

Quarterly Report on Bank Trading and Derivatives Activities

Third Quarter 2017

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 derivative activities is based on call report information provided by all insured U.S. commercial banks (including trust companies) and savings associations; reports filed by U.S. financial holding companies; and other published data. A total of 1,391¹ insured U.S. commercial banks and savings associations reported derivative activities at the end of the third quarter of 2017. A small group of large financial institutions continues to dominate derivative activity in the U.S. commercial banking system. During the third quarter of 2017, four large commercial banks represented 90.2 percent of the total banking industry notional amounts and 86.3 percent of industry net current credit exposure (NCCE) (see table 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 derivative 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 all OTC derivative categories, migration of certain highly liquid products to clearinghouses, and requirements for posting and collecting margin.

This is the 88th edition of the OCC's Quarterly Report on Bank Trading and Derivatives Activities. The first report was published in 1995. In our continuous efforts to improve this report, we now incorporate an entity's Legal Entity Identifier (LEI), if available, in the supplementary tables in the appendix.² Please send any comments or feedback on the structure and content of this report to the OCC by email: <u>QuarterlyDerivatives@occ.treas.gov</u>.

Executive Summary

- Insured U.S. commercial banks and savings associations (collectively, banks) reported trading revenue of \$6.4 billion in the third quarter of 2017, \$0.2 billion less (3.6 percent) than in the previous quarter and \$0.02 billion less (0.4 percent) than a year earlier (see page 4).
- Credit exposure from derivatives decreased in the third quarter of 2017 as compared to the second quarter of 2017. NCCE decreased \$21.1 billion, or 5.7 percent, to \$348.4 billion (see page 8).
- Trading risk, as measured by value-at-risk (VaR), decreased in the third quarter of 2017. Total average VaR across the top five dealer banking companies decreased \$17.0 million, or 6.2 percent, to \$256 million (see page 11).
- Derivative notional amounts increased in the third quarter of 2017 by \$2.8 trillion, or 1.5 percent, to \$188.3 trillion (see page 14).
- Derivative contracts remained concentrated in interest rate products, which represented 75.0 percent of total derivative notional amounts (see page 14).

¹ Beginning March 31, 2017, institutions with total assets less than \$1 billion have the option to file the FFIEC 051 Call Report. Due to the limited amount of derivatives data provided by FFIEC 051 Call Report filers, this report provides this information in a separate and distinct table in the appendix (see table 13 in the appendix).

² The Legal Entity Identifier (LEI) is a 20-digit, alphanumeric code that enables clear and unique identification of legal entities. For more information, see the Global Legal Entity Identifier Foundation's website at <u>www.gleif.org</u>.

³

<u>Revenue</u>

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

Insured U.S. commercial banks and savings associations reported \$6.4 billion in trading revenue in the third quarter of 2017, \$0.2 billion less (3.6 percent) than in the previous quarter and \$0.02 billion less (0.4 percent) than a year earlier (see table 1). The driver of the year-over-year decrease in trading revenue was interest rate and foreign exchange (FX) trading offset by an increase in equity and credit trading revenue.

Combined interest rate and FX revenue led the quarterly decrease, decreasing \$0.7 billion to \$4.5 billion. Since dealers often use interest rate contracts to hedge exposures in FX derivatives, it is useful to view these categories collectively. For a historical view of quarterly bank trading revenue by instrument, see graph 9a in the appendix.

| | | | | | | Y/Y | Y/Y % |
|-----------------------|---------|---------|------------|--------------|---------|--------|--------|
| | 2017 Q3 | 2017 Q2 | Q/Q Change | Q/Q % Change | 2016 Q3 | Change | Change |
| Interest Rate & FX | \$4,458 | \$5,201 | -\$743 | -14.3% | \$5,214 | -\$756 | -14.5% |
| Equity | \$1,184 | \$1,122 | \$62 | 5.5% | \$734 | \$449 | 61.2% |
| Commodity & Other | \$284 | \$206 | \$78 | 38.1% | \$354 | -\$69 | -19.6% |
| Credit | \$470 | \$108 | \$362 | 333.3% | \$118 | \$352 | 297.2% |
| Total Trading Revenue | \$6,396 | \$6,637 | -\$241 | -3.6% | \$6,420 | -\$24 | -0.4% |

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

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 \$13.9 billion in the third quarter of 2017 was \$1.2 billion (7.7 percent) lower than in the previous quarter. A \$0.9 billion decrease in equity revenue and a \$0.5 billion decrease in commodity and other revenue drove the decrease in trading revenue from the previous quarter. Year-over-year holding company trading results decreased by \$0.9 billion (6.2 percent). For a historical view of quarterly holding company trading revenue by instrument, see graph 9b in the appendix.

| | 2017 Q3 | 2017 Q2 | Q/Q Change | Q/Q % Change | 2016 Q3 | Y/Y Change | Y/Y % Change |
|--------------------------|----------|----------|------------|--------------|----------|---------------|-----------------|
| Interest Rate & FX | \$6,546 | \$6,605 | -\$59 | -0.9% | \$8,258 | -\$1,712 | -20.7% |
| Equity | \$4,705 | \$5,682 | -\$977 | -17.2% | \$4,159 | \$546 | 13.1% |
| Commodity & Other | \$784 | \$1,330 | -\$545 | -41.0% | \$969 | -\$185 | -19.1% |
| Credit | \$1,917 | \$1,493 | \$424 | 28.4% | \$1,482 | \$435 | 29.3% |
| Total HC Trading Revenue | \$13,953 | \$15,111 | -\$1,158 | -7.7% | \$14,868 | -\$915 | -6.2% |

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

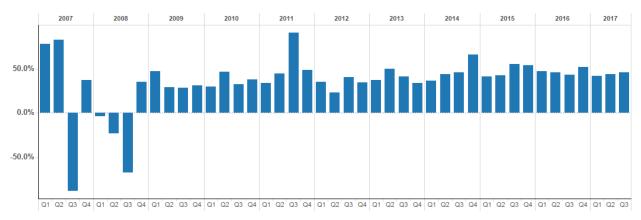
Bank Trading Revenue as a Percentage of Consolidated Holding Company Trading Revenue

Before the financial crisis, trading revenue at banks typically ranged from 60 percent to 80 percent of consolidated BHC trading revenue. Since the financial crisis and the adoption of bank charters by the former investment banks, the percentage of bank trading revenue to consolidated BHC trading revenue has fallen and is now 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 trading commodity and equity products.

In the third quarter of 2017, banks generated 45.8 percent of consolidated holding company trading revenue, up from 43.9 percent in the previous quarter (see figure 1).





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

Credit Risk

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 current 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 where 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 \$322.0 billion (13.7 percent) in the third quarter of 2017 to \$2.0 trillion, driven by a \$295 billion (18.1 percent) decrease in receivables from interest rate contracts (see table 3).

Because banks mostly hedge the market risk of their derivative portfolios with other derivatives, a similar decrease in GNFVs generally matched the change in GPFV. Derivative payables, GNFV, decreased \$317.0 billion (13.8 percent) to \$2.0 trillion during the quarter, driven by a decrease in payables on interest rate contracts

GPFV and GNFV interest rate contracts declined 53.1 percent and 53.6 percent respectively year-over-year. Part of the decline is a result of the continued implementation of settled-to-market (STM) treatment for variation margin. STM allows for the characterization of variation margin for over the counter derivatives that are cleared through central clearing parties (CCP), to constitute a settlement of the exposure, as opposed to collateralization.

| | | | Q/Q | Q/Q % | | Y/Y | Y/Y % |
|---------------------------|---------|---------|--------|--------|---------|----------|--------|
| | 2017 Q3 | 2017 Q2 | Change | Change | 2016 Q3 | Change | Change |
| Interest Rate | \$1,339 | \$1,634 | -\$295 | -18.1% | \$2,853 | -\$1,514 | -53.1% |
| Foreign Exchange | \$476 | \$515 | -\$39 | -7.6% | \$481 | -\$5 | -1.0% |
| Equity | \$105 | \$97 | \$8 | 8.2% | \$96 | \$9 | 9.0% |
| Commodities | \$47 | \$42 | \$5 | 11.7% | \$42 | \$5 | 11.7% |
| Credit | \$68 | \$69 | -\$1 | -1.1% | \$91 | -\$23 | -25.3% |
| Gross Positive Fair Value | \$2,035 | \$2,357 | -\$322 | -13.7% | \$3,563 | -\$1,529 | -42.9% |

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

| | | | | 1 | | | |
|---------------------------|---------|---------|--------|--------|---------|----------|--------|
| | | | Q/Q | Q/Q % | | Y/Y | Y/Y % |
| | 2017 Q3 | 2017 Q2 | Change | Change | 2016 Q3 | Change | Change |
| Interest Rate | \$1,287 | \$1,565 | -\$279 | -17.8% | \$2,776 | -\$1,489 | -53.6% |
| Foreign Exchange | \$462 | \$515 | -\$53 | -10.3% | \$467 | -\$5 | -1.2% |
| Equity | \$111 | \$102 | \$9 | 8.6% | \$95 | \$16 | 17.0% |
| Commodities | \$48 | \$43 | \$5 | 11.6% | \$44 | \$4 | 9.3% |
| Credit | \$71 | \$69 | \$1 | 2.1% | \$91 | -\$20 | -21.9% |
| Gross Negative Fair Value | \$1,979 | \$2,295 | -\$317 | -13.8% | \$3,473 | -\$1,494 | -43.0% |

Source: Call reports, Schedule RC-L

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

Table 4. Netting Contract Examples

| Bank A Portfolio With Counterparty B | Number of Contracts | Value of Contracts | Credit Measure/Metric |
|---|------------------------|-----------------------|------------------------------------|
| Contracts With Positive Value to Bank A | 6 | \$500 | Gross Positive Fair Value |
| Contracts With Negative Value to Bank A | 4 | \$350 | Gross Negative Fair Value |
| Total Contracts | 10 | \$150 | NCCE to Bank A From Counterparty B |

Most, but not necessarily all, derivative transactions that a bank has with an individual counterparty are subject to a legally enforceable netting agreement. Some transactions may be subject to the laws of a jurisdiction that does not provide legal certainty of netting agreements, in which case banks must regard such transactions as separate from the netting set. Other transactions may involve nonstandard contractual documentation. Transactions that are not subject to the same legally enforceable netting agreement have distinct values that cannot be netted and for which the appropriate current credit measure is the gross exposure to the bank, if that amount is positive. While banks can net exposures within a netting set under the same netting agreement, they cannot net exposures across netting sets without a separate legally enforceable netting agreement. As a result, a bank's NCCE to a particular counterparty equals the sum of the GPFV of contracts less the dollar amount of netting benefits with that counterparty. A bank's NCCE across all counterparties equals the sum of its NCCE to each of its counterparties.

