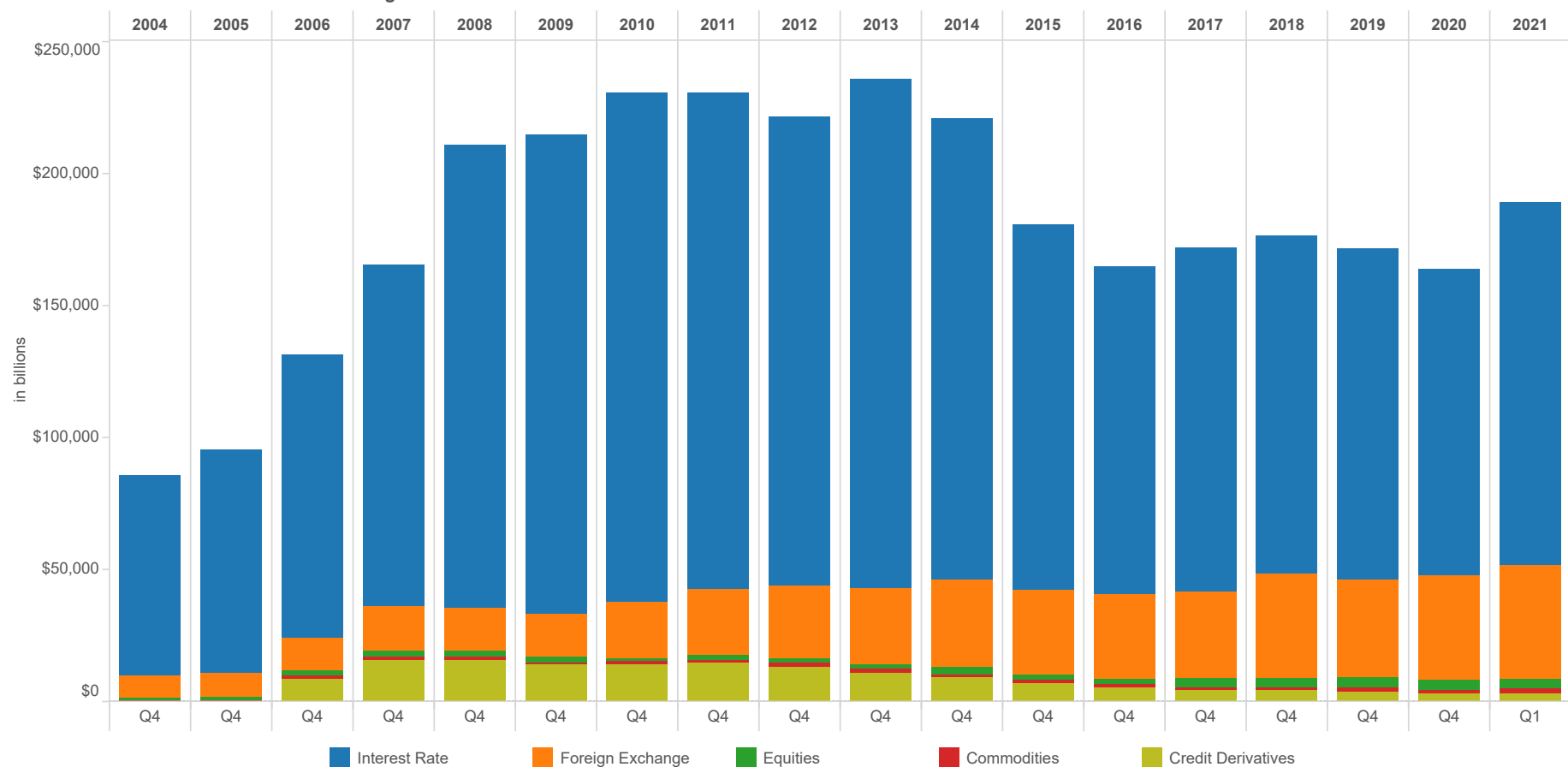
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1
Futures & Forwards	\$14,882	\$18,867	\$22,529	\$29,652	\$35,539	\$37,469	\$41,621	\$40,027	\$43,380	\$35,691	\$34,201	\$34,162	\$36,144	\$34,787	\$32,350	\$40,934
Total Options	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	36,117	31,991	36,975
Total Swaps	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	96,614	96,423	107,718
Credit Derivatives	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	3,945	3,034	3,361
Total Notional	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	171,462	163,799	188,988

*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, Schedule RC-L

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

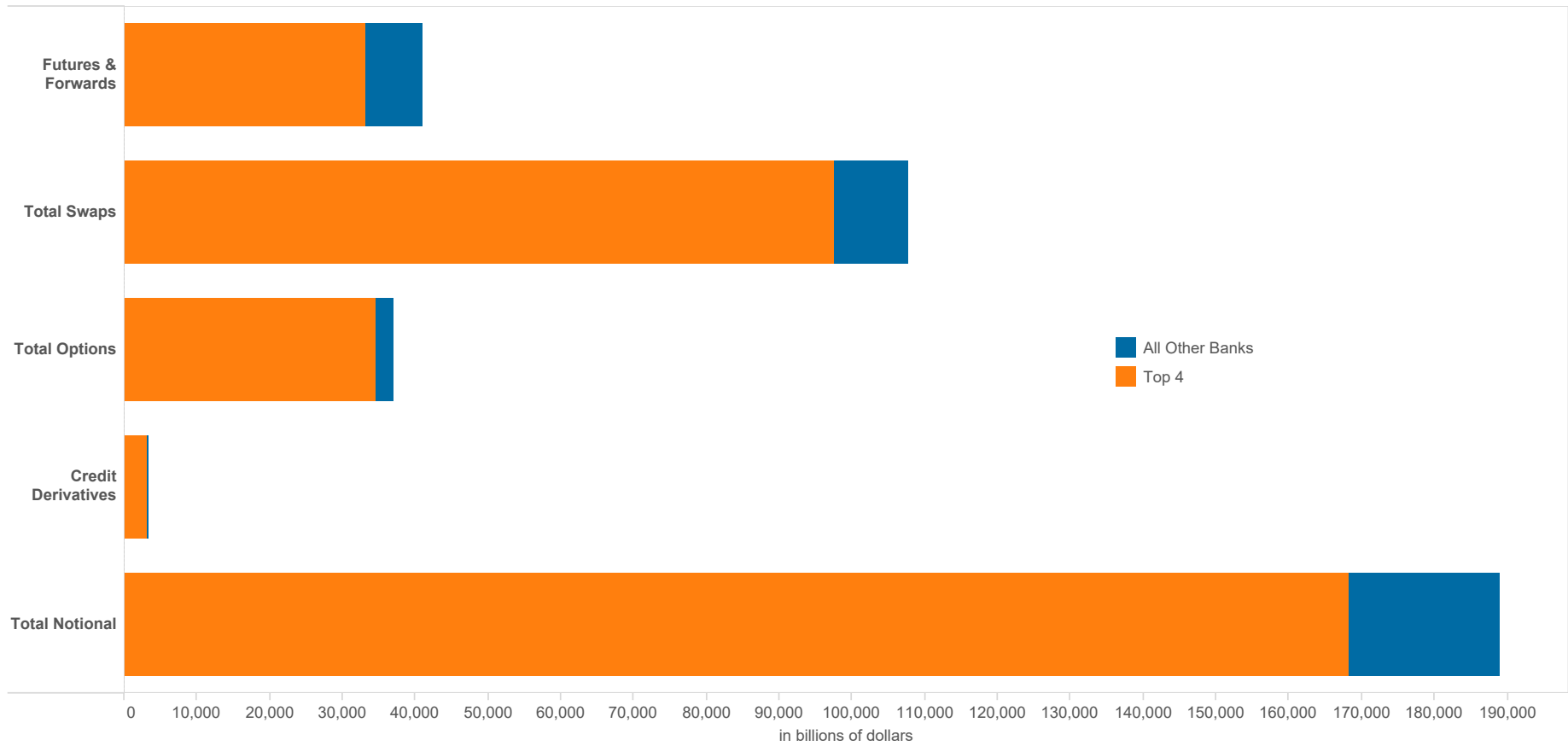


In billions of dollars

	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q1
Interest Rate	\$129,491	\$175,895	\$181,454	\$193,399	\$187,866	\$177,650	\$193,084	\$174,687	\$138,369	\$124,488	\$130,417	\$128,174	\$125,056	\$116,000	\$137,432
Foreign Exchange	16,614	16,224	16,555	20,990	25,436	27,587	28,480	33,183	32,100	31,737	32,903	39,220	37,170	39,596	42,609
Equities	2,524	2,207	1,685	1,364	1,606	1,970	2,028	2,537	2,395	2,475	3,080	3,374	3,796	3,775	4,005
Commodities	1,067	1,061	979	1,195	1,330	1,397	1,209	1,222	1,108	1,257	1,388	1,315	1,495	1,395	1,582
Credit Derivatives	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,270	3,945	3,034	3,361
Total Notional	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,959	165,252	171,973	176,353	171,462	163,799	188,988

