

Quarterly Report on Bank Trading and Derivatives Activities

Fourth Quarter 2020

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

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About This Report

The Office of the Comptroller of the Currency's (OCC) quarterly report on bank trading and derivatives activities is based on call report information provided by all insured U.S. commercial banks and savings associations; reports filed by U.S. financial holding companies; and other published data. A total of 1,382¹ insured U.S. commercial banks and savings associations reported trading and derivatives activities at the end of the fourth quarter of 2020. A small group of large financial institutions continues to dominate trading and derivatives activity in the U.S. commercial banking system. During the fourth quarter of 2020, four large commercial banks represented 88.4 percent of the total banking industry notional amounts and 78.2 percent of industry net current credit exposure (NCCE) (see tables 1 and 4 in the appendix).

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

This is the 101st 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 \$6.3 billion in the fourth quarter of 2020, \$588.0 million less (8.5 percent) than in the previous quarter and \$778.0 million less (11.0 percent) than a year earlier (see table 1).
- Credit exposure from derivatives increased in the fourth quarter of 2020 compared with the third quarter of 2020. NCCE increased \$17.0 billion, or 3.6 percent, to \$507.0 billion (see table 5).
- Derivative notional amounts decreased in the fourth quarter of 2020 by \$14.8 trillion, or 8.3 percent, to \$163.8 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled \$116.0 trillion or 70.8 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 \$6.3 billion in trading revenue in the fourth quarter of 2020, \$588.0 million less (8.5 percent) than in the previous quarter and \$778.0 million less (11.0 percent) than a year earlier (see table 1). The quarter-over-quarter decrease in trading revenue was due to decreases in combined interest rate and 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

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change	4Q 2019	Y/Y Change	Y/Y % Change
Interest rate and FX	\$3,635	\$4,763	-\$1,129	-23.7%	\$5,023	-\$1,389	-27.6%
Equity	\$2,480	\$750	\$1,730	230.6%	\$1,427	\$1,053	73.8%
Commodity and other	\$434	\$1,226	-\$792	-64.6%	\$600	-\$166	-27.7%
Credit	-\$243	\$154	-\$397	-257.5%	\$34	-\$277	-814.4%
Total trading revenue	\$6,305	\$6,893	-\$588	-8.5%	\$7,083	-\$778	-11.0%

Source: Call reports, Schedule RI

Holding Company Trading Revenue

Consolidated bank holding company (BHC) trading performance provides a more complete picture of trading revenue in the banking system. As shown in table 2, consolidated holding company trading revenue of \$18.2 billion in the fourth quarter of 2020 was \$1.6 billion (9.7 percent) higher than in the previous quarter. The quarter-over-quarter increase in trading revenue was due to an increase in equity trading revenue. Year-over-year holding company trading revenue increased by \$3.2 billion (21.0 percent). For a historical view of quarterly holding company trading revenue by instrument, see graph 9b in the appendix.

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

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change	4Q 2019	Y/Y Change	Y/Y % Change
Interest rate and FX	\$4,328	\$5,523	-\$1,195	-21.6%	\$6,538	-\$2,210	-33.8%
Equity	\$10,902	\$6,406	\$4,496	70.2%	\$7,387	\$3,515	47.6%
Commodity and other	\$1,804	\$1,912	-\$108	-5.6%	\$981	\$823	83.9%
Credit	\$1,188	\$2,767	-\$1,579	-57.1%	\$159	\$1,029	647.2%
Total HC trading revenue	\$18,221	\$16,609	\$1,612	9.7%	\$15,064	\$3,157	21.0%

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

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

Before the 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 fourth quarter of 2020, banks generated 34.6 percent of consolidated holding company trading revenue, a decrease from 41.5 percent in the previous quarter (see figure 1).

 2008
 2009
 2010
 2011
 2012
 2013
 2014
 2015
 2016
 2017
 2018
 2019
 2020

 50.0%
 -50.0%

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

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

Counterparty Credit Risk

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

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

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

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

GPFV increased by \$119.0 billion (4.7 percent) in the fourth quarter of 2020 to \$2.7 trillion, driven by a \$152.0 billion (33.9 percent) increase in receivables from FX contracts and a \$27.0 billion (17.3 percent) increase in equity contracts (see table 3). GNFV increased \$132.0 billion (5.3 percent) to \$2.6 trillion during the quarter, driven by a \$156.0 billion (34.3 percent) increase in payables on FX contracts and a \$34.0 billion (21.3 percent) increase in payables on equity contracts.

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

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change	4Q 2019	Y/Y Change	Y/Y % Change
Interest rate	\$1,792	\$1,847	-\$56	-3.0%	\$1,296	\$496	38.2%
FX	\$601	\$449	\$152	33.9%	\$423	\$177	41.9%
Equity	\$185	\$157	\$27	17.3%	\$120	\$64	53.6%
Commodities	\$47	\$48	-\$1	-2.4%	\$38	\$9	22.6%
Credit	\$31	\$34	-\$4	-10.4%	\$47	-\$17	-35.5%
Gross positive fair value	\$2,654	\$2,535	\$119	4.7%	\$1,925	\$729	37.9%

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change	4Q 2019	Y/Y Change	Y/Y % Change
Interest rate	\$1,721	\$1,774	-\$53	-3.0%	\$1,246	\$475	38.1%
FX	\$612	\$456	\$156	34.3%	\$431	\$181	41.9%
Equity	\$192	\$158	\$34	21.3%	\$121	\$70	58.0%
Commodities	\$47	\$49	-\$2	-3.6%	\$39	\$8	19.6%
Credit	\$34	\$37	-\$3	-8.2%	\$48	-\$14	-29.0%
Gross negative fair value	\$2,607	\$2,475	\$132	5.3%	\$1,887	\$720	38.1%

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 increased by \$17.0 billion (3.6 percent) to \$507.0 billion in the fourth quarter of 2020 (see table 5). Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 80.9 percent (\$2.1 trillion) in the fourth quarter of 2020.

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

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change
Gross positive fair value	\$2,654	\$2,535	\$119	4.7%
NCCE RC-R	\$507	\$490	\$17	3.6%
Netting benefit RC-R	\$2,147	\$2,045	\$102	5.0%
Netting benefit % RC-R	80.9%	80.7%		0.2%

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 the first quarter of 2020 as markets responded to the financial impact of the COVID-19 global pandemic, NCCE ended 2020 lower as more normal market activity resumed.

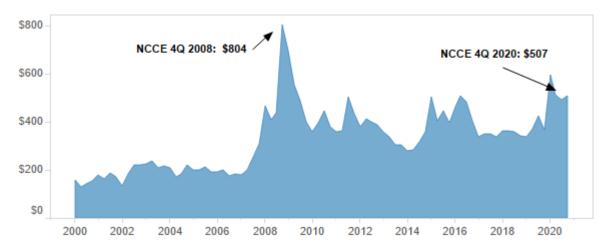


Figure 2: Net Current Credit Exposure, in Billions of Dollars

Source: Call reports, Schedule RC-R

The bulk of NCCE in the financial system is concentrated in banks and securities firms (39.8 percent) and in corporations and other counterparties (49.9 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (10.4 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
4Q 2020	39.8%	2.2%	8.2%	49.9%
3Q 2020	38.7%	2.1%	8.0%	51.1%
2Q 2020	40.7%	2.1%	7.5%	49.8%
1Q 2020	39.4%	3.5%	6.4%	50.7%
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%

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 86.8 percent of their total NCCE at the end of the fourth quarter of 2020, down from 89.7 percent in the third quarter of 2020 (see table 7). Collateral held against hedge fund exposures decreased in the fourth quarter but remains high at 467.6 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 %
4Q 2020	107.5%	467.6%	52.1%	59.5%	86.8%
3Q 2020	113.7%	477.4%	54.3%	60.7%	89.7%
2Q 2020	124.3%	404.1%	51.3%	69.1%	97.3%
1Q 2020	121.3%	230.8%	51.7%	65.8%	92.6%
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%

Source: Call reports, Schedule RC-L

The majority of collateral held by banks against NCCE is very liquid with 68.1 percent held in cash (both U.S. dollar and Cash other currencies) and an additional 9.5 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
4Q 2020	39.5%	28.6%	7.8%	1.7%	1.1%	7.2%	14.1%
3Q 2020	41.2%	27.9%	8.3%	1.9%	1.4%	6.3%	13.1%
2Q 2020	38.9%	23.6%	11.5%	2.3%	2.1%	6.9%	14.8%
1Q 2020	44.6%	22.5%	10.7%	1.6%	1.9%	4.3%	14.4%
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%

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
4Q 2020 average 60-day VaR	\$385	\$118	\$42	\$134
3Q 2020 average 60-day VaR	\$328	\$123	\$55	\$191
Q/Q change	\$57	-\$6	-\$14	-\$57
4Q 2020 total risk-based capital	\$256,791	\$162,485	\$179,173	\$32,435

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
4Q 2020 VaR capital requirement	\$1,155	\$353	\$167	\$401
3Q 2020 VaR capital requirement	\$983	\$370	\$166	\$572
Q/Q change	\$172	-\$17	\$1	-\$171
4Q 2020 total risk-based capital	\$256,791	\$162,485	\$179,173	\$32,435

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 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 22.8 percent at the end of the fourth quarter of 2020.

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

80.0% 60.0% 40.0%

12/31/12

Figure 3: Volatility Index (VIX)

Source: Bloomberg

0.0%

Level 3 Trading Assets

12/31/08

12/31/10

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 fourth quarter of 2020, banks held \$37.5 billion of level 3 trading assets, up 10.1 percent from the previous quarter, and 53.0 percent higher than a year ago. Level 3 trading assets are \$166.6 billion (81.6 percent) lower than the peak level from 2008.

12/31/14

12/31/16

12/31/18

12/31/20

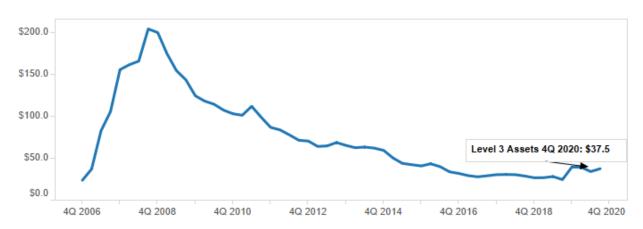


Figure 4: Level 3 Trading Assets, in Billions of Dollars

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 fourth quarter decreased by \$14.8 trillion (8.3 percent) to \$163.8 trillion from the previous quarter (see table 10). The decrease in the notional amount of derivative contracts by underlying risk exposure was primarily driven by a decrease in interest rate contracts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at \$116.0 trillion, or 70.8 percent of total derivatives (see table 10).