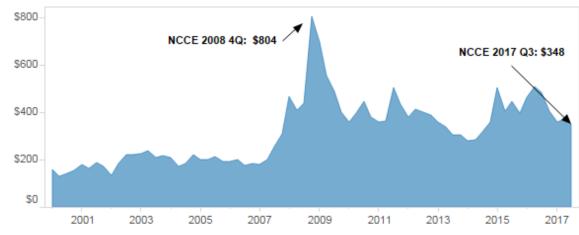
NCCE is the primary metric the OCC uses to evaluate credit risk in bank derivative activities. NCCE for insured U.S. commercial banks and saving associations decreased by \$21.1 billion (5.7 percent) to \$348.4 billion in the third quarter of 2017 (see table 5).³ Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 82.9 percent (\$1.7 trillion) in the third quarter of 2017 compared with 84.3 percent (\$2.0 trillion) in the previous quarter.

| | 2017 Q3 | 2017 Q2 | Q/Q Change | Q/Q % Change |
|---------------------------|---------|---------|---------------|-----------------|
| Gross Positive Fair Value | \$2,035 | \$2,357 | -\$322 | -13.7% |
| NCCE RC-R | \$348 | \$369 | -\$21 | -5.7% |
| Netting Benefit RC-R | \$1,686 | \$1,987 | -\$301 | -15.2% |
| Netting Benefit % RC-R | 82.9% | 84.3% | | -1.4% |

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

NCCE peaked at \$804.1 billion at the end of 2008, during the financial crisis, when interest rates had plunged and credit spreads were very high (see figure 2). The significant decline in NCCE since 2008 has largely resulted from declines in the GPFV of interest rate and credit contracts. GPFV from interest rate contracts has fallen from \$5.1 trillion at the end of 2008 to \$1.3 trillion at the end of the third quarter of 2017. On September 30, 2017, exposure from credit contracts were \$68.1 billion (see table 3), which is \$1.0 trillion lower (93.8 percent) than the \$1.1 trillion on December 31, 2008. New regulations and a decrease in client demand have led to the reduction in credit derivative notional amounts since 2008.





Source: Call reports, Schedule RC-R

The bulk of bank's NCCE in the financial system is concentrated in banks and securities firms (40.1 percent) and corporations and other counterparties (49.0 percent) (see table 6).

The combined exposure to hedge funds, sovereign governments, and monoline financial firms was small (10.9 percent in total). The sheer size of aggregate counterparty exposures, however,

³ Banks report NCCE in 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.

results in the potential for major losses, even in sectors where credit exposure is a small percentage of the total. For example, notwithstanding the minimal share of NCCE to monolines, banks suffered material losses on these exposures during the credit crisis. Sovereign credit exposures were also a small component (7.6 percent) of NCCE during the quarter and, like monoline exposures before the financial crisis, are largely unsecured.

| | Banks & Securities Firms | Monoline Financial Firms | Hedge Funds | Sovereign Governments | Corp & All Other Counterparties |
|---------|--------------------------------|-----------------------------|-------------|--------------------------|---------------------------------------|
| 2017 Q3 | 40.1% | 0.1% | 3.2% | 7.6% | 49.0% |
| 2017 Q2 | 47.5% | 0.1% | 2.5% | 7.1% | 42.8% |
| 2017 Q1 | 47.5% | 0.1% | 2.2% | 7.5% | 42.7% |
| 2016 Q4 | 48.5% | 0.1% | 2.0% | 6.5% | 43.0% |
| 2015 Q4 | 53.3% | 0.1% | 2.1% | 6.0% | 38.5% |
| 2014 Q4 | 53.2% | 0.1% | 1.9% | 6.4% | 38.4% |

Table 6. Net Current Credit Exposure by Counterparty Type as a Percentage of Total Net CurrentCredit Exposure

Source: Call reports, Schedule RC-L

A more risk-sensitive measure of credit exposure would consider the value of collateral held against counterparty exposures. Commercial banks and savings associations with total assets greater than \$10 billion report the fair value of collateral held against various classifications of counterparty exposure.

Reporting banks held collateral valued at 109.2 percent of their total NCCE at the end of the third quarter of 2017, up from 108.6 percent in the second quarter of 2017 (see table 7). The increase in the ratio of the value of collateral held to the value of counterparty exposure was due primarily to stronger collateral coverage ratio of exposures to banks and securities firms, which increased from 125.7 percent to 133.6 percent. Collateral held against hedge fund exposures decreased in the third quarter, but coverage remains very high at 461.8 percent. Bank exposures to hedge funds have always been secured, because banks take initial margin on transactions with hedge funds, in addition to fully securing any current credit exposure. Collateral coverage of corporate, monoline, and sovereign exposures is much less than coverage of financial institutions and hedge funds, although coverage of corporate exposures has been increasing over the past several years because of increases in the volume of trades cleared at central counterparties.

| | FV Banks & Securities Firms | FV Monoline Financial Firms | FV Hedge Funds | FV Sovereign Governments | FV Corp and All Other Counterparties | FV/NCCE% |
|---------|-----------------------------------|--------------------------------|-------------------|-----------------------------|--|----------|
| 2017 Q3 | 133.6% | 0.0% | 461.8% | 34.1% | 77.9% | 109.2% |
| 2017 Q2 | 125.7% | 0.0% | 522.3% | 35.0% | 77.5% | 108.6% |
| 2017 Q1 | 122.7% | 0.0% | 579.9% | 34.5% | 77.4% | 106.7% |
| 2016 Q4 | 119.0% | 0.0% | 491.5% | 34.2% | 67.1% | 98.5% |
| 2015 Q4 | 101.6% | 5.2% | 435.5% | 15.6% | 66.2% | 89.6% |
| 2014 Q4 | 94.4% | 0.0% | 361.5% | 11.0% | 59.5% | 80.6% |

Source: Call reports, Schedule RC-L

Collateral quality held by banks was very high and liquid during the quarter, with 65.0 percent held in cash (both U.S. dollar and non-dollar) and an additional 12.2 percent held in U.S.

Treasuries and government agency securities (see table 8). Supervisors assess changes in the quality 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.

| | Cash U.S. Dollar | Cash Other Currencies | U.S. Treasury Securities | U.S. Gov't Agency | Corp Bonds | Equity Securities | All Other Collateral |
|---------|---------------------|--------------------------|-----------------------------|----------------------|------------|----------------------|-------------------------|
| 2017 Q3 | 38.2% | 26.8% | 10.1% | 2.1% | 2.2% | 5.8% | 14.8% |
| 2017 Q2 | 40.9% | 27.6% | 9.5% | 2.1% | 2.0% | 5.3% | 12.5% |
| 2017 Q1 | 42.0% | 27.5% | 8.3% | 1.9% | 2.0% | 5.5% | 12.8% |
| 2016 Q4 | 40.1% | 31.5% | 8.1% | 1.7% | 1.6% | 5.0% | 12.0% |
| 2015 Q4 | 43.7% | 31.7% | 4.6% | 1.6% | 1.4% | 5.3% | 11.7% |
| 2014 Q4 | 43.8% | 31.9% | 4.1% | 1.7% | 1.2% | 1.7% | 15.7% |

Table 8. Composition of Collateral

Source: Call reports, Schedule RC-L

Credit quality metrics for derivative exposures improved in the third quarter of 2017, as banks reported net recoveries of \$8.8 million, compared to net charge-offs of \$8.7 million in the second quarter of 2017 (see graph 7 in the appendix). The number of banks reporting charge-offs decreased from 14 to seven banks. Net recoveries in the third quarter of 2017 represented 0.003 percent of the NCCE from derivative contracts. For comparison purposes, commercial and industrial (C&I) loan net charge-offs decreased \$296.4 million, or 15.6 percent, to \$1.6 billion during the quarter and were 0.08 percent of total C&I loans. Charge-offs of derivative exposures typically are associated with problem commercial lending exposures, in which the borrower has an associated swap transaction.

<u>Market Risk</u>

Value-at-Risk

Banks primarily control market risk in trading operations by establishing limits against potential losses. Banks use VaR to quantify the maximum expected loss over a specified time period and at a certain confidence level under relevant market conditions. Since VaR does not measure the maximum potential loss, banks stress test trading portfolios to assess the potential for loss beyond the VaR measure. Banks and supervisors have been working to expand the use of stress testing to complement the VaR risk measurement process that banks typically use to assess a bank's exposure to market risk.