*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, Schedule RC-L

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

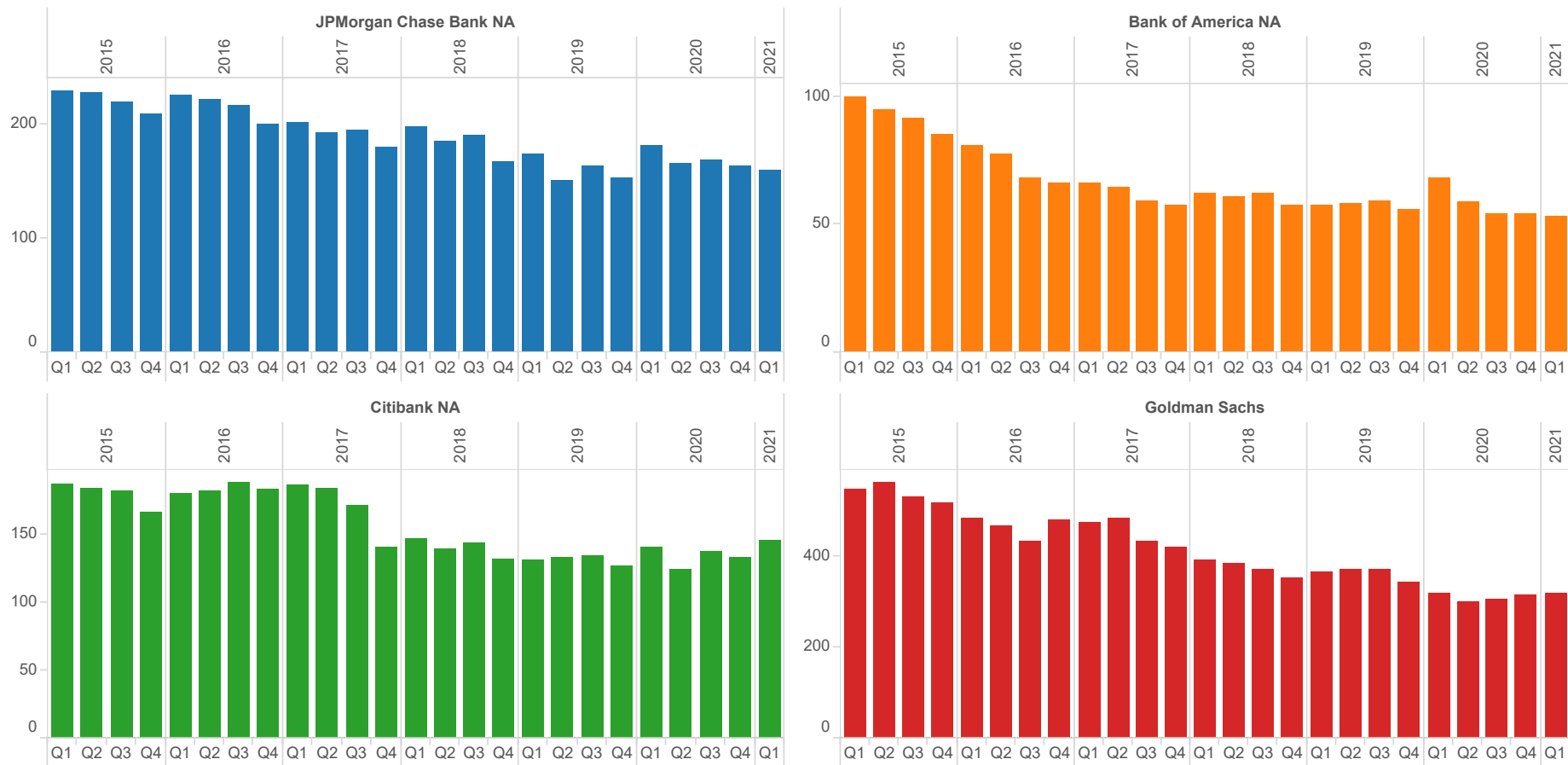


In billions of dollars

	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$33,163	\$7,771	\$40,934
Total Swaps	97,444	10,275	107,718
Total Options	34,480	2,495	36,975
Credit Derivatives	3,131	230	3,361
Total Notional	168,217	20,771	188,988

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

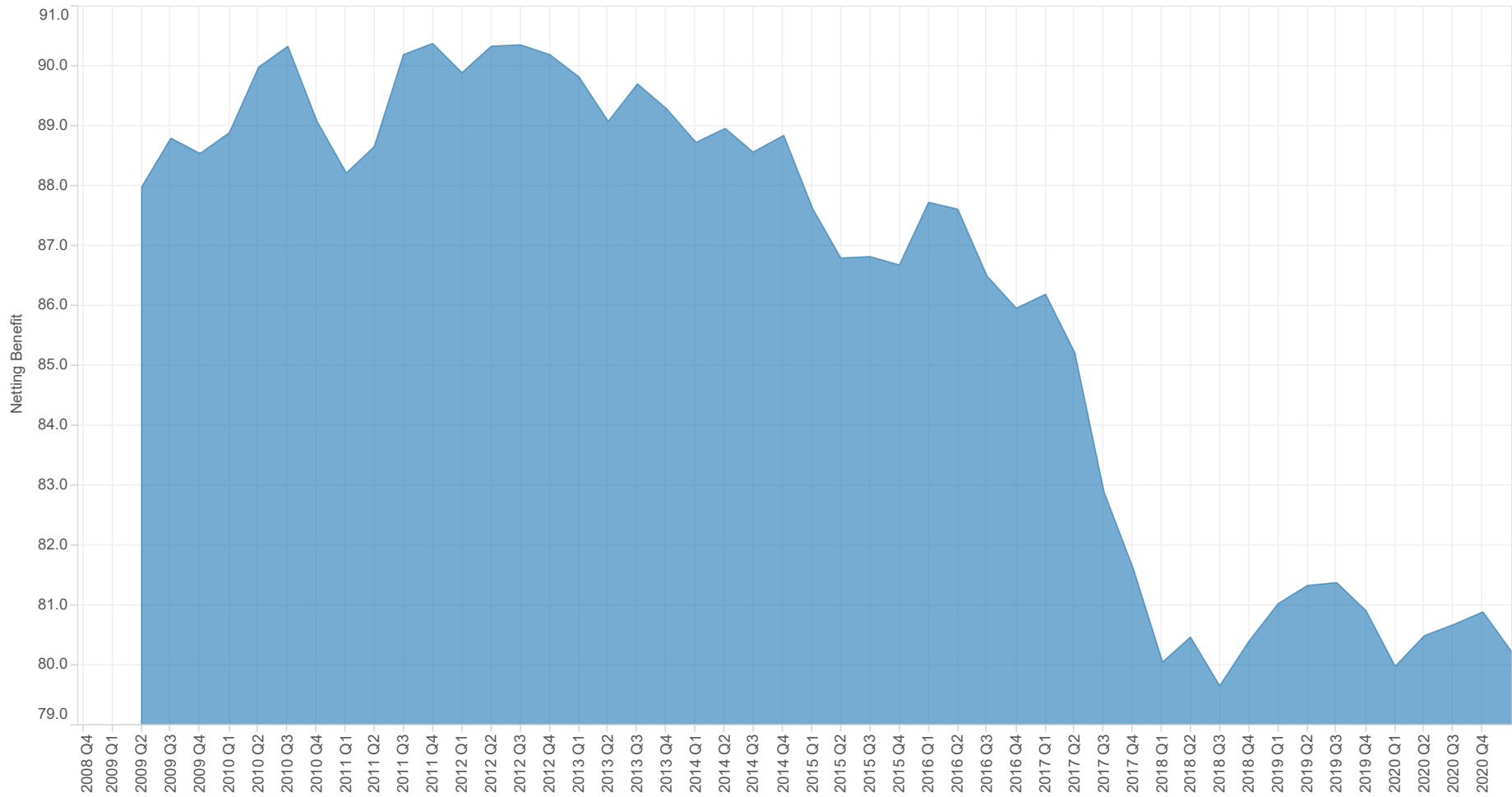
Graph 5
Credit Exposure to Risk-Based Capital (in Percentage)
Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



	2014				2015				2016				2017				2018				2019				2020				2021				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
JPMorgan Chase Bank NA	183	189	181	177	229	228	219	209	225	221	216	199	201	193	195	179	197	184	190	167	173	150	163	153	181	165	168	163	159				
Bank of America NA	109	107	107	93	100	95	91	85	81	77	68	66	66	64	59	57	62	61	62	57	58	58	59	56	68	59	54	54	53				
Citibank NA	147	156	190	173	187	184	181	166	180	181	188	183	186	184	171	140	146	139	144	132	130	132	134	126	140	125	137	132	145				
Goldman Sachs	689	620	539	516	547	563	530	516	482	467	433	481	472	484	433	420	389	384	371	354	366	372	372	344	319	299	304	314	316				
TOTAL	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1				
	248	240	224	211	238	242	232	223	226	222	217	220	220	218	205	191	195	187	188	173	178	169	176	164	174	160	165	163	165				

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, Schedule RC-R

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

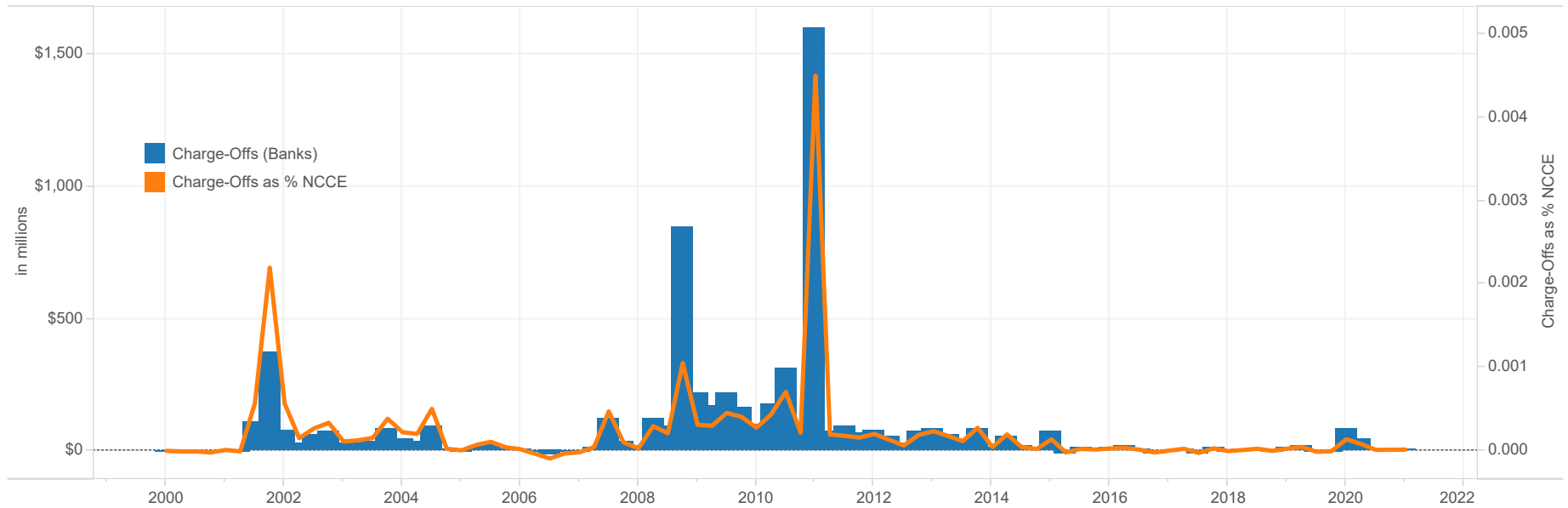


Netting Benefit

2012				2013				2014				2015				2016				2017				2018				2019				2020				2021
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1				
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	80.9	80.0	80.5	80.7	80.9	80.2

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

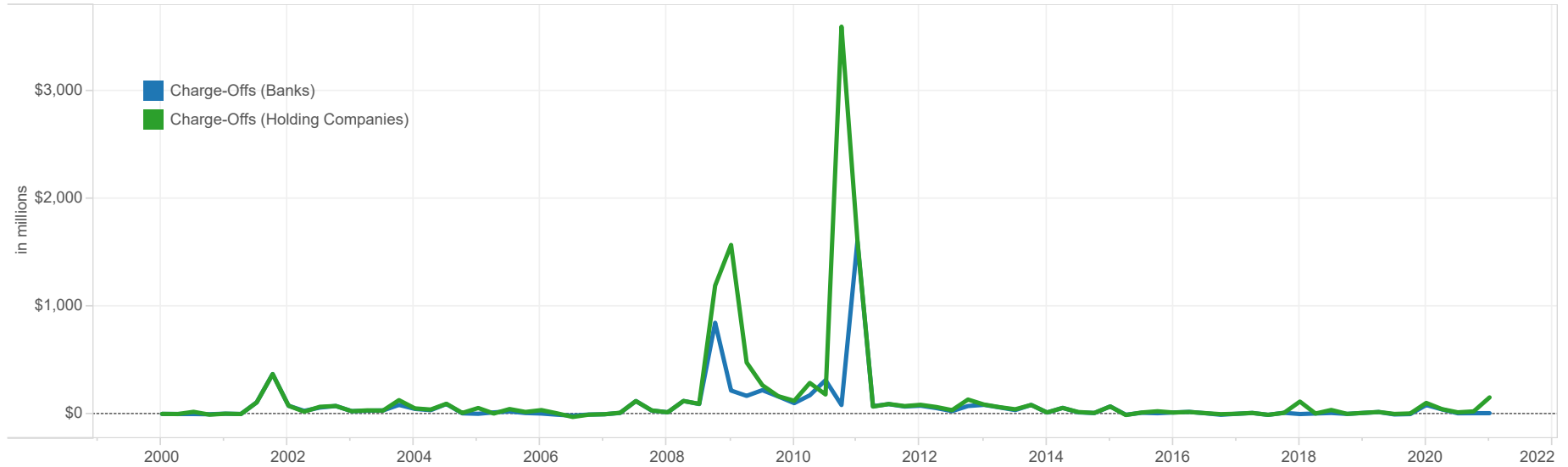
	2000				2001				2002				2003								
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Charge-Offs (Banks)	0.0	-1.0	-1.0	-3.0	2.0	-1.0	107.3	370.0	75.8	28.2	59.0	73.7	25.3	29.9	32.3	83.7					
	2004				2005				2006				2007								
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Charge-Offs (Banks)	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	314	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				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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	-1.45	82.70	42.08	5.98	6.62	6.77