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

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change	4Q 2019	Y/Y Change	Y/Y % Change
Interest rate	\$116,001	\$129,758	-\$13,757	-10.6%	\$125,056	-\$9,056	-7.2%
FX	\$39,596	\$39,682	-\$86	-0.2%	\$37,170	\$2,426	6.5%
Equity	\$3,775	\$4,023	-\$248	-6.2%	\$3,796	-\$21	-0.6%
Commodity	\$1,395	\$1,536	-\$142	-9.2%	\$1,495	-\$101	-6.7%
Credit derivatives	\$3,034	\$3,581	-\$546	-15.3%	\$3,945	-\$910	-23.1%
Total notional	\$163,800	\$178,579	-\$14,780	-8.3%	\$171,462	-\$7,663	-4.5%

Source: Call reports, Schedule RC-L

The decrease in the total notional amount of derivative contracts by contract type was primarily driven by decreases in swaps and futures and forwards contracts (see table 11). Swap contracts remained the leading derivatives contract type at 58.9 percent of all notional amounts.

The four banks with the most derivative activity hold 88.4 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

	4Q 2020	3Q 2020	Q/Q Change	Q/Q % Change	4Q 2019	Y/Y Change	Y/Y % Change
Futures and forwards	\$32,350	\$39,822	-\$7,472	-18.8%	\$34,787	-\$2,436	-7.0%
Swaps	\$96,423	\$99,580	-\$3,157	-3.2%	\$96,614	-\$191	-0.2%
Options	\$31,992	\$35,596	-\$3,604	-10.1%	\$36,117	-\$4,125	-11.4%
Credit derivatives	\$3,034	\$3,581	-\$546	-15.3%	\$3,945	-\$910	-23.1%
Total notional	\$163,800	\$178,579	-\$14,779	-8.3%	\$171,462	-\$7,663	-4.5%

Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives decreased \$546.0 billion (15.3 percent), to \$3.0 trillion, in the fourth quarter of 2020 (see table 10). Contracts referencing investment-grade firms decreased \$387.0 billion and contracts referencing sub-investment-grade firms decreased \$160.0 billion in the fourth 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 \$2.6 trillion (86.5 percent) of all credit derivative notional amounts.

Credit derivative contracts referencing investment-grade entities with maturities from one to five years represented the largest segment of the market at \$1.5 trillion or 50.1 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are \$2.2 trillion or 73.7 percent of the market (see the chart on the right in figure 5).

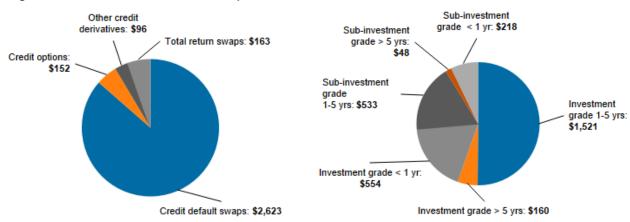


Figure 5: 4Q 2020 Credit Derivative Composition, in Billions of Dollars

Source: Call reports, Schedule RC-L

The notional amount for the 99 banks that net sold credit protection (i.e., assumed credit risk) was \$1.4 trillion, down \$260.9 billion (15.3 percent) from the third 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 \$1.6 trillion, \$285.4 billion lower (15.2 percent) than in the third 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 fourth quarter of 2020, as shown in figure 6.



Figure 6: Quarterly Compression Activity, in Trillions of Dollars

Source: LCH Clearnet

Centrally Cleared Derivative Contracts

In the first quarter of 2015, banks began reporting their volumes of cleared and non-cleared derivative transactions, as well as risk weights for counterparties in each of these categories. In the fourth quarter of 2020, 35.0 percent of banks' derivative holdings were centrally cleared (see table 12). From a market factor perspective, 45.3 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 36.8 percent of credit derivative transactions were centrally cleared during the fourth quarter of 2020.

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
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.

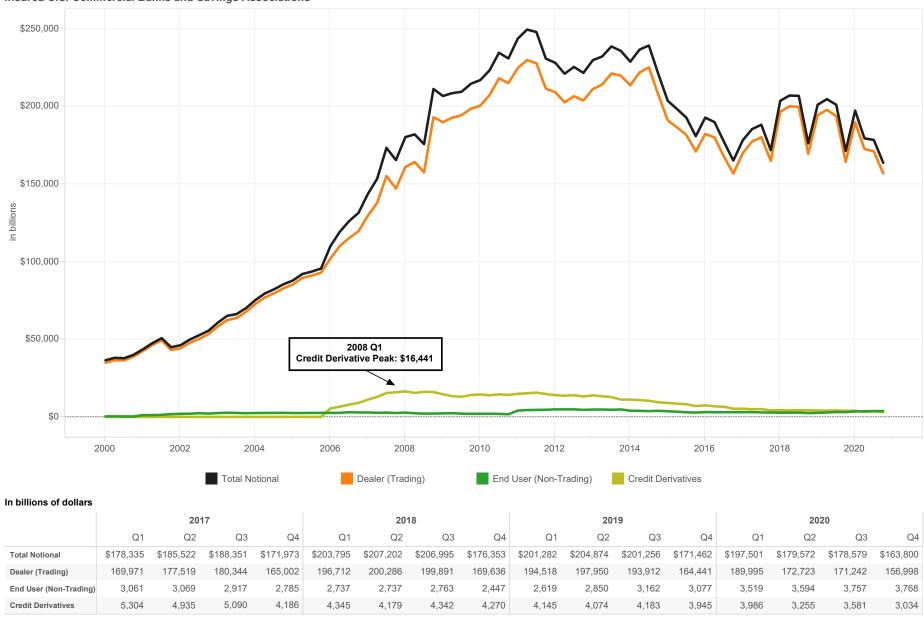
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Appendix: Supplementary Graphs and Tables

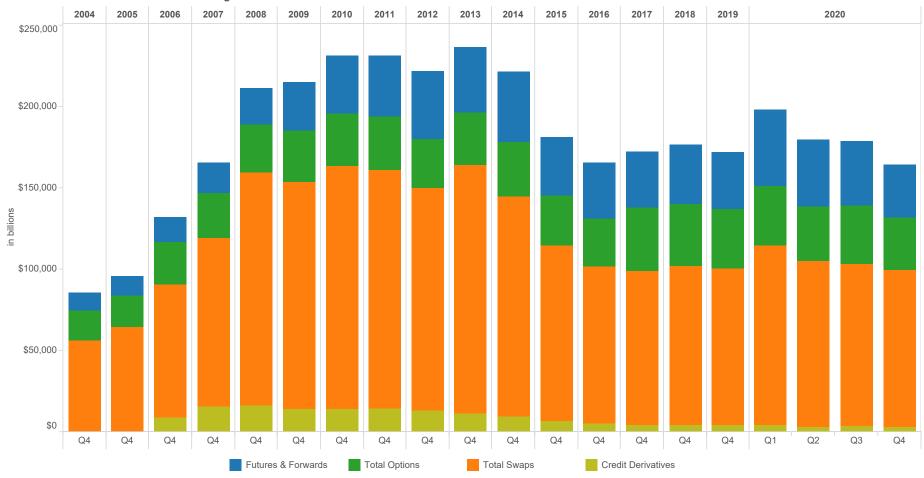
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Graph 1
Derivative Notional Amounts by Type
Insured U.S. Commercial Banks and Savings Associations



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

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

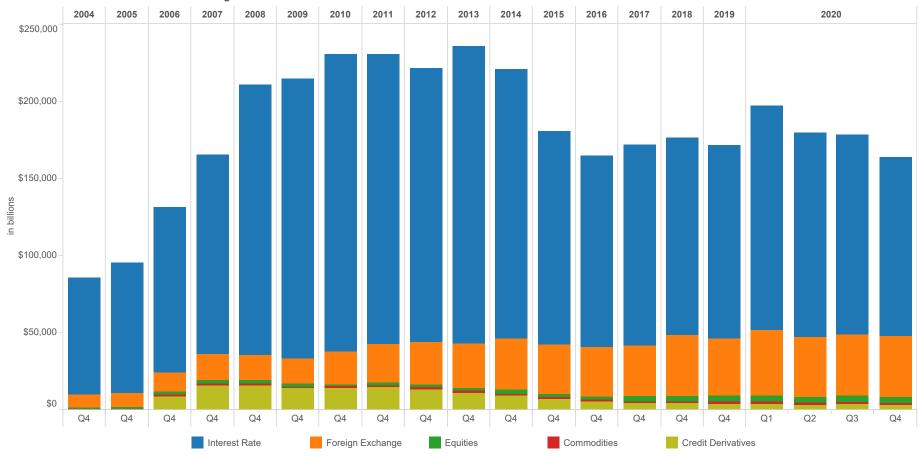


	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		20	20	
	Q4	Q1	Q2	Q3	Q4													
Futures & Forwards	\$14,882	\$18,867	\$22,529	\$29,652	\$35,539	\$37,469	\$41,621	\$40,027	\$43,380	\$35,691	\$34,201	\$34,162	\$36,144	\$34,787	\$46,804	\$41,018	\$39,822	\$32,350
Total Options	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	36,111	33,564	35,596	31,992
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	110,599	101,734	99,580	96,423
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	3,986	3,255	3,581	3,034
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	197,501	179,572	178,579	163,800

*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



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		20	20	
	Q4	Q1	Q2	Q3	Q4												
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	\$146,027	\$132,045	\$129,758	\$116,001
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	42,181	39,191	39,682	39,596
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	3,662	3,574	4,023	3,775
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	1,644	1,507	1,536	1,395
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	3,986	3,255	3,581	3,034
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	197,501	179,572	178,579	163,800

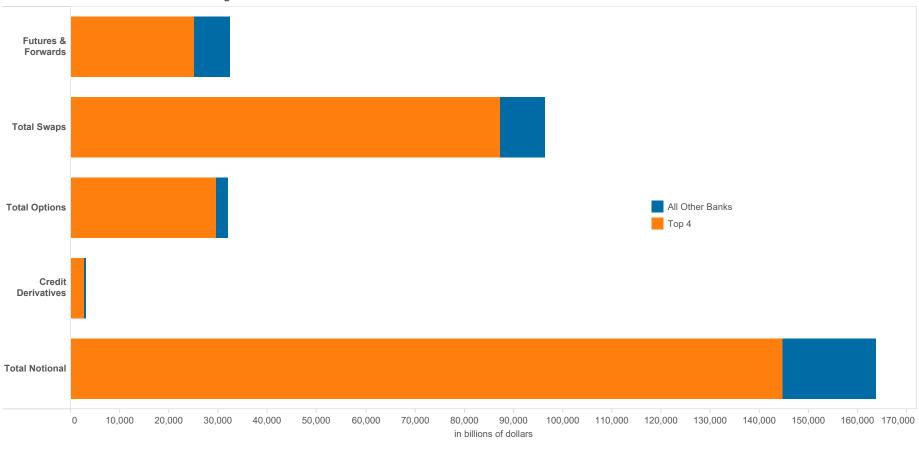
*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.