The large trading banks disclose average VaR data in published financial reports. Comparing the VaR numbers over time to equity capital and net income provides perspective on market risk of trading activities. As shown in table 9, market risk reported by the five largest banking companies, as measured by VaR, is small as a percentage of their equity capital.

| | | | BANK OF | | MORGAN | |
|--------------------|-----------------|-----------|-----------|----------|----------|-----------|
| | JPMORGAN | CITIGROUP | AMERICA | GOLDMAN | STANLEY | TOTAL |
| Q3 2017 | \$30 | \$89 | \$47 | \$47 | \$43 | \$256 |
| Q2 2017 | \$27 | \$96 | \$48 | \$51 | \$51 | \$273 |
| Q/Q Change | \$3 | -\$7 | -\$1 | -\$4 | -\$8 | -\$17 |
| Q/Q % Change | 11.1% | -7.3% | -2.1% | -7.8% | -15.7% | -6.2% |
| Equity Capital | \$258,483 | \$230,019 | \$270,987 | \$86,675 | \$77,826 | \$923,990 |
| 2016 Net Income | \$59,979 | \$37,251 | \$40,708 | \$16,541 | \$14,142 | \$168,621 |
| Avg VaR/Equity | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% | 0.0% |
| Avg VaR/Net Income | 0.1% | 0.2% | 0.1% | 0.3% | 0.3% | 0.2% |

Table 9. Value-at-Risk at Major Bank Holding Companies, in Millions of Dollars

Source: 10K and 10Q U.S. Securities and Exchange Commission reports

VaR measures are not comparable across firms because of methodological differences in calculating VaR, as well as differences in the scope of coverage. These differences can result in materially different VaR estimates across firms, even for the same portfolios. When assessing trading risk in the banking system, it is therefore appropriate to review the trend in VaR at individual firms, not in aggregate across firms.

Because of methodological differences in calculating VaR, readers are cautioned that a higher VaR figure at a particular bank may not necessarily imply that the bank has more trading risk than another bank with a lower VaR. For example, JPMorgan, Goldman Sachs, and Morgan Stanley calculate VaR using a 95 percent confidence interval. If those firms used a 99 percent confidence interval, as Bank of America and Citigroup do, their VaR estimates would be meaningfully higher. The data series used to measure risk also is an important factor in the calculated risk. VaR for a single portfolio of exposures will differ if the historical period used to measure risk differs. The scope of coverage of the VaR measure is also important when reviewing risks across institutions. Some firms disclose VaR based only on their trading and intermediation activity, while others also include risks from hedging mortgage-servicing assets, fair value option portfolios, and asset and liability management activities. Graph 16 in the appendix illustrates the trend over the past seven years in average VaR at each of the top five large banking companies.

Figure 3 shows the VIX, a volatility index,⁴ which measures the market's expectation of stock market volatility in the S&P 500 index over the next 30-day period. The chart illustrates that there has been an extended period of low volatility since the end of the financial crisis.

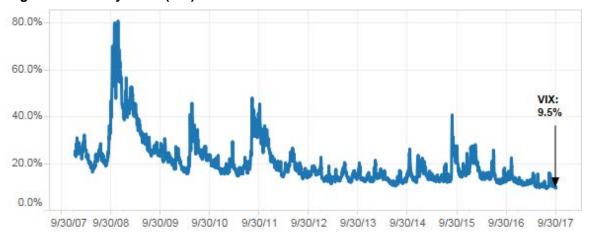


Figure 3. Volatility Index (VIX)

Source: Bloomberg

Level 3 Trading Assets

Another measure used to assess market risk is the volume of and changes in level 3 trading assets. Level 3 trading assets are assets whose fair value cannot be determined by using observable inputs, such as market prices. Since the peak of the financial crisis at the end of 2008, major dealers have reduced the volume of level 3 trading assets. Because banks cannot observe inputs into the models that determine the fair value of these illiquid exposures, banks use their own assumptions in determining their fair values. Level 3 assets peaked at \$204.1 billion at the end of 2008 (see figure 4). At the end of the third quarter of 2017, banks held \$27.8 billion of level 3 trading assets, down 4.8 percent from the previous quarter, and 30.4 percent lower than a year ago. Level 3 assets are \$176.3 billion (86.4 percent) lower than the peak level from 2008.

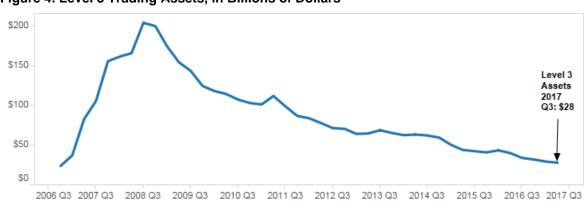


Figure 4. Level 3 Trading Assets, in Billions of Dollars

Source: Call reports, Schedule RC-Q

⁴ VIX is the trademarked ticker symbol for the Chicago Board Options Exchange SPX Volatility Index.

Credit Derivatives

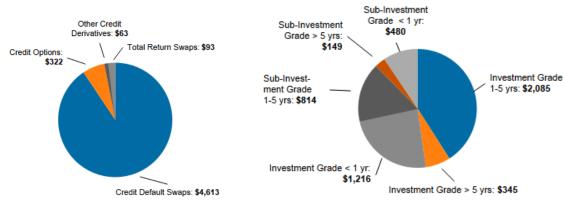
The notional amounts outstanding of credit derivatives increased \$156.0 billion (3.2 percent) in the third quarter of 2017 to \$5.0 trillion. Contracts referencing sub-investment-grade firms increased \$10.9 billion in the third quarter, while contracts referencing investment-grade firms increased \$144.7 billion. Credit derivatives outstanding remained well below the peak of \$16.4 trillion in the first quarter of 2008 (see graphs 1 and 14 in the appendix). As shown in figure 5, credit default swaps are the dominant product, at \$4.6 trillion (90.6 percent) of all credit derivative notional amounts (see also tables 11 and 12 in the appendix).

Contracts referencing investment-grade entities with maturities from one to five years, which increased by \$12.2 billion (0.6 percent) in the quarter, represented the largest segment of the market at 41.0 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are 71.6 percent of the market (see chart on right in figure 5 and graph 14 in the appendix).



By Product Type

By Maturity and Quality of Underlying Reference Entity



Source: Call reports, Schedule RC-L

The notional amount for the 70 banks that net sold credit protection (i.e., assumed credit risk) was \$2.5 trillion, down \$73.2 billion (3.0 percent) from the second quarter of 2017. The notional amount for the 56 banks that net purchased credit protection (i.e., hedged credit risk) was \$2.6 trillion, \$82.4 billion lower (3.3 percent) than in the second quarter of 2017 (see table 12 in the appendix).

Notional Amounts

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

The notional amount of derivative contracts held by banks in the third quarter increased by \$2.8 trillion (1.5 percent) to \$188.3 trillion from the previous quarter (see table 10). The increase in the notional amount of derivative contracts by underlying risk exposure was driven by a \$1.4 trillion increase in interest rate notional amounts as well as a \$0.9 trillion increase in foreign exchange notional amounts. Interest rate notional amounts continued to represent the majority of

banks' derivative holdings at \$141.2 trillion, or 75.0 percent of total derivatives during the third quarter of 2017 (see table 10).

Conversely, the increase in the notional amount of derivative contracts by contract type was driven by a \$3.6 trillion increase in options contracts (9.5 percent) to \$41.3 trillion offset somewhat by a \$1.2 trillion decrease in swap contracts (see table 11). Swap contracts remained the leading derivatives contract type at 54.1 percent of all notional amounts.

The four banks with the most derivative activity hold 90.2 percent of all bank derivatives, while the largest 25 banks account for nearly 100 percent of all contracts (see tables 3 and 5 and graph 4 in the appendix).

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

| | | | Q/Q | Q/Q % | | Y/Y | Y/Y % |
|--------------------|-----------|-----------|---------|--------|-----------|----------|--------|
| | 2017 Q3 | 2017 Q2 | Change | Change | 2016 Q3 | Change | Change |
| Interest Rate | \$141,244 | \$139,817 | \$1,426 | 1.0% | \$132,993 | \$8,251 | 6.2% |
| Foreign Exchange | \$37,457 | \$36,521 | \$936 | 2.6% | \$33,858 | \$3,599 | 10.6% |
| Equity | \$3,056 | \$2,908 | \$147 | 5.1% | \$2,735 | \$321 | 11.7% |
| Commodity | \$1,478 | \$1,334 | \$143 | 10.7% | \$1,312 | \$165 | 12.6% |
| Credit Derivatives | \$5,090 | \$4,935 | \$156 | 3.2% | \$6,562 | -\$1,472 | -22.4% |
| Total Notional | \$188,324 | \$185,516 | \$2,808 | 1.5% | \$177,461 | \$10,864 | 6.1% |

Source: Call reports, Schedule RC-L

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

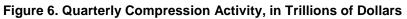
| | | | Q/Q | Q/Q % | | Y/Y | Y/Y % |
|--------------------|-----------|-----------|----------|--------|-----------|----------|--------|
| | 2017 Q3 | 2017 Q2 | Change | Change | 2016 Q3 | Change | Change |
| Futures & Forwards | \$40,119 | \$39,841 | \$277 | 0.7% | \$36,957 | \$3,162 | 8.6% |
| Swaps | \$101,809 | \$103,004 | -\$1,196 | -1.2% | \$103,014 | -\$1,205 | -1.2% |
| Options | \$41,307 | \$37,736 | \$3,571 | 9.5% | \$30,928 | \$10,379 | 33.6% |
| Credit Derivatives | \$5,090 | \$4,935 | \$156 | 3.2% | \$6,562 | -\$1,472 | -22.4% |
| Total Notional | \$188,324 | \$185,516 | \$2,808 | 1.5% | \$177,461 | \$10,864 | 6.1% |

Source: Call reports, Schedule RC-L

Compression Activity

Notional amounts of banks' derivative contracts have generally declined since 2011 due to trade compression efforts, which has led to less need for risk management products. Trade compression continues to be a significant factor in reducing the amount of notional derivatives outstanding. Trade compression aggregates a large number of swap contracts with similar factors, such as risk or cash flows, into fewer trades. Compression removes economic redundancy in a derivative book and reduces operational risk and capital costs for large banks. Trade compression activities decreased in the third quarter of 2017, as shown in figure 6.