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

Graph 8

Quarterly Charge-Offs/(Recoveries) From Derivatives - Holding Company

Insured U.S. Commercial Banks and Savings Associations with Derivatives Compared with Holding Companies

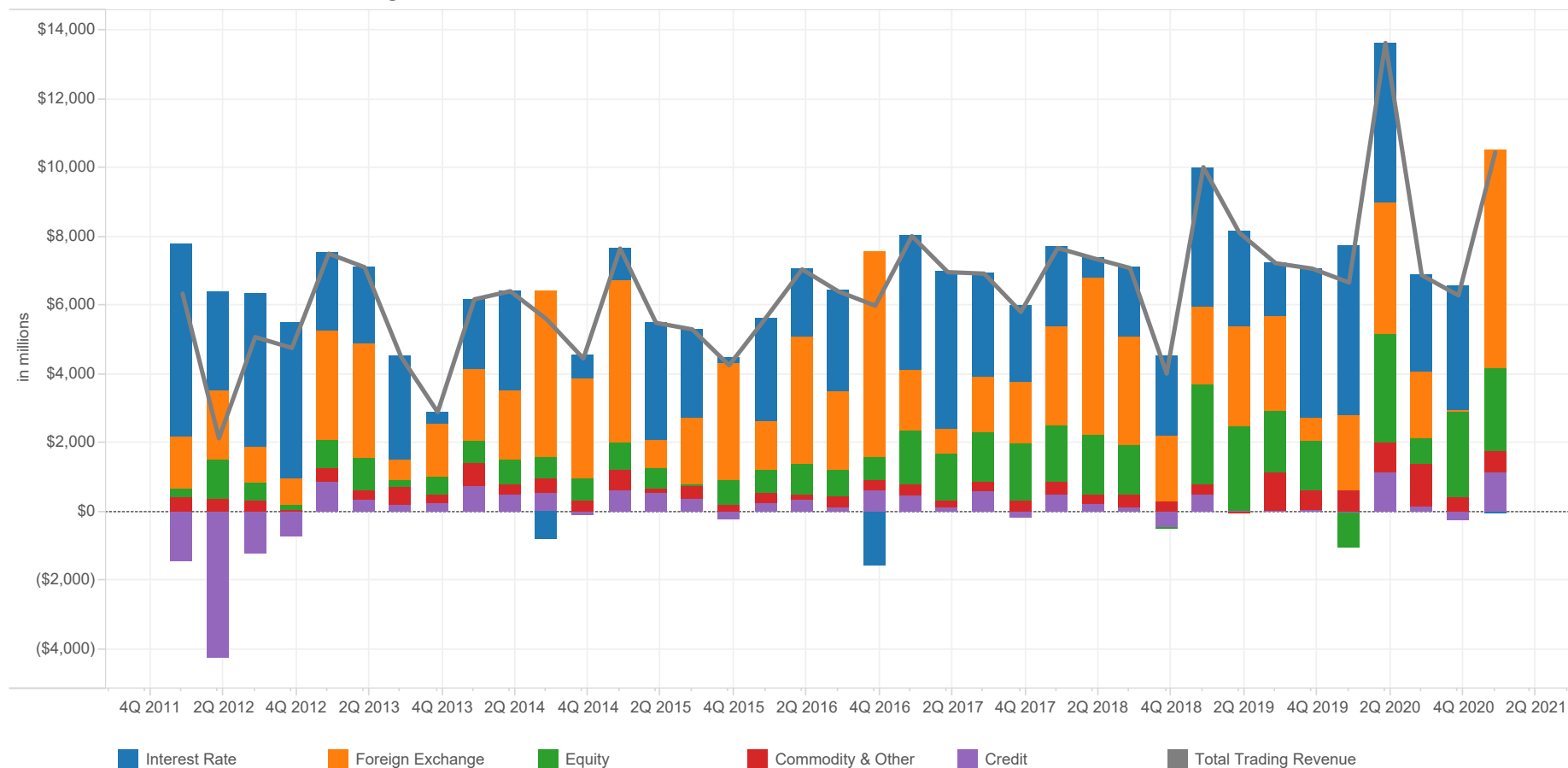


In millions of dollars

	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	314	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				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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	-1.5	82.7	42.1	6.0	6.6	6.8
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	4.1	102.1	44.2	14.6	23.3	153.3

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

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

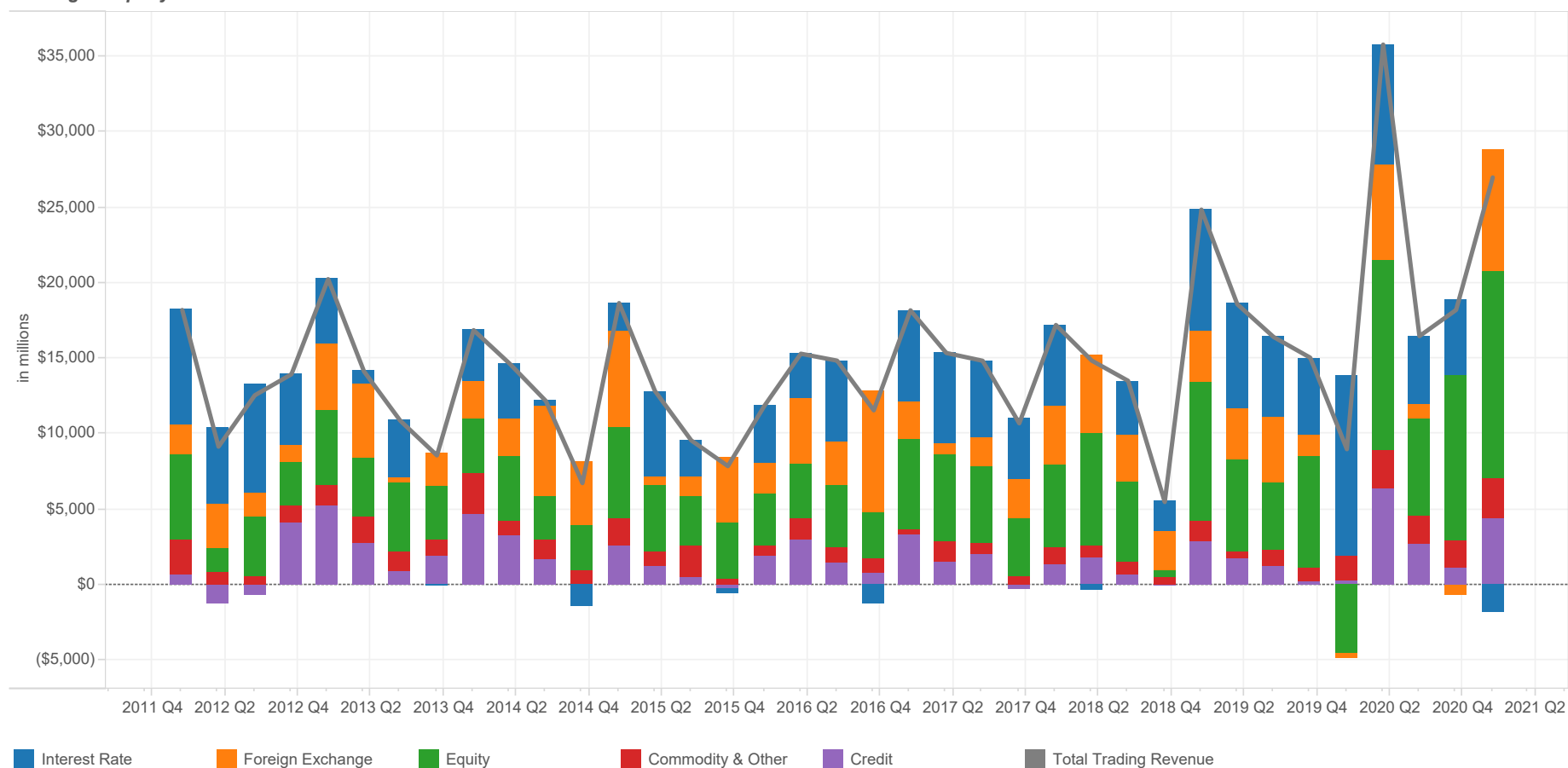


In millions of dollars

	2017				2018				2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Interest Rate	\$3,917	\$4,586	\$3,011	\$2,220	\$2,317	\$587	\$2,020	\$2,305	\$4,078	\$2,780	\$1,567	\$4,361	\$4,942	\$4,634	\$2,821	\$3,616	(\$42)
Foreign Exchange	1,743	697	1,608	1,811	2,861	4,569	3,149	1,971	2,254	2,900	2,718	662	2,167	3,841	1,942	18	6,343
Equity	1,595	1,359	1,454	1,649	1,624	1,727	1,444	-43	2,895	2,464	1,805	1,427	-1,040	3,139	750	2,480	2,388
Commodity & Other	330	211	300	324	395	286	349	274	323	-43	1,109	600	646	905	1,226	434	622
Credit	447	128	566	-178	487	215	141	-476	485	30	43	34	-34	1,129	154	-243	1,151
Total Trading Revenue	8,031	6,981	6,940	5,824	7,684	7,384	7,103	4,030	10,035	8,131	7,242	7,083	6,681	13,648	6,893	6,305	10,462