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

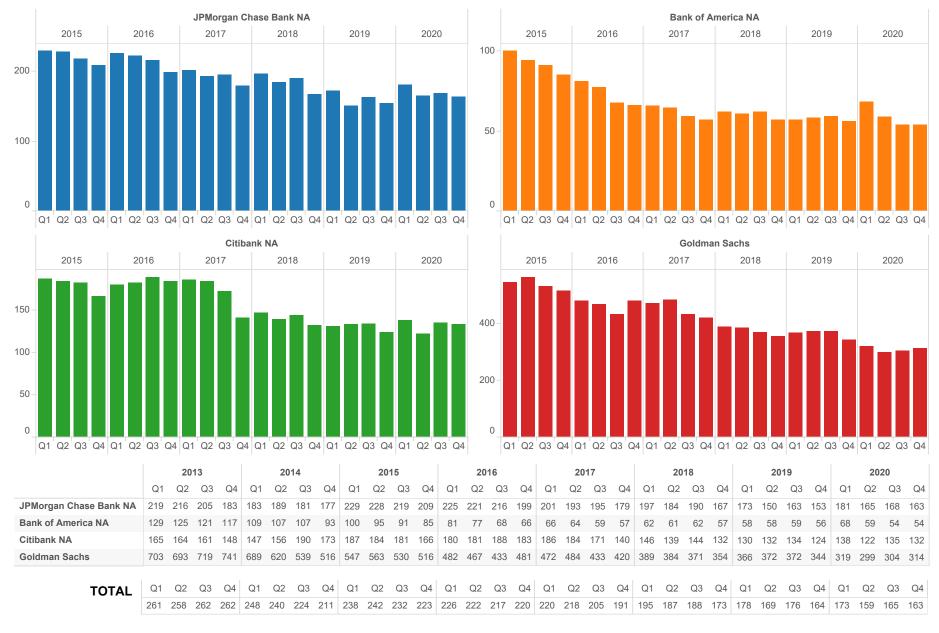
Graph 4
Four Banks Dominate in Derivatives*
Insured U.S. Commercial Banks and Savings Associations



	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$25,193	\$7,157	\$32,350
Total Swaps	87,236	9,187	96,423
Total Options	29,566	2,426	31,992
Credit Derivatives	2,806	228	3,034
Total Notional	144,801	18,999	163,800

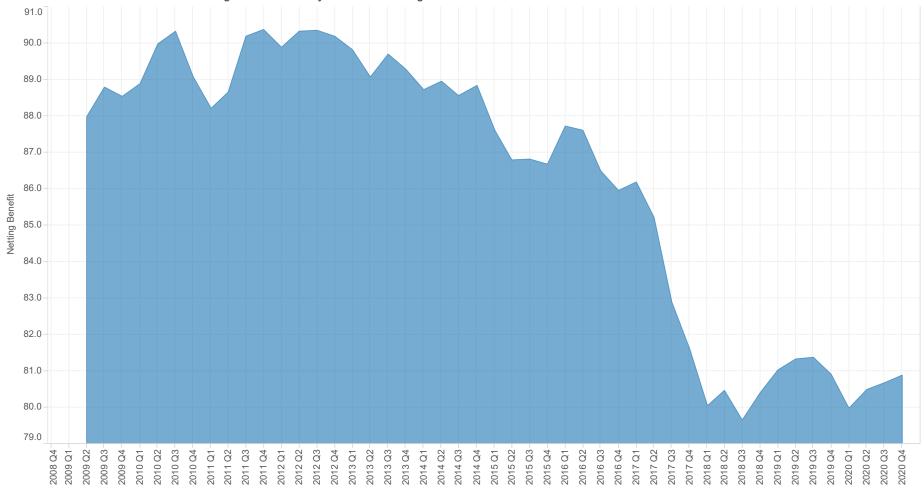
^{*}Notional amount of total: futures, exchange-traded options, over-the-counter options, forwards, and swaps. Source: Call reports, Schedule RC-L

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



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

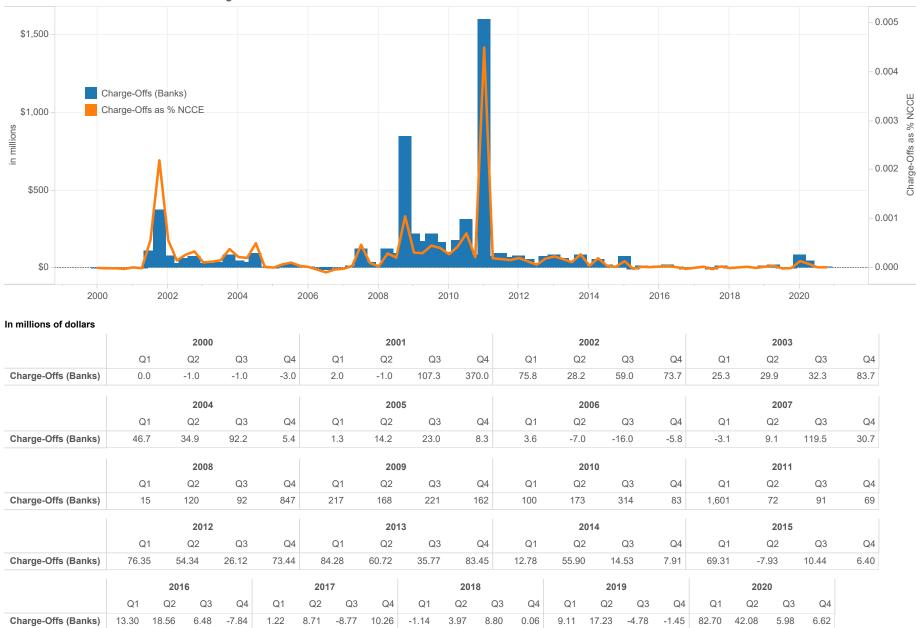
Graph 6
Netting Benefit*: Amount of Gross Credit Exposure Eliminated Through Bilateral Netting (in Percentage)
Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



Netting Benefit

		20	12			20	13			20	14			20	15			20	16			20	17			20	18			20	19			20	20	
C)1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																												
89	.9 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

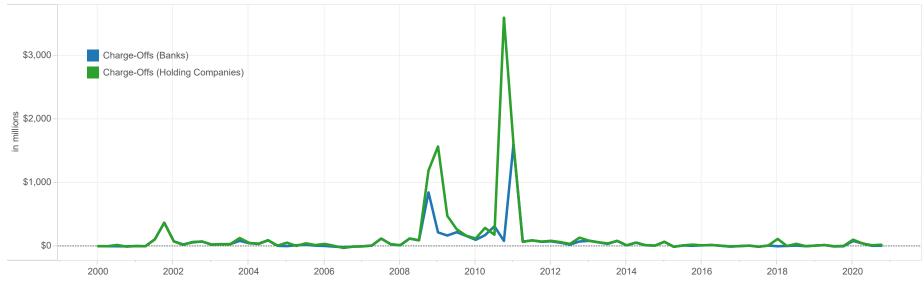
Graph 7
Quarterly Charge-Offs/(Recoveries) From Derivatives - Bank
Insured U.S. Commercial Banks and Savings Associations with Derivatives



Note: The figures are for each quarter alone, not year-to-date.

Source: Call reports Schedule RI, NCCE: Pre 2009 Q2 (RC-R); 2009 Q2 - 2014 Q4 (RC-L); 2015 Q1 onward (RC-R)

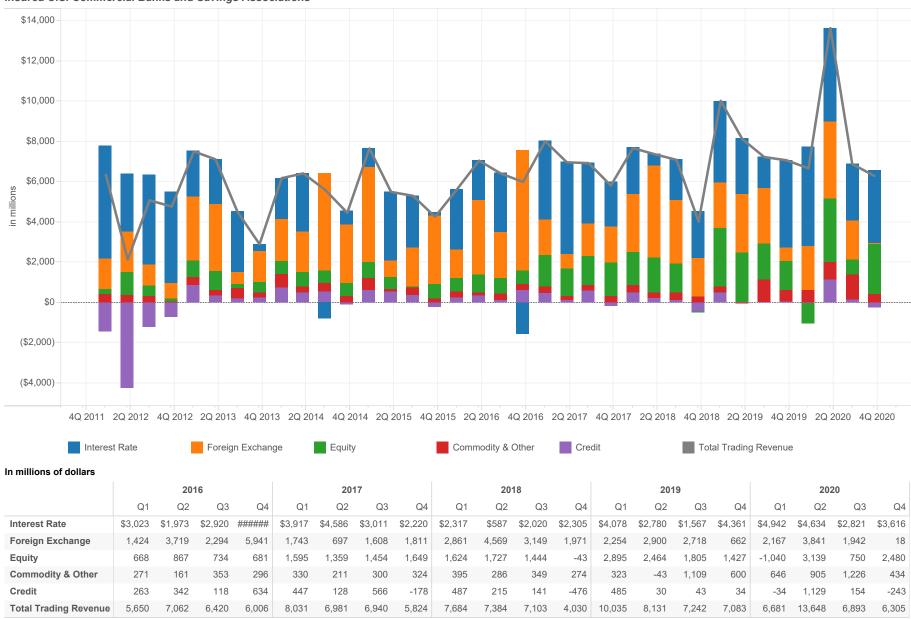
Graph 8
Quarterly Charge-Offs/(Recoveries) From Derivatives - Holding Company
Insured U.S. Commercial Banks and Savings Associations with Derivatives Compared with Holding Companies