In the first quarter of 2015, banks began reporting their volumes of cleared and non-cleared derivative transactions, as well as risk weights for counterparties in each of these categories. In the third quarter of 2017, 39.6 percent of bank's derivative holdings were centrally cleared (see table 12). From a market factor perspective, 50.2 percent of interest rate derivative contracts' notional amounts outstanding were centrally cleared, while very little of the FX derivative market was centrally cleared. The bank-held credit derivative market remained largely uncleared, as 27.7 percent of investment grade and 23.4 percent of non-investment-grade transactions were centrally cleared (see graph 15 in the appendix).

Centrally cleared derivative transactions were heavily concentrated at qualified central counterparties, with 91.6 percent of notional amounts reflecting the 2 percent risk weight applicable to such counterparties.

| | Interest | Foreign | | Precious | | | |
|---------|----------|----------|--------|----------|--------|-------|-------|
| | Rate | Exchange | Equity | Metals | Credit | Other | Total |
| 2017 Q3 | 50.2% | 1.3% | 28.6% | 4.3% | 26.2% | 15.5% | 39.6% |
| 2017 Q2 | 50.8% | 1.1% | 27.3% | 4.9% | 23.6% | 15.5% | 40.3% |
| 2017 Q1 | 49.8% | 1.2% | 25.1% | 5.0% | 22.3% | 16.0% | 39.2% |
| 2016 Q4 | 49.2% | 1.0% | 23.4% | 5.1% | 20.4% | 15.0% | 38.8% |
| 2016 Q3 | 49.2% | 0.7% | 24.3% | 6.4% | 21.2% | 14.9% | 39.0% |
| 2016 Q2 | 49.1% | 0.5% | 22.1% | 5.5% | 18.3% | 13.7% | 39.1% |
| 2016 Q1 | 45.4% | 0.5% | 21.4% | 4.4% | 19.4% | 13.6% | 36.5% |
| 2015 Q4 | 46.2% | 0.5% | 20.0% | 3.7% | 16.8% | 14.0% | 36.9% |
| 2015 Q3 | 44.7% | 0.5% | 14.5% | 5.0% | 20.4% | 12.5% | 36.0% |
| 2015 Q2 | 43.1% | 0.3% | 13.6% | 2.6% | 19.6% | 10.7% | 35.0% |
| 2015 Q1 | 44.7% | 0.2% | 13.6% | 1.6% | 19.7% | 16.0% | 36.5% |

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

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, 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 into account netting. 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 into account netting. 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.

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.

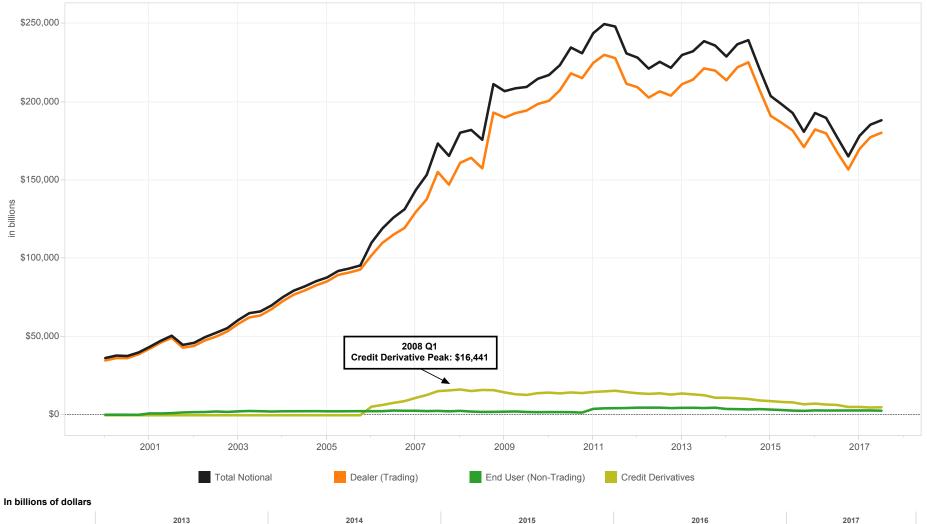
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Derivative Notional Amounts by Type Insured U.S. Commercial Banks and Savings Associations



| | 2013 | | | | 2014 | | | 2015 | | | 2016 | | | | 2017 | | | | |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Total Notional | \$229,987 | \$232,342 | \$238,827 | \$235,992 | \$229,011 | \$236,808 | \$239,459 | \$221,078 | \$203,771 | \$198,523 | \$192,937 | \$180,952 | \$192,947 | \$189,834 | \$177,461 | \$165,256 | \$178,343 | \$185,516 | \$188,324 |
| Dealer (Trading) | 211,353 | 214,240 | 221,425 | 219,990 | 213,838 | 222,078 | 225,318 | 207,711 | 191,123 | 186,686 | 181,777 | 171,172 | 182,437 | 179,971 | 167,873 | 156,913 | 169,983 | 177,519 | 180,337 |
| End User (Non-Trading) | 4,733 | 4,776 | 4,610 | 4,812 | 4,008 | 3,903 | 3,732 | 3,918 | 3,632 | 3,349 | 2,963 | 2,794 | 3,092 | 3,010 | 3,025 | 3,049 | 3,056 | 3,063 | 2,898 |
| Credit Derivatives | 13,901 | 13,327 | 12,793 | 11,191 | 11,165 | 10,827 | 10,408 | 9,449 | 9,017 | 8,488 | 8,198 | 6,986 | 7,418 | 6,853 | 6,562 | 5,293 | 5,304 | 4,935 | 5,090 |

Note: Numbers may not 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

Derivative Contracts by Product*

Insured U.S. Commercial Banks and Savings Associations

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 201 | 2 20 | 13 2 | 014 | 2015 | 2016 | | 2017 | |
|-------------|--------|----------|----------|----------|-------------|----------|--------------|----------|----------|----------|----------|------------|----------|--------|--------|----------|----------|--------|
| \$250,000 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | _ | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 200,000 - | | | | | | | | | 100 | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 150,000- | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 100,000 - | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| \$50,000- | | | | | | | | | | | | | | | | | | |
| , | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| \$0 | | | | | | | | | | | | | | | | | | |
| | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | . C | 4 0 | Q4 | Q4 | Q4 | Q1 | Q2 | Q3 |
| | | | | Futures | s & Forward | ls 📃 T | Fotal Option | IS | Total S | Swaps | | Credit Der | ivatives | | | | | |
| llions of d | ollars | | | | | | | | | | | | | | | | | |
| | | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | |
| | | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q1 | Q2 | |
| ures & Fo | | \$11,406 | \$11,370 | \$12,057 | \$14,882 | \$18,867 | \$22,529 | \$29,652 | \$35,539 | \$37,469 | \$41,621 | \$40,027 | \$43,380 | | | \$39,858 | \$39,841 | \$40,1 |
| al Options | - | 14,616 | 17,754 | 18,858 | 26,277 | 27,727 | 29,747 | 31,884 | 32,078 | 32,505 | 30,375 | 32,305 | 33,081 | 30,889 | 29,386 | 33,999 | 37,736 | 41,3 |

Credit Derivatives 0 0 0 9,020 15,863 16,029 14,112 14,151 14,759 **Total Notional** 70,112 85,536 95,627 131,519 165,559 211,416 214,786 231,099 230,998

81,340

103,102

143,111

139,138

64,712

*Notional amount of total: futures, exchange-traded options, over the counter options, forwards and swaps. Note: Numbers may not add due to rounding