*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, Schedule RI

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

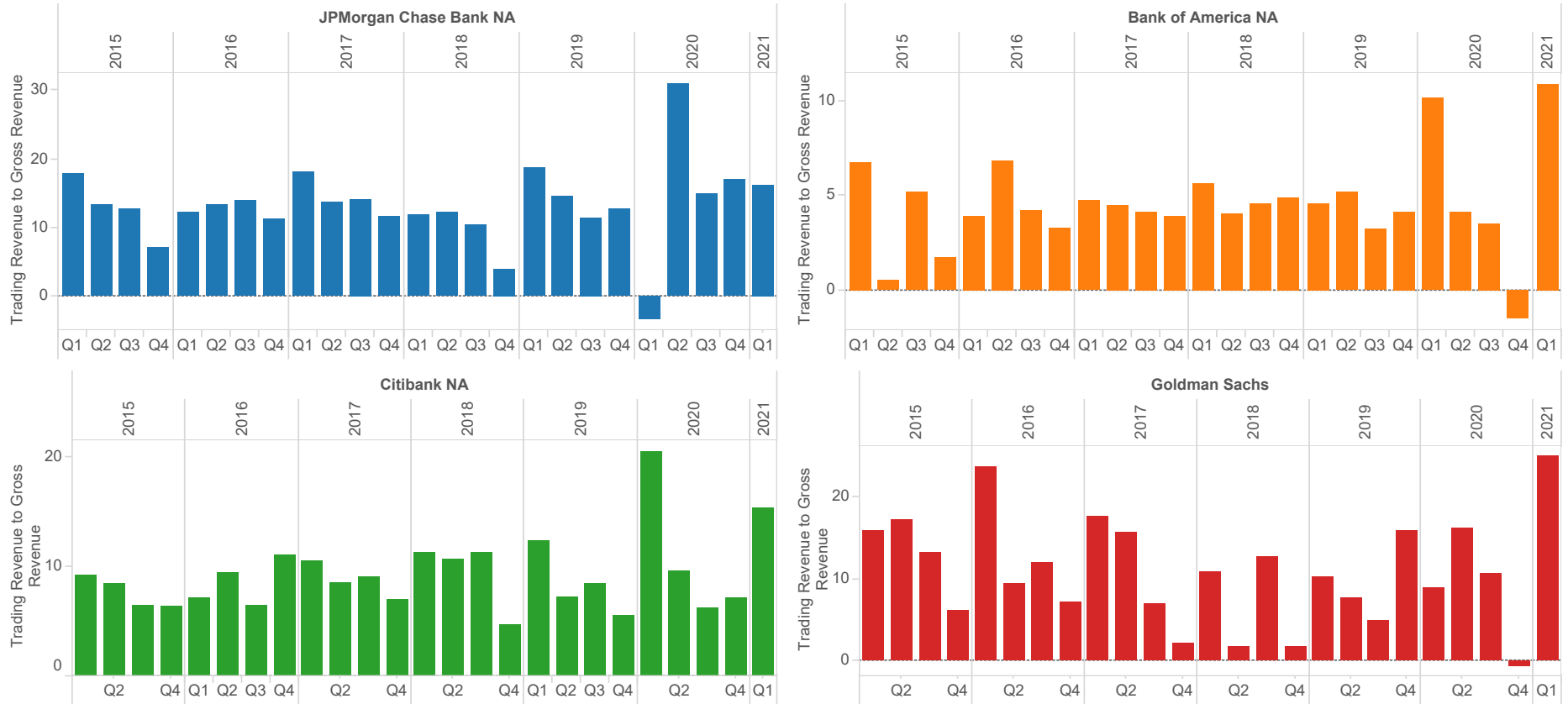


In millions of dollars

	2017				2018				2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Interest Rate	\$6,055	\$6,019	\$5,124	\$4,006	\$5,361	(\$336)	\$3,550	\$1,997	\$8,050	\$6,973	\$5,377	\$5,075	\$11,918	\$7,919	\$4,486	\$4,963	(\$1,801)
Foreign Exchange	2,524	733	1,848	2,589	3,900	5,133	3,222	2,530	3,396	3,351	4,241	1,463	-302	6,374	1,037	-628	8,051
Equity	5,939	5,783	5,123	3,867	5,431	7,445	5,222	502	9,215	6,083	4,548	7,387	-4,532	12,580	6,401	10,906	13,698
Commodity & Other	299	1,317	769	568	1,177	779	874	508	1,298	512	1,045	981	1,664	2,486	1,912	1,804	2,665
Credit	3,381	1,523	1,996	-310	1,359	1,848	666	-25	2,903	1,684	1,226	159	257	6,431	2,654	1,181	4,382
Total Trading Revenue	18,198	15,376	14,861	10,721	17,229	14,870	13,534	5,513	24,862	18,604	16,437	15,064	9,006	35,790	16,491	18,225	26,994

*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, Schedule HI

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



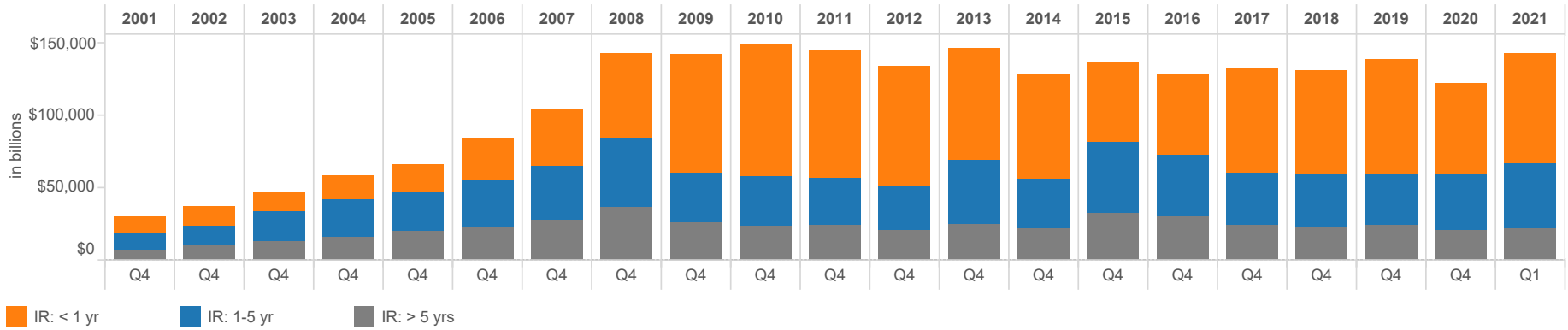
Trading Revenue to Gross Revenue*

	2015				2016				2017				2018				2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
JPMorgan Chase Bank NA	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	12.62	-3.33	30.88	14.83	16.96	16.12
Bank of America NA	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	4.09	10.13	4.14	3.55	-1.52	10.89
Citibank NA	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	5.56	20.50	9.63	6.27	7.08	15.35
Goldman Sachs	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	7.78	4.98	15.90	8.96	16.21	10.68	-0.56	25.05
TOTAL	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	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	9.60	8.01	8.61	7.44	18.00	9.49	8.91	14.87

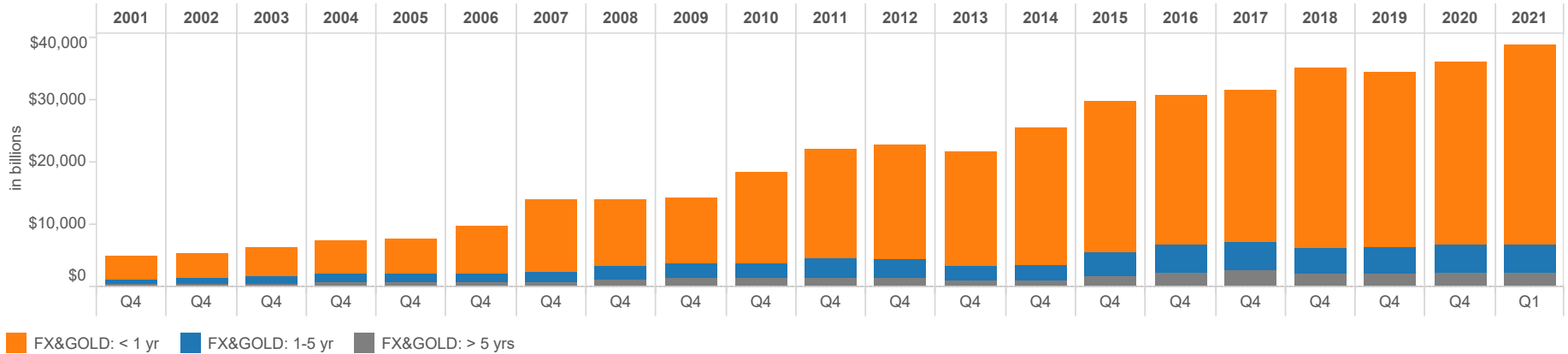
*The trading revenue figures are for cash and derivative activities. Revenue figures are quarterly, not year-to-date numbers.
 Note: Gross revenue equals interest income plus non-interest income.
 Source: Call reports, Schedule RI

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



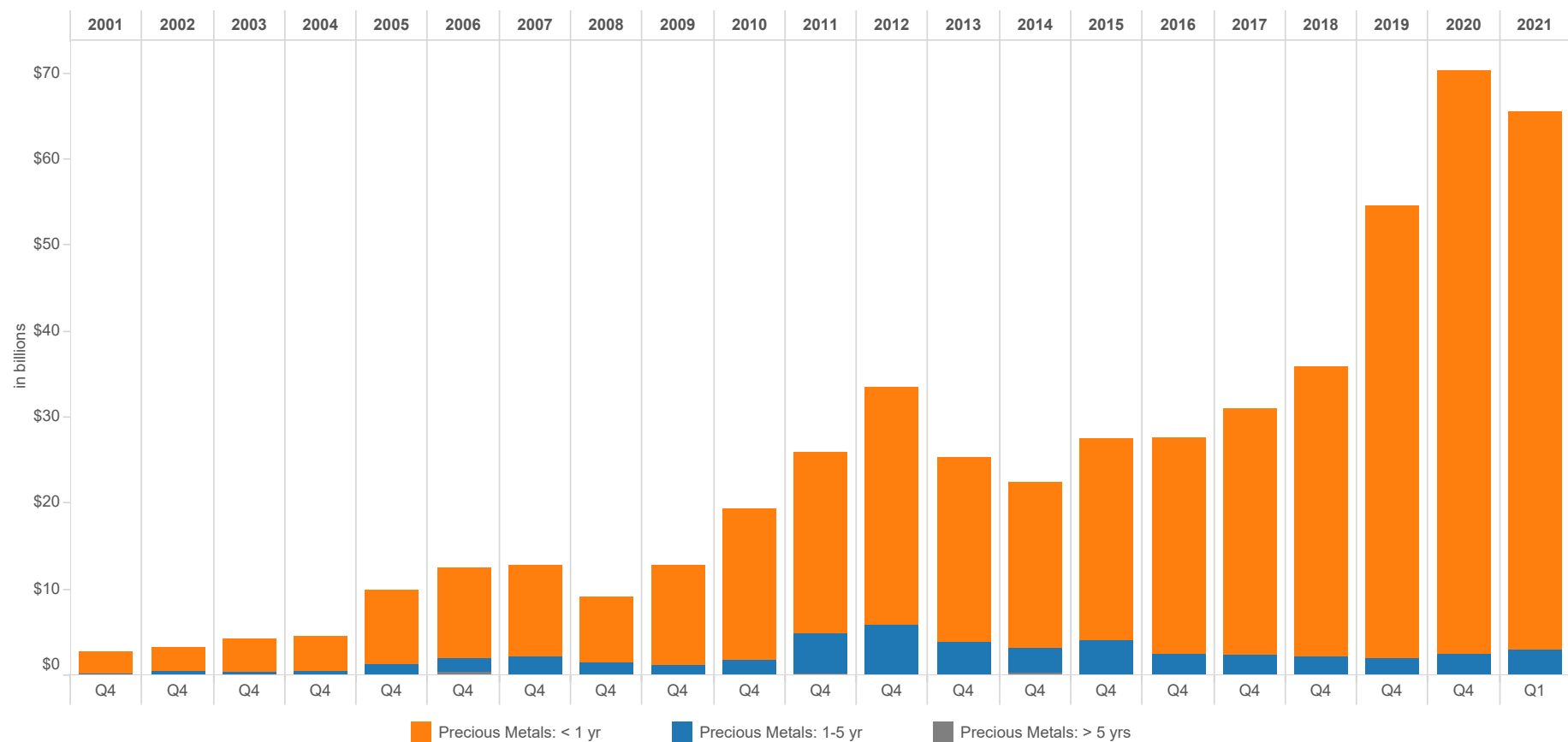
In billions of dollars

	2004 Q4	2005 Q4	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q1
IR: < 1 yr	\$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	\$79,130	\$62,444	\$76,501
IR: 1-5 yr	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	36,681	35,854	39,198	44,408
IR: > 5 yrs	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	24,259	20,838	22,231
FX&GOLD: < 1 yr	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	28,891	28,241	29,434	32,130
FX&GOLD: 1-5 yr	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	4,052	4,404	4,336
FX&GOLD: > 5 yrs	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	2,146	2,402	2,405