n millions of dollars																								
			2000				2	2001				2	2002				2	003				20	04	
	Q.	1 (Q 2	Q3	Q4	Q1	Q	2	Q3	Q4	Q1	Q	2 G	23	Q4	Q1	Q2	. G	13	Q4	Q1	Q2	Q	3 Q4
Charge-Offs (Banks)	0.0) -1	.0	-1.0	-3.0	2.0	-1.0	0 10	7.3	370.0	75.8	28.	2 59	.0	73.7	25.3	29.9	32.	3 8	33.7	46.7	34.9	92.	2 5.4
Charge-Offs (Holding Companies)	0.1	1 -1	.0	19.3	-7.0	2.0	-1.0	0 10	7.3	369.6	75.8	21.	2 66	.0	73.7	25.3	32.9	31.	4 12	27.8	51.2	40.4	94.	2 9.0
			2005				2	2006				2	2007				2	800				20	09	
	Q.	1 (Q 2	Q3	Q4	Q1	Q	2	Q3	Q4	Q1	Q	2 G	23	Q4	Q1	Q2	. G	13	Q4	Q1	Q2	Q	3 Q4
Charge-Offs (Banks)	1	١ .	14	23	8	4	-	7	-16	-6	-3	9	9 11	19	31	15	120	9	2	847	217	168	22	1 162
Charge-Offs (Holding Companies)	55	5	4	45	18	35	į	5	-28	-7	-3	10) 11	19	32	15	120	9	3 1,	192	1,570	477	26	6 164
	2010						2	2011				2	2012				2	013				20	14	
	Q.	1 (Q2	Q3	Q4	Q1	Q	2	Q3	Q4	Q1	Q	2 G	23	Q4	Q1	Q2	. G	13	Q4	Q1	Q2	Q	3 Q4
Charge-Offs (Banks)	100) 1	73	314	83	1,601	72	2	91	69	76	54	4 2	26	73	84	61	3	6	83	13	56	1	5 8
Charge-Offs (Holding Companies)	122	2 28	88	181	3,598	1,617	68	3	92	73	85	64	4 3	35	133	87	63	4	3	83	14	56	1	7 9
	2015				201	6			20	17			20	18			201	19			202	20		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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
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

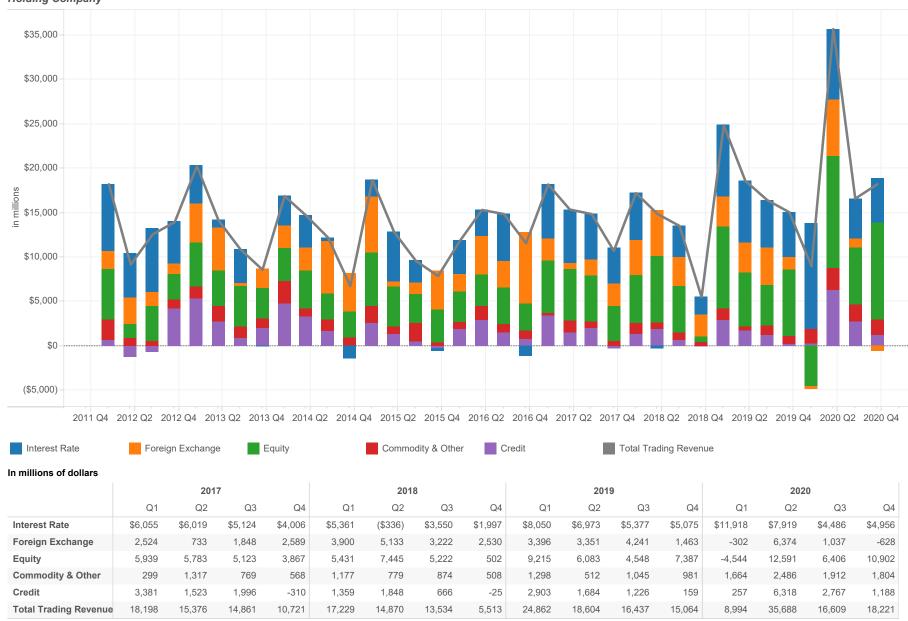
Note: The figures are for each quarter alone, not year-to-date. Source: Call reports, Schedule RI and Y-9, Schedule HI

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



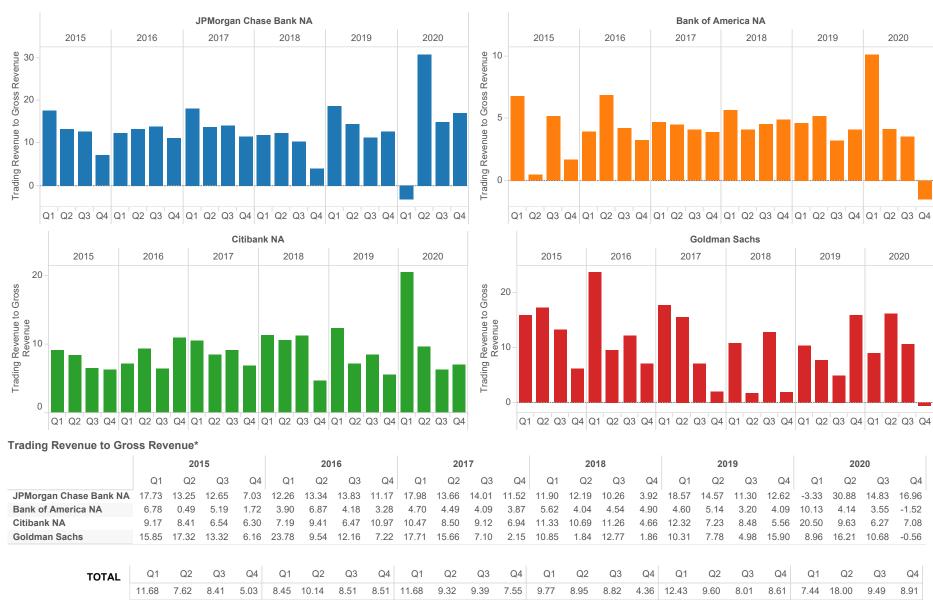
^{*}The trading revenue figures are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date. Note: Numbers may not add up to total due to rounding. Source: Call reports, Schedule RI

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



^{*}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

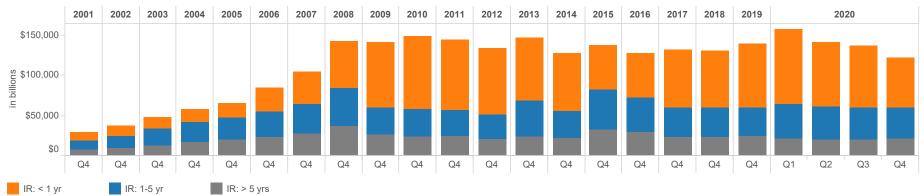
Graph 10
Quarterly Trading Revenue (Cash and Derivative Positions) as a Percentage of Gross Revenue (in Percentage)
Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



^{*}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



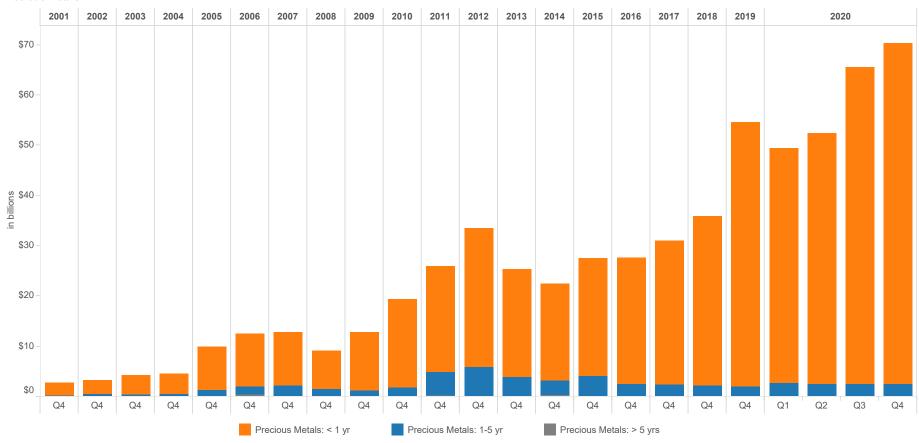
In billions of dollars

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		20	20	
	Q4	Q1	Q2	Q3	Q4															
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	\$92,838	\$80,135	\$76,386	\$62,444
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	43,089	41,096	39,964	39,198
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	20,987	19,980	20,500	20,838
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	31,570	29,050	29,396	29,434
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	4,128	4,239	4,299	4,404
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	2,152	2,179	2,299	2,402

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

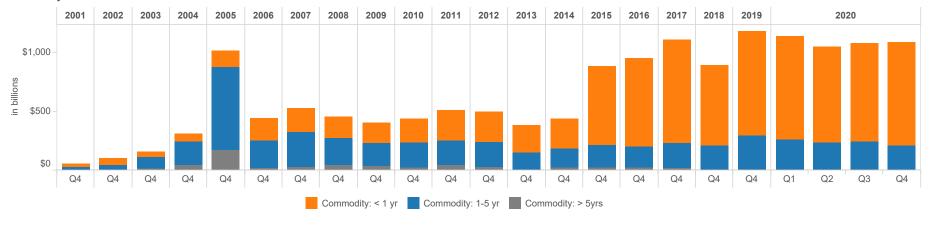


In billions of dollars

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		20	20	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4
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	\$46.74	\$49.96	\$63.02	\$67.80
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	2.64	2.46	2.60	2.53
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	0.00	0.00