56,411

44,090

Source: Call reports

Total Swaps

149,331

146,266

136,608

13,190

221,794

152,469

11,191

235,992

135,169

9,449

221,078

107,392

180,952

6,986

96,384

5,293

165,256

99,183

5,304

178,343

103,004

185,516

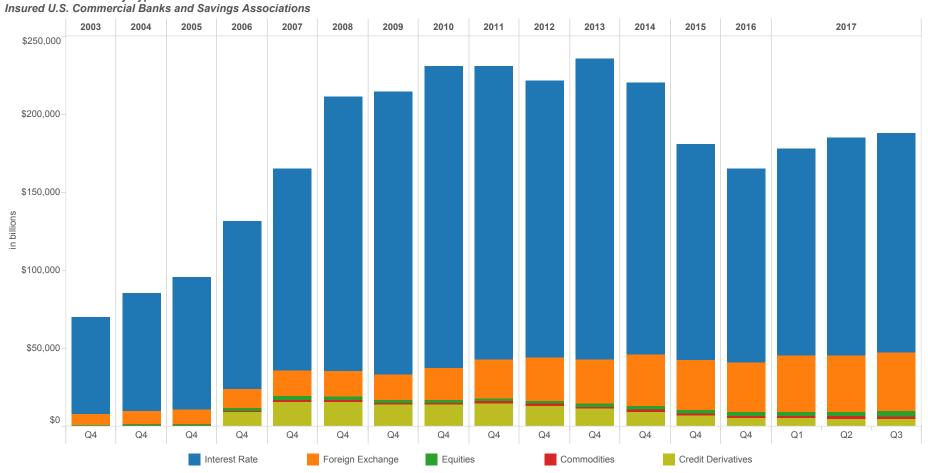
4,935

101,809

188,324

5,090

Derivative Contracts by Type*



In billions of dollars

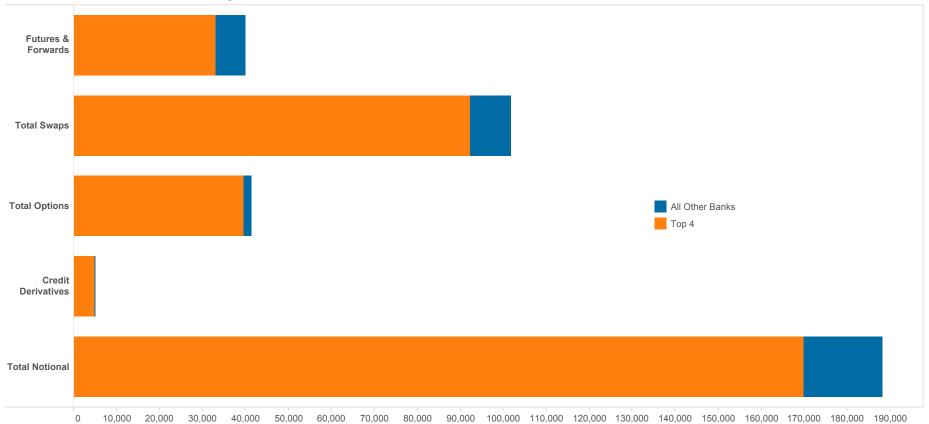
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | |
|--------------------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q1 | Q2 | Q3 |
| Interest Rate | \$61,876 | \$75,533 | \$84,530 | \$107,435 | \$129,491 | \$175,895 | \$181,454 | \$193,399 | \$187,866 | \$177,650 | \$193,084 | \$174,687 | \$138,363 | \$124,480 | \$132,690 | \$139,817 | \$141,244 |
| Foreign Exchange | 7,185 | 8,607 | 9,289 | 11,900 | 16,614 | 16,224 | 16,555 | 20,990 | 25,436 | 27,587 | 28,480 | 33,183 | 32,100 | 31,737 | 36,161 | 36,521 | 37,457 |
| Equities | 829 | 1,112 | 1,255 | 2,271 | 2,524 | 2,207 | 1,685 | 1,364 | 1,606 | 1,970 | 2,028 | 2,537 | 2,395 | 2,488 | 2,839 | 2,908 | 3,056 |
| Commodities | 223 | 284 | 552 | 893 | 1,067 | 1,061 | 979 | 1,195 | 1,330 | 1,397 | 1,209 | 1,222 | 1,108 | 1,257 | 1,350 | 1,334 | 1,478 |
| Credit Derivatives | 0 | 0 | 0 | 9,020 | 15,863 | 16,029 | 14,112 | 14,151 | 14,759 | 13,190 | 11,191 | 9,449 | 6,986 | 5,293 | 5,304 | 4,935 | 5,090 |
| Total Notional | 70,112 | 85,536 | 95,627 | 131,519 | 165,559 | 211,416 | 214,786 | 231,099 | 230,998 | 221,794 | 235,992 | 221,078 | 180,952 | 165,256 | 178,343 | 185,516 | 188,324 |

Note: As of 2006 Q2 equities and commodities types are shown as separate categories. They were previously shown as "Other Derivs." Numbers may not total due to rounding.

Source: Call Reports

Four Banks Dominate in Derivatives*

Insured U.S. Commercial Banks and Savings Associations



in billions of dollars

In billions of dollars

| | Top 4 | All Other Banks | Grand Total |
|--------------------|----------|-----------------|-------------|
| Futures & Forwards | \$33,202 | \$6,917 | \$40,119 |
| Total Swaps | 92,263 | 9,546 | 101,809 |
| Total Options | 39,534 | 1,772 | 41,307 |
| Credit Derivatives | 4,913 | 177 | 5,090 |
| Total Notional | 169,912 | 18,412 | 188,324 |

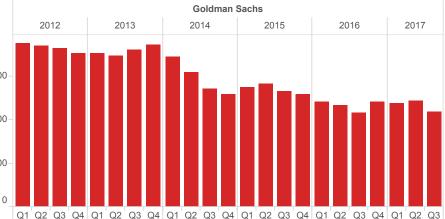
*Notional amount of total: futures, exchange-traded options, over-the-counter options, forwards, and swaps. Source: Call reports

Credit Exposure to Risk-Based Capital (in Percentage)

Top 4 Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



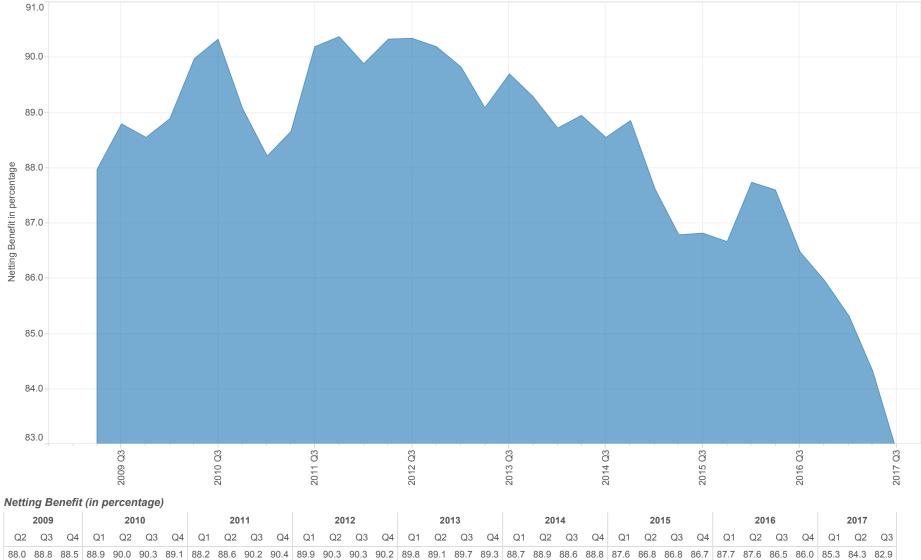




Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q2 Q3 Q1 Q2 Q3 Q4 Q1 Q2 Q3 TOTAL

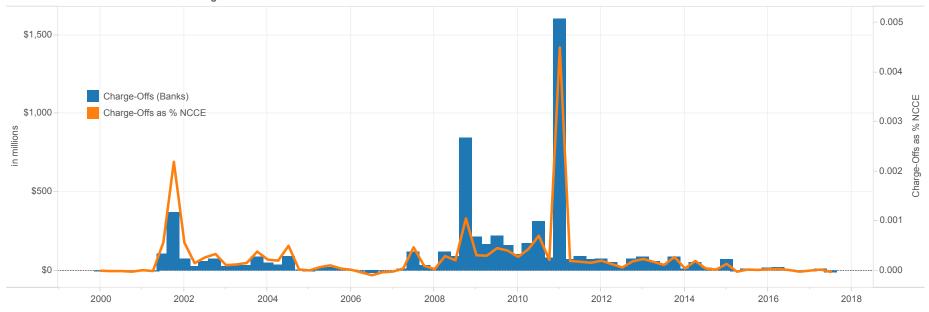
Note: The methodology to calculate the credit risk exposure to capital ratio for the Top 4 category uses a weighted average of total current credit exposure. Source: Call reports





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

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



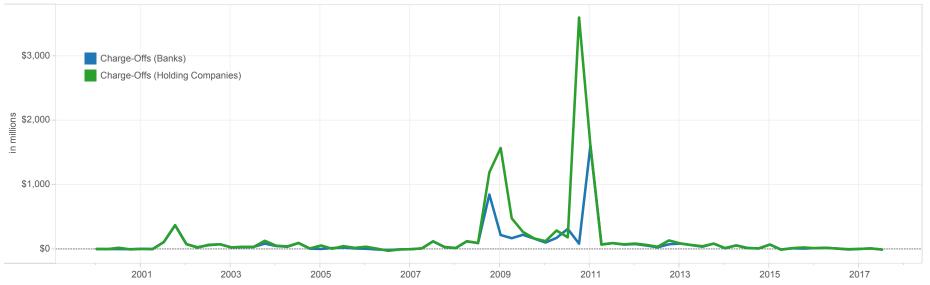
In millions of dollars

| | 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 | 1 | | | 2005 | 5 | | | 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 | 3 | | | 2009 |) | | | 2010 |) | | | 2011 | l | |
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Charge-Offs (Banks) | 15 | 120 | 92 | 847 | 217 | 168 | 221 | 162 | 100 | 173 | 313 | 83 | 1,601 | 72 | 91 | 69 |
| | | 2012 | 2 | | | 2013 | 3 | | | 2014 | Ļ | | | 2015 | 5 | |
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| | 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 |

| | | 201 | 16 | | 2017 | | |
|---------------------|-------|-------|------|-------|------|------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Charge-Offs (Banks) | 13.30 | 18.56 | 6.48 | -7.84 | 1.22 | 8.71 | -8.77 |