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, Schedule RC-R

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

Precious Metals



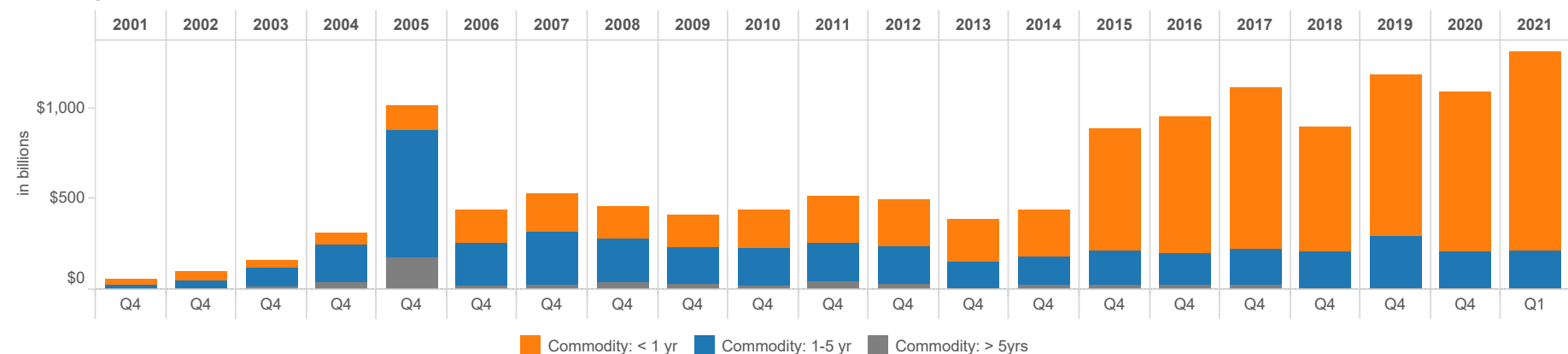
In billions of dollars

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1
Precious Metals: < 1 yr	\$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	\$52.58	\$67.80	\$62.60
Precious Metals: 1-5 yr	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	2.06	2.53	3.03
Precious Metals: > 5 yrs	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

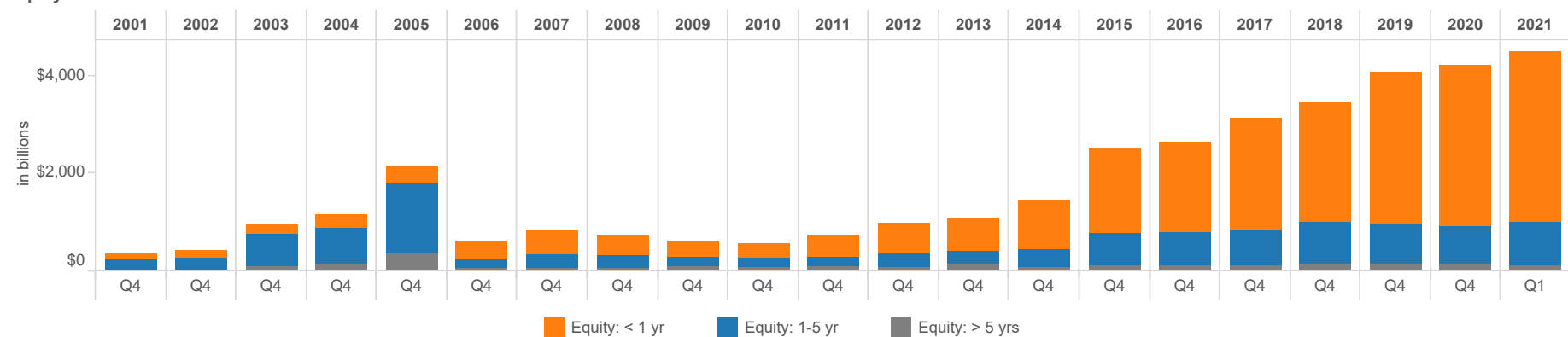
Note: Figures exclude FX contracts with an original maturity of 14 days or less, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.
Source: Call reports, Schedule RC-R

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

Commodity



Equity

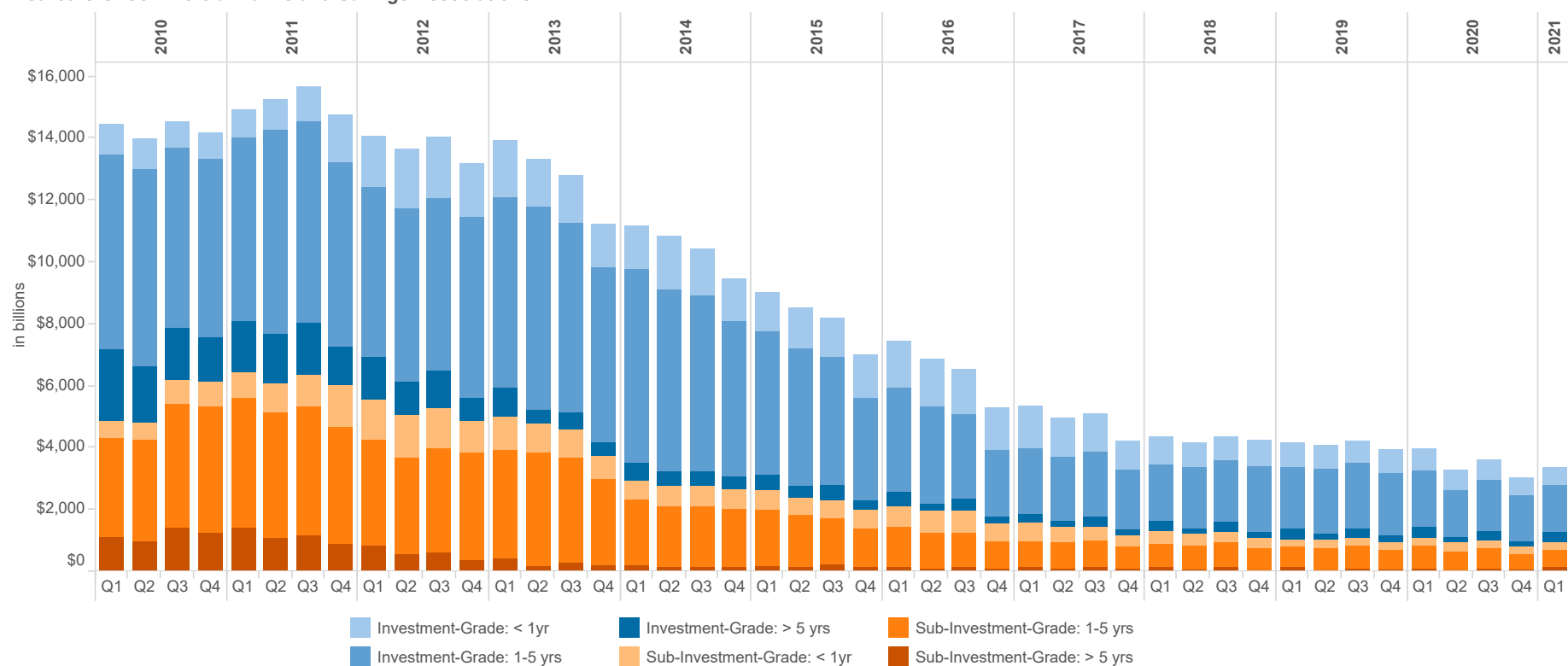


In billions of dollars

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Q4	Q4	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	\$884	\$879	\$1,098
Commodity: 1-5 yr	35	103	205	707	235	297	233	198	209	209	208	144	164	197	179	202	198	286	198	201
Commodity: > 5yrs	9	14	40	175	20	25	43	33	25	46	28	6	20	22	23	25	9	10	9	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	3,084	3,287	3,504
Equity: 1-5 yr	249	674	736	1,428	221	297	256	228	191	210	262	291	352	628	677	733	864	844	771	871
Equity: > 5 yrs	25	84	140	383	45	70	72	82	85	94	82	136	101	130	123	113	139	136	139	124

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, Schedule RC-R

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

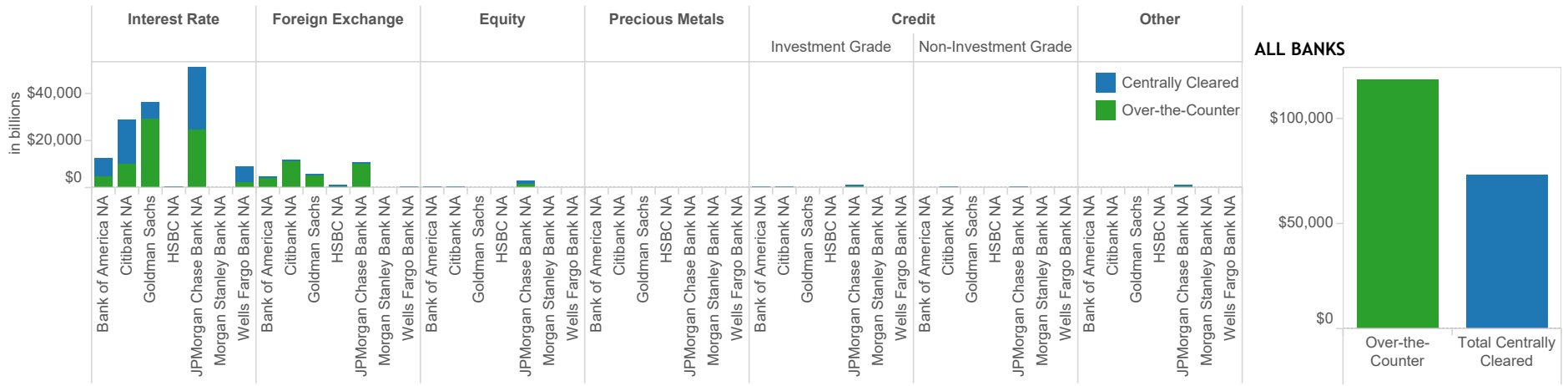


In billions of dollars

	2016				2017				2018				2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Investment-Grade: < 1yr	\$1,471	\$1,549	\$1,451	\$1,348	\$1,343	\$1,234	\$1,216	\$934	\$880	\$805	\$764	\$837	\$763	\$758	\$675	\$781	\$726	\$619	\$648	\$554	\$547
Investment-Grade: 1-5 yrs	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	2,018	1,799	1,523	1,637	1,521	1,545
Investment-Grade: > 5 yrs	457	262	385	214	309	195	345	186	331	184	338	204	367	189	330	198	367	171	336	160	334
Total Investment Grade	\$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	\$2,997	\$2,891	\$2,313	\$2,622	\$2,235	\$2,426
	2016				2017				2018				2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Sub-Investment-Grade: < 1yr	\$622	\$683	\$683	\$581	\$582	\$509	\$480	\$375	\$400	\$335	\$318	\$304	\$259	\$283	\$275	\$268	\$247	\$278	\$233	\$218	\$245
Sub-Investment-Grade: 1-5 yrs	1,313	1,159	1,122	869	838	830	814	718	763	791	801	691	661	701	708	624	743	608	618	533	570
Sub-Investment-Grade: > 5 yrs	155	101	157	111	159	93	149	77	133	69	133	61	119	60	111	56	105	56	108	48	119
Total Sub-Investment Grade	\$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	\$947	\$1,095	\$942	\$959	\$799	\$935