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

Commodity



Equity

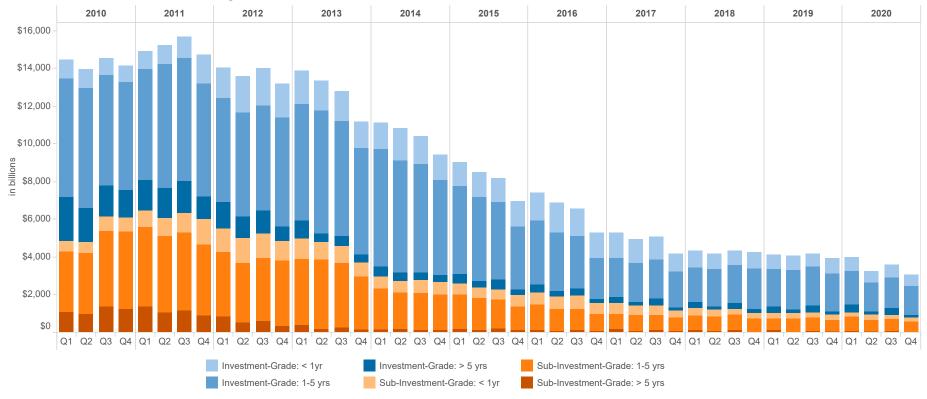


In billions of dollars

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		202	20	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2	Q3	Q4
Commodity: < 1 yr	\$55	\$43	\$64	\$133	\$185	\$206	\$179	\$176	\$203	\$261	\$261	\$235	\$257	\$668	\$750	\$883	\$688	\$884	\$877	\$820	\$838	\$879
Commodity: 1-5 yr	35	103	205	707	235	297	233	198	209	209	208	144	164	197	179	202	198	286	251	226	234	198
Commodity: > 5yrs	9	14	40	175	20	25	43	33	25	46	28	6	20	22	23	25	9	10	9	9	11	9
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	2,959	2,851	3,210	3,287
Equity: 1-5 yr	249	674	736	1,428	221	297	256	228	191	210	262	291	352	628	677	733	864	844	780	826	882	771
Equity: > 5 yrs	25	84	140	383	45	70	72	82	85	94	82	136	101	130	123	113	139	136	124	129	134	139

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



	2016			2017			2018			2019				2020						
	Q1	Q2	Q3	Q4																
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
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
Investment-Grade: > 5 yrs	457	262	385	214	309	195	345	186	331	184	338	204	367	189	330	198	367	171	336	160
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

	2016			2017			2018			2019				2020						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sub-Investment-Grade: < 1yr	\$622	\$683	\$683	\$581	\$582	\$509	\$480	\$375	\$400	\$335	\$318	\$304	\$259	\$283	\$275	\$268	\$247	\$278	\$233	\$218
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
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
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

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 4Q 2020 Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts Insured U.S. Commercial Banks and Savings Associations



In t	llic	ions	of c	lol	lars
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	Interest Rate		Foreign Exchange		Equity		Preciou	s Metals		Cre	dit		Oth	ner
									Investment Grade		Non-Investment Grade			
Bank Name	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-
Dalik Name	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter
JPMorgan Chase Bank NA	21,350	23,682	149	10,288	744	1,908	0	40	443	393	164	208	60	716
Citibank NA	15,873	8,629	302	11,172	94	535	1	8	218	516	48	194	64	95
Bank of America NA	5,264	4,600	87	3,958	146	485	0	8	137	170	49	93	0	18
Goldman Sachs	5,519	26,079	100	5,306	0	21	0	0	0	97	0	58	0	3
HSBC NA	198	270	43	1,282	0	48	0	11	4	10	3	12	0	3
Wells Fargo Bank NA	5,224	2,046	0	524	36	148	0	1	0	3	0	20	0	51
Morgan Stanley Bank NA	0	30	0	28	0	1	0	0	0	4	0	3	0	0
Grand Total	53,428	65,336	681	32,557	1,020	3,147	1	69	803	1,195	265	588	125	886
	2,110	1,606	5	2,997	0	30	0	0	1	26	1	24	9	66
ALL OTHER														

Total Centrally Cleared	Over- the- Counter	Total Notional
22,909	37,235	60,144
16,601	21,151	37,752
5,683	9,332	15,016
5,619	31,564	37,184
249	1,636	1,885
5,261	2,794	8,055
0	66	66
56,323	103,779	160,101
2.126	4.749	6.875

TOTAL 55,538 66,942 686 35,554 1,020 3,177 1 69 804 1,221 266 612 134	952	
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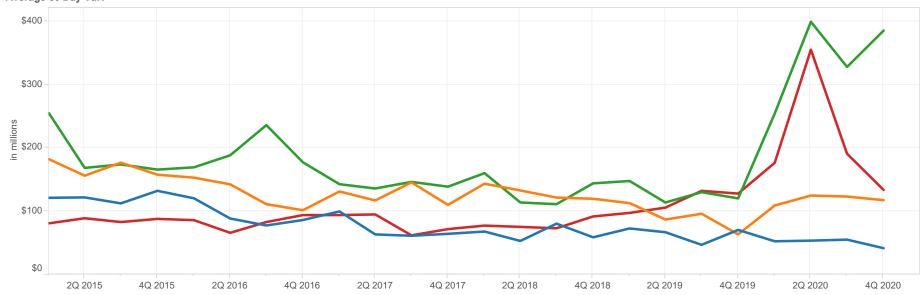
58.449	108,528	166,977
30,443	100,520	100,377

% of Total

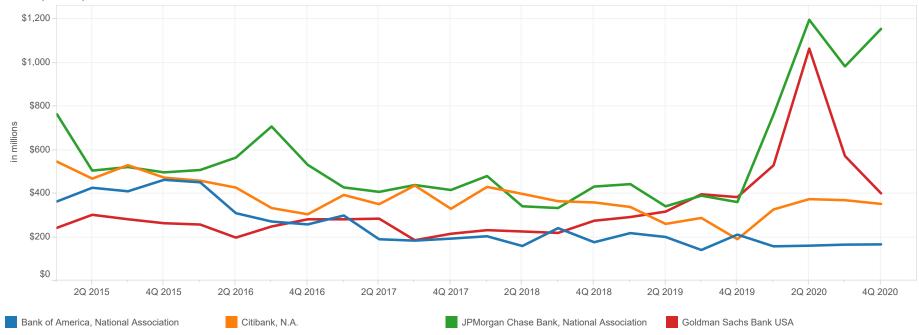
	Interes	st Rate	Foreign E	Foreign Exchange		Equity		s Metals		Cre	edit		Oth	her
									Investment Grade		Non-Investment Grade			
Bank Name	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-	Centrally	Over-the-
Ballk Name	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter	Cleared	Counter
JPMorgan Chase Bank NA	47%	53%	1%	99%	28%	72%	0%	100%	53%	47%	44%	56%	8%	92%
Citibank NA	65%	35%	3%	97%	15%	85%	15%	85%	30%	70%	20%	80%	40%	60%
Bank of America NA	53%	47%	2%	98%	23%	77%	0%	100%	45%	55%	35%	65%	0%	100%
Goldman Sachs	17%	83%	2%	98%	0%	100%			0%	100%	0%	100%	0%	100%
HSBC NA	42%	58%	3%	97%	0%	100%	0%	100%	30%	70%	19%	81%	0%	100%
Wells Fargo Bank NA	72%	28%	0%	100%	19%	81%	0%	100%	8%	92%	2%	98%	1%	99%
Morgan Stanley Bank NA	0%	100%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%

Total Centrally Cleared as a % of Total Notional	
38% 44% 38% 15% 13% 65% 0%	62% 56% 62% 85% 87% 35% 100%

Graph 16 Average 60 Day VaR



VaR Capital Requirement



NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

		LEGAL			TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL CREDIT	
		ENTITY	TOTAL	TOTAL	FUTURES	OPTIONS	FORWARDS	SWAPS	OPTIONS	DERIVATIVES	SPOT
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	(EXCH TR)	(EXCH TR)	(OTC)	(OTC)	(OTC)	(OTC)	FX
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$1,389,530	\$1,831,597	\$7,688,902	\$26,525,295	\$8,264,206	\$1,191,161	\$587,213
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	1,265,179	2,143,033	4,520,874	25,491,613	8,659,437	163,248	380,849
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	671,510	608,568	6,025,310	27,219,548	5,295,019	1,010,308	334,366
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	190,184	166,122	3,441,770	7,999,677	2,597,529	441,494	293,480
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,767,808	8,856,815	297,903	152,771	2,436,283	4,412,195	1,465,630	92,033	5,936
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	311,181	2,603,317	4,822	0	2,556,048	8,481	33,966	0	89,629
7	HSBC NA	1IE8VN30JCEQV1H4R804	197,980	1,951,954	38,223	1,428	538,361	1,113,558	207,770	52,615	57,040
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	386,515	988,804	8,565	52	258,060	697,016	24,946	165	74,254
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	544,774	693,091	15,452	600	124,006	373,736	168,942	10,355	2,400
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	463,097	471,823	4,059	0	26,049	401,347	29,112	11,256	1,223
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	169,571	330,183	0	0	311,346	18,335	502	0	19,320
12	TRUIST BANK	JJKC32MCHWDI71265Z06	498,944	318,034	4,407	16,758	22,185	214,131	50,399	10,154	176
13	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	401,512	256,107	0	0	2,704	251,357	2,046	0	0
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	183,366	210,004	2,284	0	24,175	166,872	14,225	2,447	80
15	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,483	190,759	2,043	753	175,319	8,562	4,062	19	0
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	132,111	187,552	737	0	77,830	102,692	6,197	97	922
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	363,522	168,115	8,594	0	5,038	147,720	846	5,916	420
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	203,174	144,456	1,286	128	6,857	98,497	32,825	4,862	304
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	146,476	130,715	1,219	0	3,945	97,638	20,736	7,177	6
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	168,975	130,632	1,943	0	7,099	102,096	19,072	423	1,050
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	142,220	93,299	0	0	4,054	85,968	3,277	0	108
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	122,838	81,753	177	0	5,913	48,209	24,043	3,411	64
23	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	175,627	78,276	0	100	21,160	35,401	14,578	7,037	542
24	BBVA USA	C90VT034M03BN29IRA40	101,630	55,782	200	0	2,815	45,408	6,316	1,042	0
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	89,502	51,709	0	0	1,719	42,254	7,615	121	15
	COMMERCIAL BANKS, SAs & TCs WITH DERIVA		\$13,834,582	\$162,794,294	\$3,908,317	\$4,921,910	\$28,287,823	\$95,707,608	\$26,953,294	\$3,015,341	\$1,849,399
	COMMERCIAL BANKS, SAs & TCs WITH DERIVA		5,787,331	1,005,496	4,371	835	149,716	715,867	115,765	18,944	3,666
TOTAL C	OMMERCIAL BANKS, SAs & TCs WITH DERIVA	TIVES	19,621,913	163,799,790	3,912,688	4,922,745	28,437,539	96,423,475	27,069,059	3,034,285	1,853,065

Note: Credit derivatives have been included in the sum of total derivatives. Credit derivatives have been included as an "over the counter" category, although the call report does not differentiate by market currently. Note: Before the first quarter of 1995 total derivatives included spot FX. Beginning in that quarter, spot FX has been reported separately.