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

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



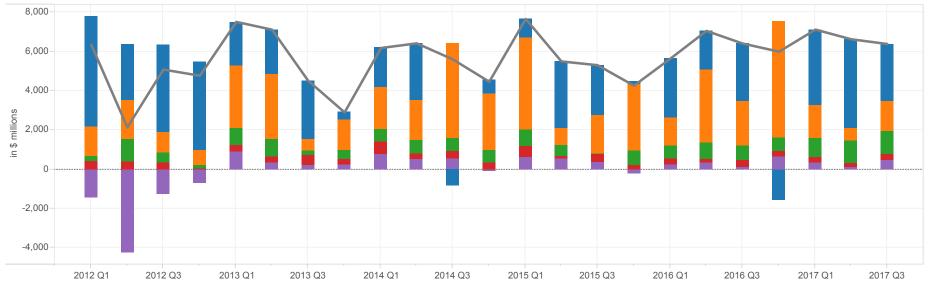
| In | mil | lions | of | dol | lars |
|----|-----|-------|----|-----|------|
| | | | | | |

| in millions of dollars | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|------|------|------|-------|------|------|------|------|------|------|-------|------|----------|-------|-------|------|------|------|------|------|-----|-------|--|
| | | | 2000 | D | | | | 2 | 001 | | | | | 2002 | | | | | 20 | 03 | | | |
| | G | 21 | Q2 | Q3 | C | Q4 | Q1 | Q2 | | Q3 | Q4 | Q | 1 | Q2 | Q3 | Q | 4 | Q1 | Q2 | G | 23 | Q4 | |
| Charge-Offs (Banks) | 0. | .0 | -1.0 | -1.0 | -3 | 8.0 | 2.0 | -1.0 | 10 | 7.3 | 370.0 | 75.8 | 3 2 | 28.2 | 59.0 | 73. | 7 2 | 25.3 | 29.9 | 32 | .3 | 83.7 | |
| Charge-Offs (Holding Companies) | 0. | .1 | -1.0 | 19.3 | -7 | .0 | 2.0 | -1.0 | 10 | 7.3 | 369.6 | 75.8 | 3 2 | 21.2 | 66.0 | 73. | 7 2 | 25.3 | 32.9 | 31 | .4 | 127.8 | |
| | | | 2004 | 4 | | | | 2 | 005 | | | | | 2006 | | | | | 20 | 07 | | | |
| | G | Q1 | Q2 | Q3 | (| Q4 | Q1 | Q2 | | Q3 | Q4 | Q | 1 | Q2 | Q3 | Q | 4 | Q1 | Q2 | C | 23 | Q4 | |
| Charge-Offs (Banks) | 46 | .7 | 34.9 | 92.2 | 5 | 5.4 | 1.3 | 14.2 | 2 | 3.0 | 8.3 | 3.6 | <u>}</u> | -7.0 | -16.0 | -5. | 8 | -3.1 | 9.1 | 119 | .5 | 30.7 | |
| Charge-Offs (Holding Companies) | 51 | .2 | 40.4 | 94.2 | 9 | 0.0 | 54.9 | 3.6 | 4 | 5.1 | 18.1 | 35.4 | 1 | 5.4 | -28.1 | -7. | 2 | -3.1 | 10.4 | 119 | .4 | 32.2 | |
| | | | 2008 | В | | | | 2 | 009 | | | | | 2010 | | | | | 20 | 11 | | | |
| | G | 21 | Q2 | Q3 | (| 24 | Q1 | Q2 | | Q3 | Q4 | Q | 1 | Q2 | Q3 | Q | 4 | Q1 | Q2 | G | 23 | Q4 | |
| Charge-Offs (Banks) | 1 | 5 | 120 | 92 | 84 | 47 | 217 | 168 | 2 | 21 | 162 | 100 |) . | 173 | 313 | 8 | 31, | 601 | 72 | ç | 91 | 69 | |
| Charge-Offs (Holding Companies) | 1 | 5 | 120 | 93 | 1,19 | 92 1 | ,570 | 477 | 2 | 66 | 164 | 122 | 2 2 | 288 | 181 | 3,59 | 8 1, | 617 | 68 | ç | 92 | 73 | |
| | | 20 | 12 | | | 20 | 13 | | | 20 | 14 | | | 20 | 15 | | | 201 | 16 | | | 2017 | |
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | |
| Charge-Offs (Banks) | 76.3 | 54.3 | 26.1 | 73.4 | 84.3 | 60.7 | 35.8 | 83.5 | 12.8 | 55.9 | 14.5 | 7.9 | 69.3 | -7.9 | 10.4 | 6.4 | 13.3 | 18.6 | 6.5 | -7.8 | 1.2 | 8.7 | |
| Charge-Offs (Holding Companies) | 84.6 | 64.0 | 34.9 | 133.4 | 87.2 | 62.6 | 42.9 | 83.4 | 13.6 | 55.6 | 17.2 | 9.1 | 69.0 | -10.2 | 12.9 | 24.5 | 12.8 | 18.0 | 7.5 | -2.5 | 1.4 | 8.9 | |

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

Graph 9a

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



| Interest Rate | In millions of dollars | | | | | | | | |
|-----------------------|------------------------|--------|-----------------|--------------------|-----------------|----------------|-----------------|---------------|---------------|
| Foreign Exchange | | | Average | Past 8 | Past 8 | Past 8 | Since | Max | Min |
| Equity | | 3Q2017 | Past 12 Q3's | Quarter Average | Quarter High | Quarter Low | 2000 Average | Since 2000 | Since 2000 |
| Commodity & Other | Interest Rate | 2,918 | 1,899 | 2,267 | 4,520 | -5,282 | 1,711 | 9,291 | -1,547 |
| Credit | Foreign Exchange | 1,540 | 2,649 | 2,513 | 5,941 | -1,069 | 1,843 | 5,941 | 681 |
| Total Trading Revenue | Equity | 1,183 | 655 | 774 | 1,183 | -1,059 | 574 | 1,830 | 49 |
| | Commodity & Other | 284 | 362 | 278 | 402 | -307 | 227 | 789 | 161 |
| | Credit | 470 | 370 | 267 | 634 | -10,237 | -172 | 2,727 | -222 |
| | Total Trading Revenue | 6,396 | 5,936 | 6,099 | 7,129 | -10,580 | 4,182 | 10,217 | 4,273 |

In millions of dollars

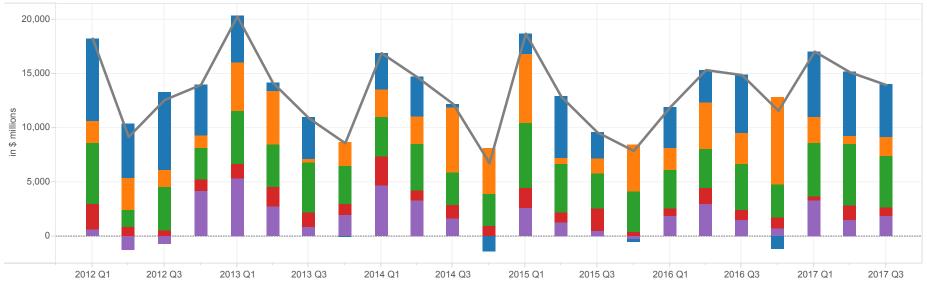
| | | 20 | 12 | | | 201 | 13 | | | 20 | 14 | | | 20 | 15 | | | 20 | 16 | | | 2017 | |
|-----------------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Interest Rate | 5,627 | 2,870 | 4,457 | 4,521 | 2,243 | 2,268 | 3,002 | 360 | 2,015 | 2,883 | -819 | 664 | 958 | 3,406 | 2,578 | 154 | 3,023 | 1,973 | 2,920 | -1,547 | 3,865 | 4,520 | 2,918 |
| Foreign Exchange | 1,505 | 1,990 | 1,020 | 753 | 3,185 | 3,303 | 588 | 1,550 | 2,137 | 2,026 | 4,830 | 2,902 | 4,703 | 855 | 1,931 | 3,401 | 1,424 | 3,719 | 2,294 | 5,941 | 1,685 | 681 | 1,540 |
| Equity | 260 | 1,140 | 508 | 187 | 838 | 924 | 233 | 491 | 612 | 726 | 654 | 650 | 797 | 587 | 49 | 742 | 668 | 867 | 734 | 681 | 922 | 1,122 | 1,183 |
| Commodity & Other | 412 | 390 | 350 | 30 | 364 | 292 | 481 | 265 | 672 | 293 | 411 | 335 | 587 | 129 | 402 | 198 | 271 | 161 | 353 | 296 | 328 | 206 | 284 |
| Credit | -1,444 | -4,243 | -1,242 | -713 | 890 | 339 | 222 | 245 | 756 | 500 | 535 | -79 | 624 | 530 | 357 | -222 | 263 | 342 | 118 | 634 | 330 | 108 | 470 |
| Total Trading Revenue | 6,359 | 2,147 | 5,093 | 4,778 | 7,520 | 7,125 | 4,527 | 2,911 | 6,192 | 6,428 | 5,612 | 4,471 | 7,669 | 5,507 | 5,316 | 4,273 | 5,650 | 7,062 | 6,420 | 6,006 | 7,129 | 6,637 | 6,396 |

*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 total due to rounding.