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, Schedule RC-L

Graph 15
1Q 2021 Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts
Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

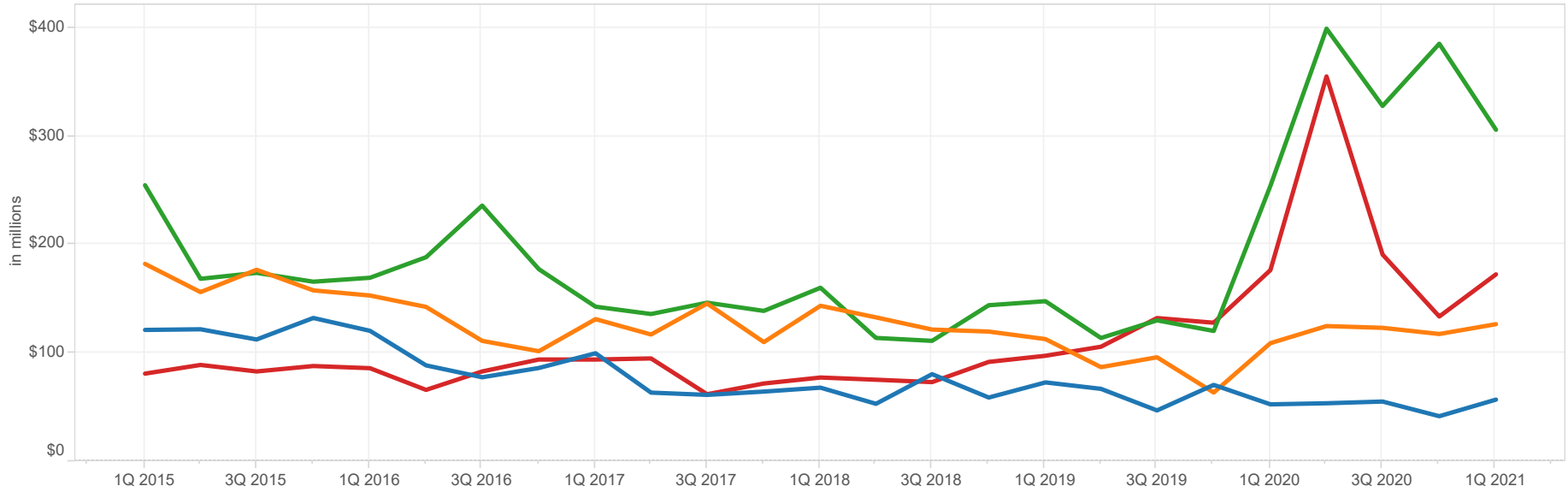
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared	Over-the-Counter	Total Notional
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter			
JPMorgan Chase Bank NA	26,235	25,067	163	10,668	819	2,033	0	35	525	391	220	227	71	901	28,033	39,323	67,356
Citibank NA	19,328	9,929	328	11,685	80	626	2	8	262	583	74	239	80	101	20,153	23,170	43,323
Bank of America NA	7,969	4,604	118	4,863	149	507	0	8	138	177	54	96	0	19	8,428	10,274	18,702
Goldman Sachs	7,085	29,775	121	6,076	0	18	0	0	0	101	0	61	0	4	7,205	36,035	43,240
HSBC NA	70	269	49	1,189	0	34	0	11	1	9	3	11	0	0	124	1,523	1,647
Wells Fargo Bank NA	6,783	2,244	0	549	44	149	0	2	0	4	0	23	0	56	6,828	3,027	9,854
Morgan Stanley Bank NA	0	39	0	19	0	12	0	0	0	6	0	3	0	0	0	78	79
Grand Total	67,470	71,926	778	35,050	1,091	3,378	2	64	927	1,269	352	661	152	1,081	70,772	113,429	184,201
ALL OTHER	2,136	1,608	6	3,039	0	29	0	0	1	26	1	24	10	67	2,153	4,793	6,946
TOTAL	69,606	73,534	783	38,088	1,092	3,408	2	64	928	1,295	353	685	162	1,148	72,925	118,223	191,148

% of Total

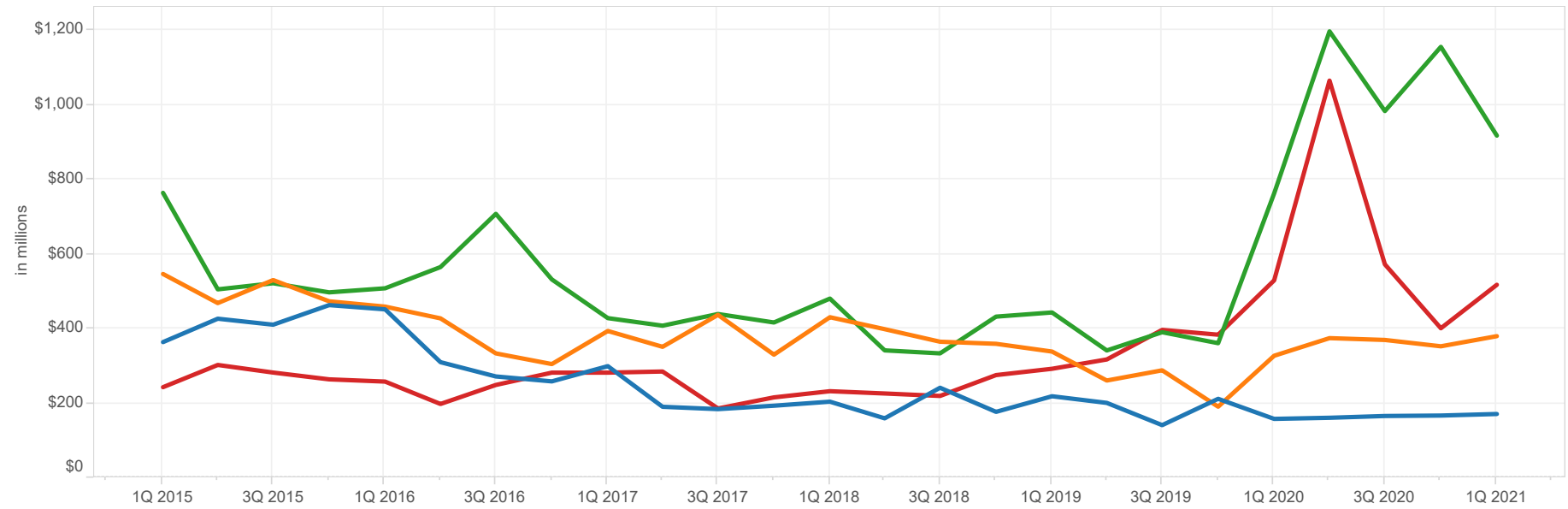
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared as a % of Total Notional	Total Over-the-Counter as a % of Total Notional
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter		
JPMorgan Chase Bank NA	51%	49%	2%	98%	29%	71%	0%	100%	57%	43%	49%	51%	7%	93%	42%	58%
Citibank NA	66%	34%	3%	97%	11%	89%	18%	82%	31%	69%	24%	76%	44%	56%	47%	53%
Bank of America NA	63%	37%	2%	98%	23%	77%	2%	98%	44%	56%	36%	64%	0%	100%	45%	55%
Goldman Sachs	19%	81%	2%	98%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	17%	83%
HSBC NA	21%	79%	4%	96%	0%	100%	0%	100%	13%	87%	23%	77%	0%	100%	8%	92%
Wells Fargo Bank NA	75%	25%	0%	100%	23%	77%	0%	100%	6%	94%	2%	98%	1%	99%	69%	31%
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
MARCH 31, 2021, 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	7H6GLXDRUGQU57RNE97	\$3,207,521	\$52,671,225	\$1,396,236	\$1,790,030	\$10,325,224	\$29,369,978	\$8,471,851	\$1,317,906	\$746,237
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	1,438,520	2,258,692	6,310,546	27,626,174	12,740,531	167,486	461,154
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	543,455	695,448	7,873,595	30,763,090	5,411,920	1,190,682	430,973
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	200,498	175,688	5,074,784	9,684,359	2,935,524	455,205	701,220
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,773,157	10,716,099	249,834	165,981	3,033,712	5,607,353	1,558,373	100,846	8,871
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	313,281	2,675,651	5,877	0	2,627,449	7,958	34,367	0	113,288
7	HSBC NA	1IE8VN30JCEQV1H4R804	194,912	1,701,445	23,481	2,624	580,980	912,675	138,185	43,500	40,632
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	383,939	1,072,364	7,028	55	268,206	771,730	25,180	165	111,810
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	542,566	706,864	14,013	800	114,135	379,178	188,338	10,401	3,293
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	469,299	466,388	3,836	0	36,911	377,035	37,042	11,565	927
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	163,541	319,071	0	0	300,384	18,199	488	0	19,426
12	TRUIST BANK	JJKC32MCHWDI71265Z06	506,471	307,151	7,002	15,600	21,897	204,967	47,467	10,218	412
13	TD BANK NATIONAL ASSN	03D0JEWFDUS0SEEK89	411,622	280,996	0	0	2,921	276,310	1,765	0	0
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	187,182	217,329	1,849	0	26,623	169,537	16,019	3,300	123
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	369,908	168,125	9,741	0	5,036	147,075	612	5,661	229
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,785	166,680	2,163	0	54,718	103,893	5,829	77	581
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	47,239	152,606	2,382	774	136,416	8,843	4,178	14	0
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,490	150,528	1,466	187	10,681	98,410	34,809	4,974	401
19	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	174,008	136,963	1,826	0	6,806	107,626	20,313	392	554
20	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	152,519	131,098	1,335	0	3,523	99,291	20,240	6,709	18
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	179,805	84,402	4	190	26,842	38,104	10,857	8,405	3,042
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	125,419	81,429	216	0	5,798	46,539	25,427	3,449	32
23	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	150,096	78,146	0	0	3,844	71,070	3,233	0	123
24	FIRST HORIZON BANK		87,114	57,949	0	0	33,187	21,610	2,413	739	0
25	BBVA USA	C90VT034M03BN29IRA40	101,926	54,391	0	0	2,953	44,564	5,822	1,053	94
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$14,171,831	\$187,943,096	\$3,910,762	\$5,106,069	\$36,887,170	\$106,955,565	\$31,740,783	\$3,342,746	\$2,643,439
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			6,101,708	1,045,299	3,371	1,028	132,740	762,780	127,096	18,284	5,175
TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	3,914,134	5,107,097	37,019,910	107,718,346	31,867,879	3,361,030	2,648,614