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

Source: Call reports, Schedule RC-L

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS (HOLDING COMPANIES) TOP 25 HOLDING COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

		LEGAL								CREDIT	
		ENTITY	TOTAL	TOTAL	FUTURES	OPTIONS	FORWARDS	SWAPS	OPTIONS	DERIVATIVES	SPOT
RANK	HOLDING COMPANY	INDENTIFIER	ASSETS	DERIVATIVES	(EXCH TR)	(EXCH TR)	(OTC)	(OTC)	(OTC)	(OTC)	FX
1	JPMORGAN CHASE & CO.	7H6GLXDRUGQFU57RNE97	\$3,386,071	\$46,624,093	\$1,432,320	\$2,262,730	\$8,263,012	\$25,496,157	\$7,969,371	\$1,200,503	\$570,832
2	CITIGROUP INC.	E570DZWZ7FF32TWEFA76	2,260,330	41,168,392	680,418	2,164,577	6,983,834	25,045,736	5,137,450	1,156,377	333,966
3	GOLDMAN SACHS GROUP, INC., THE	KD3XUN7C6T14HNAYLU02	1,163,040	38,368,640	1,753,734	3,157,823	5,016,729	18,149,057	9,216,082	1,075,215	244,314
4	MORGAN STANLEY	IGJSJL3JD5P30I6NJZ34	1,115,862	31,944,246	739,907	1,294,977	4,311,309	17,971,481	7,138,010	488,562	41,008
5	BANK OF AMERICA CORPORATION	B4TYDEB6GKMZO031MB27	2,819,627	27,539,393	1,172,737	943,831	5,700,272	15,075,228	3,890,876	756,449	229,703
6	WELLS FARGO & COMPANY	KB1H1DSPRFMYMCUFXT09	1,955,163	9,300,962	306,233	175,895	3,069,105	4,211,951	1,462,930	74,848	5,930
7	MIZUHO AMERICAS LLC		45,622	6,218,643	22,320	14,881	679,940	5,342,053	153,178	6,271	6,121
8	SMBC AMERICAS HOLDINGS, INC.		22,053	4,978,206	155,513	1,439,494	1,089,113	1,492,824	800,510	751	326
9	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	241,536	3,816,244	258,462	505,965	538,770	2,245,209	215,223	52,615	57,040
10	STATE STREET CORPORATION	571474TGEMMWANRLN572	314,706	2,602,819	4,822	0	2,556,048	7,983	33,966	0	89,629
11	BANK OF NEW YORK MELLON CORPORATION, THE	HPFHU0OQ28E4N0NFVK49	469,633	982,961	9,303	237	277,306	671,004	24,946	165	74,279
12	U.S. BANCORP	6BYL5QZYBDK8S7L73M02	553,905	692,011	15,452	600	122,670	373,993	168,941	10,355	2,400
13	RBC US GROUP HOLDINGS LLC		150,540	653,369	158,313	307,883	36,512	149,556	636	469	62
14	BARCLAYS US LLC	213800H14XVWOV87OI72	161,286	522,496	11,578	216,886	242,906	11,056	0	40,070	15
15	PNC FINANCIAL SERVICES GROUP, INC., THE	AD6GFRVSDT01YPT1CS68	466,865	466,131	4,076	0	30,163	391,523	29,112	11,256	1,223
16	TD GROUP US HOLDINGS LLC	03D0JEWFDFUS0SEEKG89	507,327	334,408	60,369	600	14,274	257,119	2,046	0	0
17	NORTHERN TRUST CORPORATION	6PTKHDJ8HDUF78PFWH30	170,004	327,433	0	0	311,346	15,585	502	0	19,320
18	TRUIST FINANCIAL CORPORATION	JJKC32MCHWDI71265Z06	509,228	322,766	4,407	16,758	27,000	214,048	50,399	10,154	176
19	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	118,490	311,850	9,438	3,568	121,338	94,526	12,485	70,496	13
20	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	421,602	231,906	8,594	0	12,860	203,690	846	5,916	420
21	MUFG AMERICAS HOLDINGS CORPORATION	OX3PU53ZLPQKJ4700D47	167,846	219,304	1,758	2,437	106,039	102,726	6,197	147	922
22	CITIZENS FINANCIAL GROUP, INC.	DRMSV1Q0EKMEXLAU1P80	183,729	210,004	2,284	0	24,175	166,872	14,225	2,447	80
23	BOK FINANCIAL CORPORATION		46,733	190,759	2,043	753	175,319	8,562	4,062	19	0
24	FIFTH THIRD BANCORP	THRNG6BD57P9QWTQLG42	204,680	145,161	1,286	128	6,857	99,202	32,825	4,862	304
25	AMERIPRISE FINANCIAL, INC.	6ZLKQF7QB6JAEKQS5388	165,888	140,958	10,474	5,205	330	73,148	49,503	2,297	2
TOP 25	HOLDING COMPANIES WITH DERIVATIVES		\$17,621,766	\$218,313,154	\$6,825,844	\$12,515,230	\$39,717,226	\$117,870,288	\$36,414,321	\$4,970,244	\$1,678,085

Note: Currently, the Y-9 report does not differentiate credit derivatives. Note: Before to the first quarter of 2005, total derivatives included spot FX. Beginning in that quarter, spot FX has been reported separately. Note: Numbers may not add up to total due to rounding.

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

DISTRIBUTION OF DERIVATIVE CONTRACTS TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES **DECEMBER 31, 2020, MILLIONS OF DOLLARS**

		LEGAL			PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
		ENTITY	TOTAL	TOTAL	EXCH TRADED	ОТС		FOREIGN EXCH	EQUITY	OTHER	CREDIT
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	CONTRACTS	CONTRACTS	CONTRACTS	CONTRACTS	CONTRACTS	CONTRACTS	DERIVATIVES
					(%)	(%)	(%)	(%)	(%)	(%)	(%)
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	6.9	93.1	66.4	25.5	3.9	1.7	2.5
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	8.1	91.9	86.5	13.0	0.1	0.0	0.4
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	3.1	96.9	64.1	30.1	2.4	0.9	2.5
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	2.4	97.6	65.1	27.9	3.9	0.2	3.0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,767,808	8,856,815	5.1	94.9	89.3	6.1	2.9	0.7	1.0
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	311,181	2,603,317	0.2	99.8	0.4	98.3	0.0	1.2	0.0
7	HSBC NA	1IE8VN30JCEQV1H4R804	197,980	1,951,954	2.0	98.0	25.9	66.7	2.5	2.2	2.7
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	386,515	988,804	0.9	99.1	23.4	76.1	0.5	0.0	0.0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	544,774	693,091	2.3	97.7	84.9	13.3	0.0	0.3	1.5
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	463,097	471,823	0.9	99.1	90.1	4.1	1.5	1.9	2.4
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	169,571	330,183	0.0	100.0	5.5	94.3	0.2	0.0	0.0
12	TRUIST BANK	JJKC32MCHWDI71265Z06	498,944	318,034	6.7	93.3	82.4	3.7	9.8	0.9	3.2
13	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	401,512	256,107	0.0	100.0	95.8	4.2	0.0	0.0	0.0
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	183,366	210,004	1.1	98.9	90.7	8.0	0.0	0.1	1.2
15	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,483	190,759	1.5	98.5	95.7	0.4	0.1	3.9	0.0
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	132,111	187,552	0.4	99.6	92.8	7.1	0.1	0.0	0.1
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	363,522	168,115	5.1	94.9	87.0	2.5	0.0	7.0	3.5
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	203,174	144,456	1.0	99.0	78.7	10.0	2.5	5.4	3.4
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	146,476	130,715	0.9	99.1	92.4	1.3	0.0	0.8	5.5
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	168,975	130,632	1.5	98.5	87.4	4.9	0.0	7.4	0.3
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	142,220	93,299	0.0	100.0	99.4	0.6	0.0	0.0	0.0
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	122,838	81,753	0.2	99.8	89.5	3.3	0.6	2.4	4.2
23	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	175,627	78,276	0.1	99.9	44.0	44.5	2.5	0.0	9.0
24	BBVA USA	C90VT034M03BN29IRA40	101,630	55,782	0.4	99.6	94.0	3.6	0.5	0.0	1.9
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	89,502	51,709	0.0	100.0	93.4	6.3	0.0	0.0	0.2
	COMMERCIAL BANKS, SAs & TCs WITH DERIVATI		\$13,834,582	\$162,794,294	\$8,830,227	\$153,964,066	\$115,080,249	\$39,538,646	\$3,771,796	\$1,388,261	\$3,015,341
OTHER	COMMERCIAL BANKS, SAs & TCs WITH DERIVATI	VES	5,787,331	1,005,496	5,206	1,000,291	920,421	56,970	2,918	6,242	18,944
TOTAL F	OR COMMERCIAL BANKS, SAs & TCs WITH DERING	VATIVES	19,621,913	163,799,790	8,835,433	154,964,357	116,000,671	39,595,616	3,774,715	1,394,504	3,034,285
				(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25	COMMERCIAL BANKS, SAs & TCs: % OF TOTAL CO	OMMERCIAL BANKS, SAs & TCs WITH DERIV	VATIVES	99.4	5.4	94.0	70.3	24.1	2.3	0.8	1.8
	COMMERCIAL BANKS, SAS & TCs: % OF TOTAL CO	•		0.6	0.0	0.6	0.6	0.0	0.0	0.0	0.0
	FOR COMMERCIAL BANKS, SAS & TCS: % OF TOTAL CO	•		100.0	5.4	94.6	70.8	24.2	2.3	0.9	1.9
TOTAL	OR COMMERCIAL DANKS, SAS & 1CS. 70 OF TOTA	AL COMMENCIAL DANINO, DAS & TCS WITH D	LIMATIVES	100.0	5.7	97.0	70.0	۲٦،۲	۷.၁	0.9	1.5

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

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

CREDIT EQUIVALENT EXPOSURES TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