Source: Call reports

Graph 9b

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



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

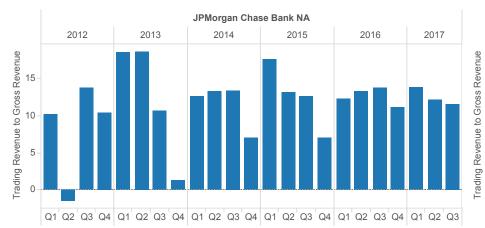
In millions of dollars

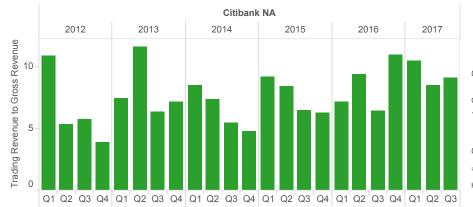
| | | 20 | 12 | | | 20 | 13 | | | 20 | 14 | | | 20 | 15 | | | 20 | 16 | | | 2017 | |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Interest Rate | 7,592 | 5,032 | 7,139 | 4,683 | 4,272 | 823 | 3,811 | -94 | 3,395 | 3,645 | 353 | -1,396 | 1,893 | 5,662 | 2,403 | -243 | 3,808 | 2,965 | 5,359 | -1,193 | 6,013 | 5,884 | 4,780 |
| Foreign Exchange | 2,005 | 2,959 | 1,617 | 1,185 | 4,414 | 4,890 | 320 | 2,205 | 2,472 | 2,521 | 5,985 | 4,243 | 6,329 | 552 | 1,393 | 4,338 | 2,025 | 4,318 | 2,899 | 8,007 | 2,440 | 721 | 1,766 |
| Equity | 5,684 | 1,543 | 3,973 | 2,849 | 4,960 | 3,936 | 4,561 | 3,484 | 3,682 | 4,296 | 2,938 | 2,947 | 6,022 | 4,481 | 3,196 | 3,696 | 3,441 | 3,612 | 4,159 | 3,021 | 4,902 | 5,682 | 4,705 |
| Commodity & Other | 2,265 | 880 | 542 | 1,107 | 1,324 | 1,746 | 1,347 | 1,052 | 2,617 | 924 | 1,242 | 954 | 1,833 | 871 | 2,146 | 412 | 738 | 1,491 | 969 | 1,003 | 399 | 1,330 | 784 |
| Credit | 673 | -1,239 | -696 | 4,143 | 5,292 | 2,761 | 855 | 1,949 | 4,718 | 3,292 | 1,687 | 14 | 2,603 | 1,294 | 452 | -317 | 1,880 | 2,940 | 1,482 | 742 | 3,274 | 1,493 | 1,917 |
| Total Trading Revenue | 18,220 | 9,175 | 12,575 | 13,968 | 20,262 | 14,156 | 10,893 | 8,595 | 16,885 | 14,679 | 12,205 | 6,762 | 18,680 | 12,860 | 9,590 | 7,887 | 11,892 | 15,327 | 14,868 | 11,579 | 17,028 | 15,111 | 13,953 |

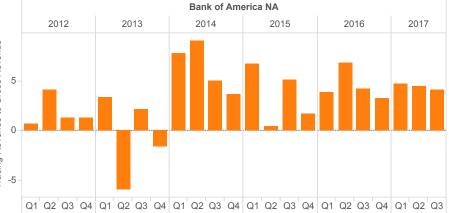
*The trading revenue figures are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date. Note: Numbers may not total due to rounding.

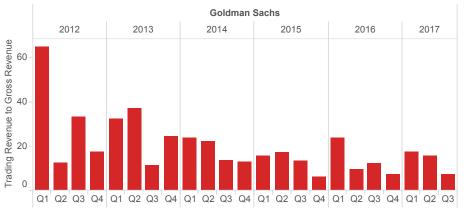
Source: Y9

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 (in percentage)*

| | | 20 | 12 | | | 201 | 13 | | | 20 | 14 | | | 20 | 15 | | | 20 | 16 | | | 2017 | |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q |
| JPMorgan Chase Bank NA | 10.24 | -1.48 | 13.79 | 10.50 | 18.65 | 18.73 | 10.67 | 1.24 | 12.63 | 13.31 | 13.47 | 6.97 | 17.73 | 13.25 | 12.65 | 7.03 | 12.26 | 13.34 | 13.83 | 11.17 | 13.84 | 12.16 | 11.64 |
| Bank of America NA | 0.67 | 4.16 | 1.28 | 1.35 | 3.39 | -5.97 | 2.14 | -1.58 | 7.80 | 9.11 | 5.11 | 3.68 | 6.78 | 0.49 | 5.19 | 1.72 | 3.90 | 6.87 | 4.18 | 3.28 | 4.70 | 4.49 | 4.09 |
| Citibank NA | 10.95 | 5.36 | 5.74 | 3.94 | 7.45 | 11.71 | 6.39 | 7.20 | 8.51 | 7.43 | 5.48 | 4.78 | 9.17 | 8.41 | 6.54 | 6.30 | 7.19 | 9.41 | 6.47 | 10.97 | 10.47 | 8.50 | 9.12 |
| Goldman Sachs | 65.27 | 12.48 | 33.26 | 17.68 | 32.65 | 37.30 | 11.54 | 24.45 | 23.67 | 22.21 | 13.74 | 13.06 | 15.85 | 17.32 | 13.32 | 6.16 | 23.78 | 9.54 | 12.16 | 7.22 | 17.71 | 15.66 | 7.10 |

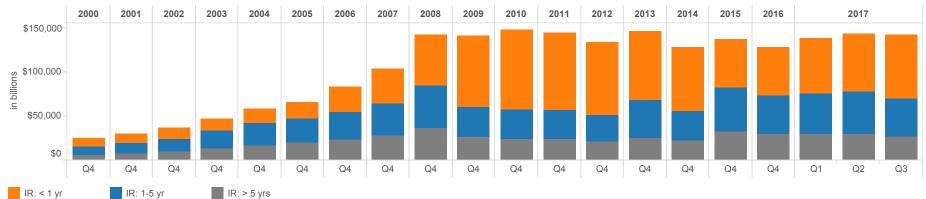
| TOTAL | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | |
|-------|------|------|------|------|-------|------|------|------|-------|-------|------|------|-------|------|------|------|------|-------|------|------|-------|------|------|--|
| | 8.70 | 2.78 | 7.86 | 5.72 | 10.42 | 9.56 | 6.72 | 2.77 | 10.06 | 10.45 | 8.53 | 5.35 | 11.68 | 7.62 | 8.41 | 5.03 | 8.45 | 10.14 | 8.51 | 8.51 | 10.10 | 8.74 | 8.47 | |

*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.

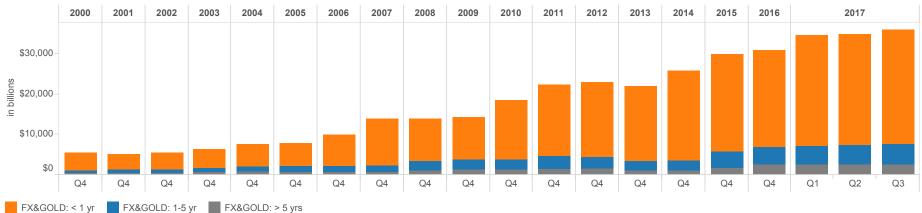
Source: Call reports

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

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | |
|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q1 | Q2 | Q3 |
| IR: < 1 yr | \$9,688 | \$10,379 | \$12,982 | \$13,581 | \$15,921 | \$18,483 | \$29,552 | \$39,085 | \$58,618 | \$81,236 | \$90,843 | \$87,812 | \$82,948 | \$77,758 | \$71,808 | \$55,047 | \$55,053 | \$61,923 | \$65,969 | \$72,143 |
| IR: 1-5 yr | 9,894 | 11,709 | 14,328 | 20,404 | 25,893 | 27,683 | 31,386 | 37,222 | 47,456 | 33,970 | 33,497 | 32,750 | 30,191 | 44,157 | 33,727 | 49,406 | 43,262 | 46,450 | 48,374 | 43,430 |
| IR: > 5 yrs | 5,830 | 7,451 | 9,735 | 13,117 | 16,492 | 19,825 | 23,273 | 27,724 | 36,868 | 26,374 | 24,307 | 24,168 | 21,175 | 24,630 | 22,214 | 32,981 | 29,762 | 29,972 | 29,633 | 27,040 |
| FX&GOLD: < 1 yr | 4,397 | 3,816 | 4,078 | 4,510 | 5,384 | 5,728 | 7,730 | 11,660 | 10,640 | 10,490 | 14,629 | 17,632 | 18,386 | 18,372 | 22,145 | 24,130 | 23,911 | 27,320 | 27,411 | 28,416 |
| FX&GOLD: 1-5 yr | 622 | 686 | 857 | 1,146 | 1,317 | 1,381 | 1,452 | 1,639 | 2,195 | 2,473 | 2,462 | 3,117 | 2,910 | 2,341 | 2,587 | 3,986 | 4,453 | 4,772 | 4,813 | 4,987 |
| FX&GOLD: > 5 yrs | 361 | 499 | 439 | 582 | 762 | 689 | 594 | 622 | 1,082 | 1,347 | 1,290 | 1,503 | 1,480 | 1,029 | 969 | 1,648 | 2,420 | 2,429 | 2,496 | 2,544 |

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

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

Precious Metals

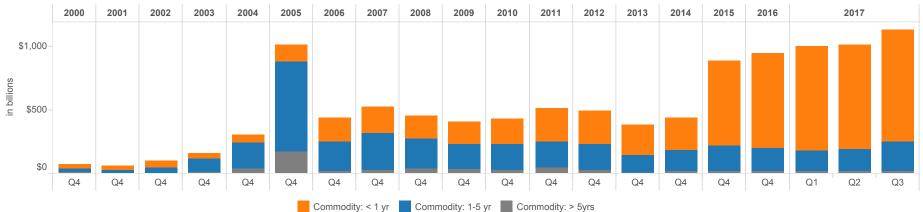
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | |
|-------------|-------------|------|------|------|------|------------------|-------------------|------|---------------|-------------------|-------------|------|-------------------|--------------------|------|------|------|----|------|----|
| \$45- | | | | | | | | | | | | | | | | | | | | |
| \$40- | | | | | | | | | | | | | | | | | | | | |
| \$35- | | | | | | | | | | | | | _ | | | | | | | |
| \$30- | | | | | | | | | | | | | | | | | | | | |
| suoillid ni | | | | | | | | | | | | | | | | | | | | |
| .⊑ \$20- | | | | | | | | | | | | | | | | | | | | |
| \$15- | | | | | | | | | | | | | | | | | | | | |
| \$10- | | | | | | | | | | | | | | | | | | | | |
| \$5- | | | | | | | | | | | | | | | | | | | | |
| \$0 | 01 | 04 | 01 | 01 | 01 | 04 | 04 | 04 | 01 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | Q1 | Q2 | 02 |
| | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 ecious Met | Q4 als: < 1 yr | Q4 | Q4 Preciou | Q4 s Metals: 1 | Q4 -5 yr | Q4 | Q4 ecious Meta | Q4 als: > 5 yrs | Q4 | Q4 | Q4 | QT | QZ | Q3 |
| In billion | s of dollar | s | | | _ | | , | | | | 2 | | | , . | | | | | | |