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
MARCH 31, 2021, 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.	7H6GLXDRUGQFU57RNE97	\$3,689,336	\$52,460,008	\$1,441,726	\$2,212,871	\$11,003,091	\$28,297,652	\$8,169,869	\$1,334,799	\$725,485
2	CITIGROUP INC.	E570DZWWZ7FF32WEFA76	2,314,266	46,596,130	703,842	2,515,258	9,256,924	27,676,552	5,150,821	1,292,733	430,756
3	GOLDMAN SACHS GROUP, INC., THE	KD3XUN7C6T14HNAYLU02	1,301,553	44,254,094	1,902,018	3,414,520	6,637,561	20,901,171	10,160,309	1,238,515	352,514
4	MORGAN STANLEY	IGJSJL3JD5P3OI6NJZ34	1,158,772	35,287,100	813,113	1,652,441	4,876,799	19,361,767	7,889,539	693,441	81,842
5	BANK OF AMERICA CORPORATION	B4TYDEB6GKMZO031MB27	2,969,992	34,992,072	769,756	1,004,049	9,184,936	18,862,181	4,309,597	861,553	353,296
6	WELLS FARGO & COMPANY	KB1H1DSPRFMYMCUFXT09	1,959,543	11,162,771	258,471	187,550	3,661,747	5,416,378	1,555,589	83,036	8,859
7	MIZUHO AMERICAS LLC		46,986	6,460,128	22,629	11,972	643,396	5,608,730	167,098	6,303	1,109
8	SMBC AMERICAS HOLDINGS, INC.		23,507	5,416,942	174,346	1,594,236	1,035,247	1,761,633	849,120	2,359	1,247
9	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	248,215	3,661,245	246,072	551,833	580,980	2,093,906	144,953	43,500	40,632
10	STATE STREET CORPORATION	571474TGEMMWANRLN572	316,885	2,675,651	5,877	0	2,627,449	7,958	34,367	0	113,288
11	BANK OF NEW YORK MELLON CORPORATION, THE	HPFHU00Q28E4N0NFVK49	464,984	1,073,815	8,226	282	292,493	747,469	25,180	165	111,750
12	RBC US GROUP HOLDINGS LLC		151,119	783,591	173,233	332,425	23,681	253,136	635	481	206
13	U.S. BANCORP	6BYL5QZYBDK8S7L73M02	553,375	706,344	14,013	800	113,356	379,436	188,338	10,401	3,293
14	BARCLAYS US LLC	213800H14XVWV87OI72	169,323	626,477	12,004	204,315	360,617	10,402	0	39,139	15
15	PNC FINANCIAL SERVICES GROUP, INC., THE	AD6GFRVSDT01YPT1CS68	474,509	464,241	3,848	0	44,284	367,502	37,042	11,565	927
16	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	119,786	407,497	12,403	2,683	219,036	109,400	13,088	50,887	10
17	TD GROUP US HOLDINGS LLC	03D0JEWFDUS0SEEKG89	517,841	331,641	32,291	40	16,383	281,162	1,765	0	0
18	NORTHERN TRUST CORPORATION	6PTKHDJ8HDUF78PFWH30	163,924	316,321	0	0	300,384	15,449	488	0	19,426
19	TRUIST FINANCIAL CORPORATION	JJKC32MCHWDI71265Z06	517,537	311,199	7,002	15,600	25,930	204,982	47,467	10,218	412
20	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	425,175	231,698	9,741	0	12,436	203,248	612	5,661	229
21	CITIZENS FINANCIAL GROUP, INC.	DRMSV1Q0EKMEXLAU1P80	187,602	217,329	1,849	0	26,623	169,537	16,019	3,300	123
22	MUFG AMERICAS HOLDINGS CORPORATION	OX3PU53ZLPQKJ4700D47	169,969	210,577	3,684	2,426	94,594	103,918	5,829	127	581
23	BOK FINANCIAL CORPORATION	GRI2NT5QHYW751NMR949	47,495	152,606	2,382	774	136,416	8,843	4,178	14	0
24	FIFTH THIRD BANCORP	THRNG6BD57P9QWTQLG42	206,899	151,233	1,466	187	10,681	99,115	34,809	4,974	401
25	KEYCORP	RKPI3RZGV1V1FJTH5T61	176,336	141,726	1,826	0	8,123	110,471	20,915	392	554
TOP 25 HOLDING COMPANIES WITH DERIVATIVES			\$18,374,929	\$249,092,437	\$6,621,819	\$13,704,263	\$51,193,168	\$133,051,997	\$38,827,626	\$5,693,564	\$2,246,953

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

Note: Before 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
MARCH 31, 2021, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY INDENTIFIER	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	\$3,207,521	\$52,671,225	(%)	(%)	(%)	(%)	(%)	(%)	(%)
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	6.0	94.0	68.4	23.7	3.6	1.7	2.5
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	7.3	92.7	86.9	12.7	0.1	0.0	0.3
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	2.7	97.3	66.7	27.5	2.4	0.9	2.6
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCFXT09	1,773,157	10,716,099	2.0	98.0	66.5	27.7	3.2	0.1	2.5
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	313,281	2,675,651	3.9	96.1	90.6	5.2	2.6	0.7	0.9
7	HSBC NA	1IE8VN30JCEQV1H4R804	194,912	1,701,445	0.2	99.8	0.4	98.4	0.0	1.2	0.0
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	383,939	1,072,364	1.5	98.5	21.4	70.9	2.0	3.1	2.6
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	542,566	706,864	0.7	99.3	23.4	76.0	0.6	0.0	0.0
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	469,299	466,388	2.1	97.9	86.3	11.9	0.0	0.3	1.5
11	NORTHERN TRUST CO	6PTKHDJ8HDFU78PFWH30	163,541	319,071	0.8	99.2	89.7	4.1	1.5	2.2	2.5
12	TRUIST BANK	JJKC32MCHWDI71265Z06	506,471	307,151	0.0	100.0	5.6	94.1	0.2	0.0	0.0
13	TD BANK NATIONAL ASSN	Q3D0JEWDFUS0SEEKG89	411,622	280,996	7.4	92.6	82.4	3.8	9.2	1.2	3.3
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	187,182	217,329	0.0	100.0	96.6	3.4	0.0	0.0	0.0
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	369,908	168,125	0.9	99.1	89.7	8.6	0.0	0.1	1.5
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,785	166,680	5.8	94.2	87.7	2.3	0.0	6.6	3.4
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	47,239	152,606	1.3	98.7	92.3	7.5	0.1	0.0	0.0
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,490	150,528	2.1	97.9	94.3	0.5	0.1	5.2	0.0
19	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	174,008	136,963	1.1	98.9	78.0	10.8	2.3	5.6	3.3
20	REGIONS BANK	EQTWVK1G7ODGC2MGLV11	152,519	131,098	1.3	98.7	86.9	4.7	0.0	8.1	0.3
21	MORGAN STANLEY BANK NA	G1MLHISON32I3QPILB75	179,805	84,402	1.0	99.0	93.0	1.1	0.0	0.8	5.1
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	125,419	81,429	0.2	99.8	51.2	23.7	15.1	0.0	10.0
23	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	150,096	78,146	0.3	99.7	89.8	3.4	0.6	2.0	4.2
24	FIRST HORIZON BANK		87,114	57,949	0.0	100.0	99.2	0.8	0.0	0.0	0.0
25	BBVA USA	C90VT034M03BN29IRA40	101,926	54,391	0.0	100.0	98.3	0.1	0.3	0.0	1.3
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$14,171,831	\$187,943,096	\$9,016,832	\$178,926,265	\$136,480,141	\$42,543,776	\$4,002,047	\$1,574,386	\$3,342,746
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			6,101,708	1,045,299	4,399	1,040,900	951,388	65,094	2,665	7,868	18,284
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	9,021,231	179,967,164	137,431,529	42,608,870	4,004,712	1,582,254	3,361,030
				(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				99.4	4.8	94.7	72.2	22.5	2.1	0.8	1.8
OTHER COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				0.6	0.0	0.6	0.5	0.0	0.0	0.0	0.0
TOTAL FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES				100.0	4.8	95.2	72.7	22.5	2.1	0.8	1.8

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

TABLE 4

CREDIT EQUIVALENT EXPOSURES
TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2021, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL RISK-BASED CAPITAL	BILATERALLY	POTENTIAL	TOTAL CREDIT	(%)
						NETTED CURRENT CREDIT EXPOSURE	FUTURE EXPOSURE	EXPOSURE FROM ALL CONTRACTS	TOTAL CREDIT EXPOSURE TO CAPITAL
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,207,521	\$52,671,225	\$260,288	\$186,364	\$227,734	\$414,098	159
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	37,271	52,600	65,332	117,932	316
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	164,921	77,141	161,950	239,091	145
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	181,994	35,349	61,011	96,360	53
5	WELLS FARGO BANK NA	KB1H1DSRPFMYMCUFXT09	1,773,157	10,716,099	173,392	30,242	20,098	50,340	29
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	313,281	2,675,651	18,119	10,365	7,845	18,210	101
7	HSBC NA	1IE8VN30JCEQV1H4R804	194,912	1,701,445	23,314	5,946	6,493	12,439	53
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	383,939	1,072,364	22,721	4,880	6,239	11,119	49
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	542,566	706,864	53,141	3,869	6,338	10,206	19
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	469,299	466,388	42,834	5,221	132	5,354	12
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	163,541	319,071	10,797	1,775	2,680	4,455	41
12	TRUIST BANK	JJKC32MCHWDI71265Z06	506,471	307,151	48,315	3,182	3,201	6,383	13
13	TD BANK NATIONAL ASSN	03D0JEWFDUFUS0SEEKG89	411,622	280,996	34,579	144	1,257	1,401	4
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	187,182	217,329	19,155	1,251	1,211	2,462	13
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM00VDV0K75	369,908	168,125	30,585	3,210	2,723	5,933	19
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,785	166,680	15,767	1,289	543	1,832	12
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A207J66	47,239	152,606	4,261	1,148	742	1,891	44
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,490	150,528	20,372	2,146	2,044	4,190	21
19	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	174,008	136,963	17,262	1,415	1,645	3,061	18
20	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	152,519	131,098	15,170	856	514	1,370	9
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	179,805	84,402	18,138	297	3,623	3,920	22
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	125,419	81,429	12,267	1,624	734	2,358	19
23	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	150,096	78,146	13,625	660	163	823	6
24	FIRST HORIZON BANK		87,114	57,949	7,855	517	290	807	10
25	BBVA USA	C90VT034M03BN29IRA40	101,926	54,391	10,078	488	169	657	7
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$14,171,831	\$187,943,096	\$1,256,220	\$431,979	\$584,713	\$1,016,692	81
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			6,101,708	1,045,299	589,779	13,991	8,905	22,896	4
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	1,845,999	445,969	593,618	1,039,587	56

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

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

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

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

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

TABLE 5

**NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2021, MILLIONS OF DOLLARS**

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL HELD FOR TRADING & MTM	% HELD FOR TRADING & MTM	TOTAL NOT FOR TRADING MTM	% NOT FOR TRADING MTM
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,207,521	\$52,671,225	\$50,838,681	99.0	\$514,638	1.0
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	50,347,423	99.9	27,040	0.1
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	45,120,734	99.6	166,774	0.4
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	16,802,096	93.0	1,268,757	7.0
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$163,108,934	98.8	\$1,977,209	1.2
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	18,310,792	89.1	2,230,430	10.9
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	181,419,726	97.7	4,207,639	2.3