						BILATERALLY		TOTAL CREDIT	(%)
		LEGAL			TOTAL	NETTED CURRENT	POTENTIAL	EXPOSURE	TOTAL CREDIT
		ENTITY	TOTAL		RISK-BASED	CREDIT	FUTURE	FROM ALL	EXPOSURE
RANK	BANK NAME	INDENTIFIER	ASSETS		CAPITAL	EXPOSURE	EXPOSURE	CONTRACTS	TO CAPITAL
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$252,045		\$203,382	\$411,292	163
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	36,944		52,180	116,052	314
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	161,623	82,079	131,565	213,644	132
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	181,370	42,631	55,628	98,259	54 29
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,767,808	8,856,815	173,719	30,415	19,775	50,190	29
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	311,181	2,603,317	18,420		5,199	17,232	94
7	HSBC NA	1IE8VN30JCEQV1H4R804	197,980	1,951,954	23,303		8,340	15,050	65
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	386,515	988,804	22,841	5,625	5,619	11,244	49
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	544,774	693,091	52,967	4,950	8,234	13,184	25 15 53
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	463,097	471,823	42,440	7,336	-916	6,420	15
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	169,571	330,183	11,123	2,948	2,943	5,891	53
12	TRUIST BANK	JJKC32MCHWDI71265Z06	498,944	318,034	47,882	4,147	4,416	8,563	18
13	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	401,512	256,107	30,881	128	1,145	1,273	4
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	183,366	210,004	18,980	1,864	1,167	3,031	16
15	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,483	190,759	4,153	969	694	1,664	40
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	132,111	187,552	15,629	1,875	593	2,467	16
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	363,522	168,115	29,369	3,479	2,919	6,399	22
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	203,174	144,456	19,915	2,407	1,917	4,324	22 22 12 20
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	146,476	130,715	14,803	1,312	494	1,806	12
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	168,975	130,632	17,195	1,709	1,654	3,362	20
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	142,220	93,299	13,373	1,037	172	1,209	9
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	122,838	81,753	12,032	1,872	770	2,643	22 19
23	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	175,627	78,276	17,882	244	3,082	3,326	19
24	BBVA USA	C90VT034M03BN29IRA40	101,630	55,782	9,796	669	170	839	9
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	89,502	51,709	11,085	1,210	384	1,594	14
TOD 35 6	COMMEDICIAL DANIES CA- 0 TC- MITTLE DEDIVIN		±12.024.502	±162 704 204	41 220 770	±400,430	AE11 E27	±1 000 057	
	COMMERCIAL BANKS, SAS & TCs WITH DERIVA		\$13,834,582	\$162,794,294	\$1,239,770		\$511,527	\$1,000,957	81
	COMMERCIAL BANKS, SAS & TCs WITH DERIVAT		5,787,331	1,005,496	548,518	17,887	8,381	26,269	5
TOTAL A	MOUNT FOR COMMERCIAL BANKS, SAs & TCs \	WITH DEKIVATIVES	19,621,913	163,799,790	1,788,288	507,317	519,908	1,027,225	57

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

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES **DECEMBER 31, 2020, MILLIONS OF DOLLARS**

					TOTAL	%	TOTAL	%
		LEGAL			HELD FOR	HELD FOR	NOT FOR	NOT FOR
		ENTITY	TOTAL	TOTAL	TRADING	TRADING	TRADING	TRADING
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	& MTM	& MTM	MTM	MTM
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$45,139,176	98.8	\$560,354	1.2
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	42,055,210	99.9	24,926	0.1
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	39,657,988	99.6	161,967	0.4
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	13,456,821	93.5	938,461	6.5
TOP 4 CC	MMERCIAL BANKS, SAs & TCs WITH DERIVA	TIVES	\$7,217,276	\$144,801,114	\$140,309,195	98.8	\$1,685,708	1.2
	OMMERCIAL BANKS, SAs & TCs WITH DERIVA		12,404,637	18,998,676	16,688,485	88.9	2,082,117	11.1
TOTAL AN	MOUNT FOR COMMERCIAL BANKS, SAs & TCs	WITH DERIVATIVES	19,621,913	163,799,790	156,997,680	97.7	3,767,825	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

GROSS FAIR VALUES OF DERIVATIVE CONTRACTS TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

					TRAD	DING	NOT FOR	TRADING	CREDIT DE	RIVATIVES
		LEGAL			GROSS	GROSS	GROSS	GROSS	GROSS	GROSS
		ENTITY	TOTAL	TOTAL	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	FAIR VALUE*	FAIR VALUE**	FAIR VALUE*	FAIR VALUE**	FAIR VALUE*	FAIR VALUE**
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$777,129	\$752,176	\$3,067	\$3,672	\$12,370	\$14,096
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	884,999	873,890	156	192	3,128	3,913
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	524,491	521,927	3,462	4,041	9,205	9,154
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	207,143	207,175	20,823	25,725	3,977	4,465
TOP 4 CC	MMERCIAL BANKS, SAs & TCs WITH DERIVATIVES		\$7,217,276	\$144,801,114	\$2,393,762	\$2,355,168	\$27,508	\$33,630	\$28,680	\$31,628
OTHER C	OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES		12,404,637	18,998,676	182,897	164,549	19,626	18,877	1,888	2,775
TOTAL A	MOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVA	TIVES	19,621,913	163,799,790	2,576,659	2,519,717	47,134	52,507	30,568	34,403

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.

Source: Call reports, Schedule RC-L

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

TRADING REVENUES FROM CASH INSTRUMENTS AND DERIVATIVES TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

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

BANK NAME	LEGAL ENTITY INDENTIFIER	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL TRADING REV FROM CASH & OFF BAL SHEET POSITIONS	TRADING REV FROM INT RATE POSITIONS	TRADING REV FROM FOREIGN EXCH POSITIONS	TRADING REV FROM EQUITY POSITIONS	TRADING REV FROM COMMOD & OTH POSITIONS	TRADING REV FROM CREDIT POSITIONS
JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$4,359	\$452	\$717	\$2,573	\$172	\$445
GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	(8)	1,681	(1,556)	47	0	(180)
CITIBANK NATIONAL ASSN	E570DZWZ7FF32TWEFA76	1,661,507	40,830,263	981	526	1,118	(320)	72	(415)
BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	(245)	105	(581)	226	(5)	10
•		\$7,217,276	\$144,801,114	\$5,087 1,218	\$2,764	(\$302)	\$2,526	\$239	(\$140)
,	AEDI\/ATI\/ES					320 10			(103) (243)
	JPMORGAN CHASE BANK NA GOLDMAN SACHS BANK USA CITIBANK NATIONAL ASSN BANK OF AMERICA NA MMERCIAL BANKS, SAs & TCs WITH DERIVATIVES DMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES	BANK NAME JPMORGAN CHASE BANK NA GOLDMAN SACHS BANK USA CITIBANK NATIONAL ASSN BANK OF AMERICA NA MMERCIAL BANKS, SAS & TCs WITH DERIVATIVES ENTITY INDENTIFIER 7H6GLXDRUGQFU57RNE97 KD3XUN7C6T14HNAYLU02 E57ODZWZ7FF32TWEFA76 B4TYDEB6GKMZ0031MB27	BANK NAME JPMORGAN CHASE BANK NA GOLDMAN SACHS BANK USA CITIBANK NATIONAL ASSN BANK OF AMERICA NA MMERCIAL BANKS, SAS & TCS WITH DERIVATIVES DMMERCIAL BANKS, SAS & TCS WITH DERIVATIVES MMERCIAL BANKS, SAS & TCS WITH DERIVATIVES DMMERCIAL BANKS, SAS & TCS WITH DERIVATIVES 10 TOTAL ASSETS ASSETS **ASSETS** **ASSETS**	BANK NAME JPMORGAN CHASE BANK NA GOLDMAN SACHS BANK USA CITIBANK NATIONAL ASSN BANK OF AMERICA NA MMERCIAL BANKS, SAS & TCS WITH DERIVATIVES ENTITY TOTAL TOTAL ASSETS DERIVATIVES \$46,890,691 KD3XUN7C6T14HNAYLU02 271,652 42,243,384 E570DZWZ7FF32TWEFA76 1,661,507 40,830,263 B4TYDEB6GKMZ0031MB27 2,258,832 14,836,776 *7,217,276 \$144,801,114 DMMERCIAL BANKS, SAS & TCS WITH DERIVATIVES DMMERCIAL BANKS, SAS & TCS WITH DERIVATIVES 12,404,637 18,998,676	LEGAL ENTITY TOTAL TOTAL OFF BAL SHEET	BANK NAME INDENTIFIER ASSETS DERIVATIVES POSITIONS FROM INT RATE POSITIONS JPMORGAN CHASE BANK NA 7H6GLXDRUGQFU57RNE97 \$3,025,285 \$46,890,691 \$4,359 \$452 GOLDMAN SACHS BANK USA KD3XUN7C6T14HNAYLU02 271,652 42,243,384 (8) 1,681 CITIBANK NATIONAL ASSN E57ODZWZ7FF32TWEFA76 1,661,507 40,830,263 981 526 BANK OF AMERICA NA B4TYDEB6GKMZ0031MB27 2,258,832 14,836,776 (245) 105 MMERCIAL BANKS, SAS & TCs WITH DERIVATIVES \$7,217,276 \$144,801,114 \$5,087 \$2,764 DMMERCIAL BANKS, SAS & TCS WITH DERIVATIVES 12,404,637 18,998,676 1,218 852	LEGAL TOTAL TOTAL TOTAL OFF BAL SHEET FROM INT RATE FOREIGN EXCH POSITIONS POSITIONS	BANK NAME TOTAL INDENTIFIER ASSETS ASSETS TOTAL DENTIFIER REV FROM CASH & OFF BAL SHEET DOES IT INDENTIFIER FROM INT RATE POSITIONS FROM FOREIGN EXCH EQUITY POSITIONS FROM INT RATE POSITIONS FROM EQUITY POSITIONS POSITIONS <td> LEGAL ENTITY TOTAL ASSETS TOTAL DERIVATIVES TOTAL BANK NAME TOTAL DEPIVATIVES TOTAL DEPVITONS TOTAL DE</td>	LEGAL ENTITY TOTAL ASSETS TOTAL DERIVATIVES TOTAL BANK NAME TOTAL DEPIVATIVES TOTAL DEPVITONS TOTAL DE

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

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 **DECEMBER 31, 2020, MILLIONS OF DOLLARS**

	LEGAL			INT RATE	INT RATE	INT RATE	INT RATE	FX and GOLD	FX and GOLD	FX and GOLD	FX and GOLD
	ENTITY	TOTAL	TOTAL	MATURITY	MATURITY	MATURITY	ALL	MATURITY	MATURITY	MATURITY	ALL
RANK BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES
1 JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$20,185,131	\$19,661,456	\$5,184,511	\$45,031,098	\$7,002,245	\$2,289,251	\$1,144,817	\$10,436,313
2 GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	15,473,777	8,278,598	7,845,608	31,597,983	3,954,997	783,928	666,715	5,405,640
3 CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	18,010,498	3,691,182	2,800,592	24,502,272	10,653,638	597,735	223,112	11,474,485
4 BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	3,314,841	3,743,088	2,805,726	9,863,655	3,334,631	444,745	266,177	4,045,553
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DE	RIVATIVES	\$7,217,276	\$144,801,114	\$56,984,247	\$35,374,324	\$18,636,437	\$110,995,008	\$24,945,511	\$4,115,659	\$2,300,821	\$31,361,991
OTHER COMMERCIAL BANKS, SAs & TCs WITH D	ERIVATIVES	12,404,637	18,998,676	5,459,634	3,824,159	2,201,292	11,485,084	4,488,519	288,833	101,282	4,878,634
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs 8	& TCs WITH DERIVATIVES	19,621,913	163,799,790	62,443,881	39,198,483	20,837,729	122,480,092	29,434,030	4,404,492	2,402,103	36,240,625

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

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY (PRECIOUS METALS) TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES **DECEMBER 31, 2020, MILLIONS OF DOLLARS**

		LEGAL			PREC METALS	PREC METALS	PREC METALS	PREC METALS
		ENTITY	TOTAL	TOTAL	MATURITY	MATURITY	MATURITY	ALL
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$39,161	\$971	\$0	\$40,132
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	0	0	0	0
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	9,465	312	0	9,777
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	7,866	479	0	8,345
TOP 4	COMMERCIAL BANKS, SAs & TCs WITH DERIV	ATIVES	\$7,217,276	\$144,801,114	\$56,492	\$1,762	\$0	\$58,254
OTHER	COMMERCIAL BANKS, SAs & TCs WITH DERI	VATIVES	12,404,637	18,998,676	11,312	765	0	12,077
TOTAL	FOR COMMERCIAL BANKS, SAs & TCs WITH I	DERIVATIVES	19,621,913	163,799,790	67,804	2,527	0	70,331

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

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 DECEMBER 31, 2020, MILLIONS OF DOLLARS

RANK	BANK NAME	LEGAL ENTITY INDENTIFIER	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	\$3,025,285	\$46,890,691	\$692,245	\$77,619	\$6,397	\$776,261	\$2,087,218	\$452,675	\$112,521	\$2,652,414
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	2,354	1,135	0	3,489	10,849	9,483	1,099	21,431
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	103,890	52,144	2,558	158,592	509,931	111,187	8,590	629,708
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	12,027	5,568	0	17,595	507,783	112,651	9,989	630,423
OTHER C	OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES OR COMMERCIAL BANKS, SAs & TCs WITH DERIVAT	5	\$7,217,276 12,404,637 19,621,913	\$144,801,114 18,998,676 163,799,790	\$810,516 68,197 878,713	\$136,466 61,870 198,336	\$8,955 454 9,409	\$955,937 130,521 1,086,458	\$3,115,781 171,355 3,287,136	\$685,996 84,825 770,821	\$132,199 6,374 138,573	\$3,933,976 262,554 4,196,530

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

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 DECEMBER 31, 2020, MILLIONS OF DOLLARS

	LEGAL					CREDIT DERIV				CREDIT DER		
	ENTITY	TOTAL	TOTAL	TOTAL CREDIT	MATURITY	MATURITY	MATURITY	ALL	MATURITY	MATURITY	MATURITY	ALL
RANK BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	DERIVATIVES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES	< 1 YR	1 - 5 YRS	> 5 YRS	MATURITIES
1 JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$1,191,161	\$221,589	\$626,010	\$67,915	\$915,514	\$66,553	\$199,056	\$10,038	\$275,647
2 GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	163,248	25,878	63,502	13,124	102,504	10,886	39,927	9,931	60,744
3 CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	1,010,308	173,725	545,490	43,533	762,748	78,312	161,802	7,446	247,560
4 BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	441,494	89,029	203,591	20,814	313,434	47,438	72,797	7,825	128,060
TOP 4 COMMERCIAL BANKS, SAs & TCs WITH DER OTHER COMMERCIAL BANKS, SAs & TCs WITH DE		\$7,217,276 12,404,637	\$144,801,114 18,998,676	\$2,806,211 228,074	\$510,221 43,852	\$1,438,593 82,215	\$145,386 14,583	\$2,094,200 140,650	\$203,189 14,562	\$473,582 59,814	\$35,240 13,048	\$712,011 87,423
TOTAL AMOUNT FOR COMMERCIAL BANKS, SAs &	TCs WITH DERIVATIVES	19,621,913	163,799,790	3,034,285	554,073	1,520,808	159,969	2,234,850	217,751	533,396	48,288	799,434

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

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

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

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

DISTRIBUTION OF CREDIT DERIVATIVE CONTRACTS HELD FOR TRADING TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

						TOTAL C	REDIT		PUR	CHASED			S	OLD	
		LEGAL			TOTAL	DERIVA	TIVES	CREDIT	TOTAL		OTHER	CREDIT	TOTAL		OTHER
		ENTITY	TOTAL	TOTAL	CREDIT			DEFAULT	RETURN	CREDIT	CREDIT	DEFAULT	RETURN	CREDIT	CREDIT
RANK	BANK NAME	INDENTIFIER	ASSETS	DERIVATIVES	DERVATIVES	PURCHASED	SOLD	SWAPS	SWAPS	OPTIONS	DERIVATIVES	SWAPS	SWAPS	OPTIONS	DERIVATIVES
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	\$3,025,285	\$46,890,691	\$1,191,161	\$613,866	\$577,295	\$547,411	\$26,220	\$35,498	\$4,737	\$524,784	\$18,858	\$33,630	\$23
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	271,652	42,243,384	163,248	98,370	64,878	88,430	2,647	4,347	2,946	58,020	2,647	4,047	164
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,661,507	40,830,263	1,010,308	534,903	475,405	509,058	14,463	11,382	0	459,568	4,523	11,314	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,258,832	14,836,776	441,494	226,712	214,782	188,316	10,177	28,219	0	176,007	15,678	23,097	0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,767,808	8,856,815	92,033	45,803	46,230	7,058	22,239	0	16,506	5,114	32,668	0	8,448
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	311,181	2,603,317	0	0	0	0	0	0	0	0	0	0	0
7	HSBC NA	1IE8VN30JCEQV1H4R804	197,980	1,951,954	52,615	33,115	19,500	25,077	8,038	0	0	19,262	238	0	0
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	386,515	988,804	165	165	0	165	0	0	0	0	0	0	0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	544,774	693,091	10,355	3,768	6,587	1,059	0	0	2,709	0	0	0	6,587
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	463,097	471,823	11,256	4,348	6,908	648	0	0	3,701	0	0	0	6,908
11	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	169,571	330,183	0	0	0	0	0	0	0	0	0	0	0
12	TRUIST BANK	JJKC32MCHWDI71265Z06	498,944	318,034	10,154	3,724	6,430	918	1,296	0	1,510	138	0	0	6,292
13	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	401,512	256,107	0	0	0	0	0	0	0	0	0	0	0
14	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	183,366	210,004	2,447	0	2,447	0	0	0	0	0	0	0	2,447
15	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,483	190,759	19	4	15	4	0	0	0	15	0	0	0
16	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	132,111	187,552	97	97	0	97	0	0	0	0	0	0	0
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	363,522	168,115	5,916	2,370	3,546	0	0	0	2,370	0	0	0	3,546
18	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	203,174	144,456	4,862	1,466	3,396	0	0	0	1,466	0	0	0	3,396
19	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	146,476	130,715	7,177	2,668	4,509	43	0	0	2,625	43	0	0	4,466
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	168,975	130,632	423	103	320	103	0	0	0	227	93	0	0
21	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	142,220	93,299	0	0	0	0	0	0	0	0	0	0	0
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	122,838	81,753	3,411	2,656	754	0	0	0	2,656	0	0	0	754
23	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	175,627	78,276	7,037	6,702	335	5,887	0	815	0	335	0	0	0
24	BBVA USA	C90VT034M03BN29IRA40	101,630	55,782	1,042	0	1,042	0	0	0	0	1,042	0	0	0
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	89,502	51,709	121	11	110	11	0	0	0	110	0	0	0
			142.024.502	1462 704 204	10.015.044	L4 500 054	L. 40.4 400	14.074.004	105.000	100.004		14 244 665	\ 7.4.70 5	L=2.000	. 42. 222
	COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES		\$13,834,582	\$162,794,294	\$3,015,341	\$1,580,851	\$1,434,490	\$1,374,284	\$85,080	\$80,261	\$41,226	, , ,	\$74,705	\$72,088	\$43,032
	OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES		5,787,331	1,005,496	18,944	8,495	10,449	1,248	2,755	0	4,492	2,962	2	0	7,485
TOTAL A	MOUNT FOR COMMERCIAL BANKS, SAs & TCs WITH DERIVA	ATIVES	19,621,913	163,799,790	3,034,285	1,589,346	1,444,939	1,375,532	87,835	80,261	45,718	1,247,627	74,707	72,088	50,517
					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 C	COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMMERCIA	L BANKS, SAs & TCs WITH DERIVATI	IVES		99.4	52.1	47.3	45.3	2.8	2.6	1.4	41.0	2.5	2.4	1.4
	COMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMERCIA	•			0.6	0.3	0.3	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.2
	MOUNT FOR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL	•		ES	100.0	52.4	47.6	45.3	2.9	2.6	1.5	41.1	2.5	2.4	1.7
			-		==3.0							· · -			=

Note: Credit derivatives have been excluded from the sum of total derivatives here. Note: Numbers may not add up to total due to rounding. Source: Call reports, Schedule RC-L

DERIVATIVES DATA REPORTED BY FFIEC 051 FILERS* COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES DECEMBER 31, 2020, MILLIONS OF DOLLARS

all Report Schedule SU																
. Gross Notional Amount of Derivatives	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17
Total gross notional amount of interest rate derivatives held for trading	\$5,808	\$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	\$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	\$52,802	\$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	\$1,137	\$1,202	\$1,302	\$1,171	\$631	\$546	\$273	\$242	\$160	\$2,754	\$3,133	\$531	\$86	\$89	\$89	\$80
all Report Schedule RC-R**					T		T									
. Notional principal amounts of over-the-counter derivative contracts covered by the regulatory capital rules:																
a. Interest rate	\$22,948 Data	Not Reported	\$33,122 D	ata 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	\$14	\$13	\$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
. 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
. 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.