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

TABLE 6

**GROSS FAIR VALUES OF DERIVATIVE CONTRACTS
TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2021, 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	\$3,207,521	\$52,671,225	\$684,870	\$647,694	\$4,134	\$3,346	\$13,090	\$13,872
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	698,819	692,291	271	232	3,348	4,121
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	442,820	434,641	2,966	2,759	11,237	11,125
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	171,734	170,834	32,958	32,559	4,493	4,701
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$1,998,243	\$1,945,460	\$40,329	\$38,896	\$32,168	\$33,819
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	158,206	137,373	22,116	16,838	1,775	1,749
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	2,156,449	2,082,833	62,445	55,734	33,943	35,568

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
MARCH 31, 2021, 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	\$3,207,521	\$52,671,225	\$4,447	\$521	\$942	\$1,760	\$462	\$762
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	584	(1,832)	2,154	51	0	211
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	2,326	1,193	906	239	172	(184)
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	1,788	251	998	347	(7)	199
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$9,145	\$133	\$5,000	\$2,397	\$627	\$988
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	1,317	(175)	1,343	(9)	(5)	163
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	10,462	(42)	6,343	2,388	622	1,151

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 RC-L and 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
MARCH 31, 2021, MILLIONS OF DOLLARS**

RANK	BANK NAME	LEGAL ENTITY IDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	INT RATE MATURITY < 1 YR	INT RATE MATURITY 1 - 5 YRS	INT RATE MATURITY > 5 YRS	INT RATE ALL MATURITIES	FX and GOLD MATURITY < 1 YR	FX and GOLD MATURITY 1 - 5 YRS	FX and GOLD MATURITY > 5 YRS	FX and GOLD ALL MATURITIES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,207,521	\$52,671,225	\$23,538,296	\$22,273,631	\$5,490,121	\$51,302,048	\$7,431,264	\$2,257,075	\$1,142,465	\$10,830,804
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	20,227,243	8,580,390	8,052,088	36,859,721	4,744,915	786,354	665,245	6,196,514
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWFA76	1,684,634	46,478,190	21,632,776	4,657,737	2,966,425	29,256,938	11,215,598	579,498	217,336	12,012,432
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	4,746,141	4,335,506	3,490,694	12,572,341	4,263,921	437,532	279,732	4,981,185
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$70,144,456	\$39,847,264	\$19,999,328	\$129,991,048	\$27,655,698	\$4,060,459	\$2,304,778	\$34,020,935
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	6,356,915	4,560,525	2,231,708	13,149,149	4,474,318	275,772	100,569	4,850,659
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	76,501,371	44,407,789	22,231,036	143,140,197	32,130,016	4,336,231	2,405,347	38,871,594

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-L and 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
MARCH 31, 2021, 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	\$3,207,521	\$52,671,225	\$33,335	\$1,533	\$0	\$34,868
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	0	0	0	0
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32WEFA76	1,684,634	46,478,190	9,528	314	0	9,842
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	7,914	440	0	8,354
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$50,777	\$2,287	\$0	\$53,064
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	11,827	740	0	12,567
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	62,604	3,027	0	65,631
<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-L and 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
MARCH 31, 2021, 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	\$3,207,521	\$52,671,225	\$876,581	\$88,569	\$7,399	\$972,549	\$2,257,291	\$500,306	\$93,840	\$2,851,437
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	3,702	566	0	4,268	7,156	10,172	898	18,226
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	133,566	44,590	2,550	180,706	553,599	142,648	9,411	705,658
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	15,999	2,688	0	18,687	532,837	110,208	12,778	655,823
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$1,029,848	\$136,413	\$9,949	\$1,176,210	\$3,350,883	\$763,334	\$116,927	\$4,231,144
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	68,133	65,009	548	133,690	153,430	107,217	7,525	268,172
TOTAL FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	1,097,981	201,422	10,497	1,309,900	3,504,313	870,551	124,452	4,499,316

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 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
MARCH 31, 2021, 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	7H6GLXDRUGQFU57RNE97	\$3,207,521	\$52,671,225	\$1,317,906	\$212,230	\$605,170	\$170,656	\$988,056	\$75,914	\$203,345	\$50,591	\$329,850
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	167,486	24,614	66,088	13,740	104,442	9,908	42,389	10,747	63,044
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	1,190,682	170,141	610,836	91,964	872,941	102,427	186,491	28,823	317,741
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,316,773	18,526,058	455,205	99,666	183,338	38,069	321,073	43,852	76,146	14,134	134,132
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$7,497,551	\$168,217,422	\$3,131,279	\$506,651	\$1,465,432	\$314,429	\$2,286,512	\$232,101	\$508,371	\$104,295	\$844,767
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			12,775,988	20,770,973	229,751	39,926	80,029	19,506	139,460	13,348	61,777	15,166	90,291
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	3,361,030	546,577	1,545,461	333,935	2,425,972	245,449	570,148	119,461	935,058

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
MARCH 31, 2021, 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	7H6GLXDRUGQFU57RNE97	\$3,207,521	\$52,671,225	\$1,317,906	\$686,540	\$631,366	\$601,510	\$31,399	\$48,753	\$4,878	\$585,417	\$4,133	\$41,668	\$148
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	288,623	50,541,949	167,486	100,935	66,551	92,227	2,737	3,565	2,406	61,798	2,431	2,214	108
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,684,634	46,478,190	1,190,682	625,871	564,811	584,114	15,885	25,872	0	537,285	5,837	21,689	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZ0031MB27	2,316,773	18,526,058	455,205	234,132	221,073	191,702	9,662	32,768	0	177,786	15,720	27,567	0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCFXT09	1,773,157	10,716,099	100,846	50,202	50,644	8,486	22,744	0	18,972	6,403	31,888	0	12,353
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	313,281	2,675,651	0	0	0	0	0	0	0	0	0	0	0
7	HSBC NA	1IE8VN30JCEQV1H4R804	194,912	1,701,445	43,500	27,537	15,963	19,199	8,338	0	0	15,731	232	0	0
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	383,939	1,072,364	165	165	0	165	0	0	0	0	0	0	0
9	U S BANK NATIONAL ASSN	6BYLSQZYBDK8S7L73M02	542,566	706,864	10,401	3,511	6,890	742	0	0	2,769	0	0	0	6,890
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	469,299	466,388	11,565	4,490	7,075	615	0	0	3,875	0	0	0	7,075
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	163,541	319,071	0	0	0	0	0	0	0	0	0	0	0
12	TRUIST BANK	JJKC32MCHWDI71265Z06	506,471	307,151	10,218	3,605	6,613	970	1,355	0	1,280	150	0	0	6,463
13	TD BANK NATIONAL ASSN	03D0JEWDFUS0SEEK689	411,622	280,996	0	0	0	0	0	0	0	0	0	0	0
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	187,182	217,329	3,300	0	3,300	0	0	0	0	0	0	0	3,300
15	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM00VDV0K75	369,908	168,125	5,661	2,344	3,316	0	0	0	2,344	0	0	0	3,316
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	134,785	166,680	77	77	0	77	0	0	0	0	0	0	0
17	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	47,239	152,606	14	2	12	2	0	0	0	12	0	0	0
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,490	150,528	4,974	1,510	3,465	0	0	0	1,510	0	0	0	3,465
19	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	174,008	136,963	392	195	197	195	0	0	0	104	93	0	0
20	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	152,519	131,098	6,709	2,511	4,198	7	0	0	2,504	7	0	0	4,191
21	MORGAN STANLEY BANK NA	G1MLHISON32I3QPILB75	179,805	84,402	8,405	7,760	645	7,007	0	753	0	645	0	0	0
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	125,419	81,429	3,449	2,697	752	0	0	0	2,697	0	0	0	752
23	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	150,096	78,146	0	0	0	0	0	0	0	0	0	0	0
24	FIRST HORIZON BANK		87,114	57,949	739	238	501	238	0	0	0	501	0	0	0
25	BBVA USA	C90VT034M03BN29IRA40	101,926	54,391	1,053	0	1,053	0	0	0	0	1,053	0	0	0
TOP 25 COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			\$14,171,831	\$187,943,096	\$3,342,746	\$1,754,322	\$1,588,425	\$1,507,256	\$92,120	\$111,711	\$43,234	\$1,386,892	\$60,333	\$93,138	\$48,062
OTHER COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			6,101,708	1,045,299	18,284	8,105	10,179	1,062	2,604	0	4,438	2,547	2	0	7,630
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES			20,273,539	188,988,395	3,361,030	1,762,426	1,598,604	1,508,318	94,724	111,711	47,672	1,389,439	60,335	93,138	55,692
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					99.5	52.2	47.3	44.8	2.7	3.3	1.3	41.3	1.8	2.8	1.4
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES					100.0	52.4	47.6	44.9	2.8	3.3	1.4	41.3	1.8	2.8	1.7

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
MARCH 31, 2021, MILLIONS OF DOLLARS

Call Report Schedule SU	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17
A. Gross Notional Amount of Derivatives																	
Total gross notional amount of interest rate derivatives held for trading	\$5,409	\$5,819	\$6,236	\$5,183	\$4,476	\$2,293	\$2,526	\$913	\$1,131	\$623	\$751	\$736	\$684	\$542	\$729	\$749	\$655
Total gross notional amount of all other derivatives held for trading	\$20	\$19	\$53	\$34	\$48	\$33	\$30	\$37	\$24	\$2	\$2	\$5	\$7	\$5	\$5	\$6	\$2
Total gross notional amount of interest rate derivatives not held for trading	\$39,997	\$52,867	\$57,459	\$52,779	\$37,572	\$20,044	\$18,527	\$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	\$1,269	\$1,137	\$1,202	\$1,302	\$1,171	\$631	\$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	Data Not Reported	\$22,948	Data Not Reported	\$33,122	Data Not Reported	\$12,478	Data Not Reported	\$7,177	\$5,858	\$4,147	\$4,459	\$4,584	\$4,471	\$3,847	\$4,657	\$5,024	\$4,758
b. Foreign exchange rate and gold		\$84		\$19		\$18		\$4	\$5	\$3	\$4	\$5	\$429	\$0	\$0	\$0	\$0
c. Credit (investment grade reference asset)		\$217		\$199		\$166		\$39	\$41	\$35	\$17	\$14	\$13	\$14	\$14	\$8	\$4
d. Credit (non-investment grade reference asset)		\$143		\$138		\$61		\$25	\$25	\$12	\$12	\$12	\$11	\$11	\$11	\$11	\$11
e. Equity		\$0		\$0		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
g. Other		\$20		\$25		\$9		\$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	\$0	\$0	\$0
B. Notional principal amounts of centrally cleared derivative contracts covered by the regulatory capital rules:																	
a. Interest rate		\$584		\$299		\$96		\$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	\$0	\$0	\$0
c. Credit (investment grade reference asset)		\$0		\$0		\$0		\$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	\$0	\$0	\$0
e. Equity		\$0		\$0		\$0		\$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	\$0	\$0	\$0
g. Other		\$0		\$0		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Current credit exposure across all derivative contracts covered by the regulatory capital rules		\$783		\$504		\$140		\$95	\$59	\$49	\$76	\$119	\$62	\$44	\$57	\$49	\$39

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

*Beginning DECEMBER 31, 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 DECEMBER 31, 2019, banks filing the FFIEC 051 Call Report complete this information from schedule RC-R in the June and December reports only.