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | |
|--------------------------|------|------|------|------|------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q1 | Q2 | Q3 |
| Precious Metals: < 1 yr | 2.51 | 2.44 | 2.72 | 3.87 | 4.04 | 8.59 | 10.35 | 10.72 | 7.55 | 11.55 | 17.47 | 21.12 | 27.68 | 21.41 | 19.29 | 23.51 | 26.87 | 40.42 | 40.14 | 42.21 |
| Precious Metals: 1-5 yr | 0.25 | 0.23 | 0.46 | 0.33 | 0.51 | 1.29 | 1.75 | 2.10 | 1.51 | 1.24 | 1.89 | 4.74 | 5.82 | 3.80 | 2.84 | 3.92 | 3.27 | 3.13 | 2.24 | 2.56 |
| Precious Metals: > 5 yrs | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.33 | 0.01 | 0.00 | 0.00 | 0.03 | 0.10 | 0.03 | 0.00 | 0.29 | 0.07 | 0.02 | 0.05 | 0.04 | 0.04 |

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

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



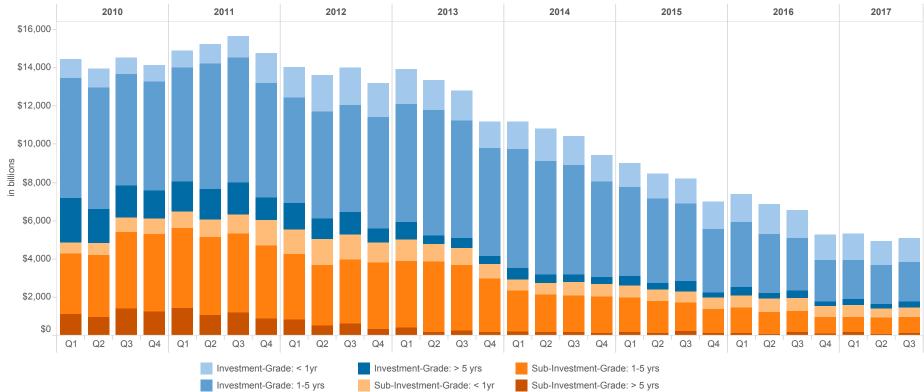




| In billions of dollars | | | | | | | | | | | | | | | | | | | | |
|------------------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | |
| | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q4 | Q1 | Q2 | Q3 |
| Commodity: < 1 yr | \$36 | \$31 | \$55 | \$43 | \$64 | \$133 | \$185 | \$206 | \$179 | \$176 | \$203 | \$261 | \$261 | \$235 | \$257 | \$668 | \$750 | \$824 | \$819 | \$883 |
| Commodity: 1-5 yr | 27 | 25 | 35 | 103 | 205 | 707 | 235 | 297 | 233 | 198 | 209 | 209 | 208 | 144 | 164 | 197 | 179 | 160 | 175 | 233 |
| Commodity: > 5yrs | 11 | 2 | 9 | 14 | 40 | 175 | 20 | 25 | 43 | 33 | 25 | 46 | 28 | 6 | 20 | 22 | 23 | 20 | 21 | 23 |
| Equity: < 1 yr | 162 | 121 | 127 | 197 | 273 | 321 | 341 | 473 | 409 | 312 | 296 | 427 | 627 | 645 | 996 | 1,743 | 1,847 | 2,203 | 2,236 | 2,160 |
| Equity: 1-5 yr | 180 | 209 | 249 | 674 | 736 | 1,428 | 221 | 297 | 256 | 228 | 191 | 210 | 262 | 291 | 352 | 628 | 680 | 763 | 720 | 781 |
| Equity: > 5 yrs | 38 | 18 | 25 | 84 | 140 | 383 | 45 | 70 | 72 | 82 | 85 | 94 | 82 | 136 | 101 | 130 | 123 | 85 | 127 | 119 |

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. Data Source: Call reports

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



In billions of dollars

| | | 20 | 13 | | | 201 | 14 | | | 201 | 15 | | | 201 | 16 | | | 2017 | |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Investment-Grade: < 1yr | \$1,790 | \$1,550 | \$1,548 | \$1,384 | \$1,414 | \$1,707 | \$1,478 | \$1,375 | \$1,256 | \$1,292 | \$1,270 | \$1,380 | \$1,471 | \$1,549 | \$1,451 | \$1,348 | \$1,343 | \$1,234 | \$1,216 |
| Investment-Grade: 1-5 yrs | 6,168 | 6,536 | 6,127 | 5,661 | 6,227 | 5,909 | 5,722 | 5,007 | 4,649 | 4,450 | 4,108 | 3,328 | 3,400 | 3,101 | 2,765 | 2,170 | 2,072 | 2,073 | 2,085 |
| Investment-Grade: > 5 yrs | 948 | 455 | 552 | 409 | 577 | 448 | 433 | 382 | 508 | 359 | 520 | 281 | 457 | 262 | 385 | 214 | 309 | 195 | 345 |
| Total Investment Grade | \$8,906 | \$8,541 | \$8,228 | \$7,455 | \$8,218 | \$8,064 | \$7,633 | \$6,764 | \$6,413 | \$6,101 | \$5,898 | \$4,990 | \$5,328 | \$4,911 | \$4,601 | \$3,732 | \$3,724 | \$3,502 | \$3,647 |

| | | 20 | 13 | | 201 | 14 | | | 201 | 15 | | | 20 | 16 | | | | | |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Sub-Investment-Grade: < 1yr | \$1,090 | \$933 | \$879 | \$765 | \$619 | \$642 | \$671 | \$658 | \$596 | \$562 | \$569 | \$607 | \$622 | \$683 | \$683 | \$581 | \$582 | \$509 | \$480 |
| Sub-Investment-Grade: 1-5 yrs | 3,491 | 3,656 | 3,424 | 2,792 | 2,127 | 1,960 | 1,948 | 1,887 | 1,813 | 1,673 | 1,518 | 1,271 | 1,313 | 1,159 | 1,122 | 869 | 838 | 830 | 814 |
| Sub-Investment-Grade: > 5 yrs | 414 | 197 | 262 | 179 | 200 | 160 | 157 | 140 | 194 | 152 | 213 | 119 | 155 | 101 | 157 | 111 | 159 | 93 | 149 |
| Total Sub-Investment Grade | \$4,995 | \$4,786 | \$4,565 | \$3,736 | \$2,946 | \$2,763 | \$2,775 | \$2,685 | \$2,604 | \$2,387 | \$2,299 | \$1,997 | \$2,090 | \$1,943 | \$1,962 | \$1,561 | \$1,579 | \$1,432 | \$1,443 |

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

In billions of dollars

2017 Q3 Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts Insured U.S. Commercial Banks and Savings Associations

| | Interest Rate | Foreign Exchange | Equity | Precious Metals | Cr | redit | Other | | | |
|---------------------|-------------------------------|---|---|---|---|---|---|------------|-----------|-----------------|
| | | | | | Investment Grade | Non-Investment Grade | | ALL BANKS | | |
| \$40,000- | | | | | | | | \$100,000- | | |
| 알이베g 뜨 \$20,000- | | | | | | entrally Cleared | | \$50,000- | | |
| \$0 | | | \bigcirc | \bigcirc | ပ ပ ဖ ပ ≥ ဖ ပ | ပ ပ ဖွ ပ ≽ စွ ပ | AC M M C C C F C S C C | \$0 | Over-the- | Total Centrally |
| | BAC GS HSBC MS MS | BAC BAC GS GS HSBC JPM MS MS MS | BAC C GS HSBC JPM MS MS WFC | BAC C GS HSBC JPM MS MS MS WFC | BAC C GS HSBC JPM MS MS | BAC C GS HSBC JPM MS MS MS | BAC C GS HSBC JPM MS MS MS | | Counter | Cleared |

| Bank Name Centrally Over-the Cleared Centrally Over-the Cleared | Over- | Total | | Other | | | dit | Cre | | s Metals | Precious | iity | Equ | Interest Rate Foreign Exchange | | | | |
|--|---------------------|---------------------------------------|-------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------|-----------|-----------|-----------|-----------|
| Bank Name Cleared Counter | the- N Counter N | | | | | | | nt Grade | Investme | | | | | | | | | |
| Cleared Counter | | | -the- | Ov | Centrally | Over-the- | Centrally | Over-the- | Centrally | Ponk Nomo |
| JPM 21,531 20,431 127 11,635 700 1,350 0 22 352 619 234 643 60 767 21,521 C 20,681 10,481 302 11,962 58 394 2 8 317 1,278 94 381 66 86 21,521 14,249 BAC 13,831 4,346 27 4,901 89 284 0 0 249 373 54 188 0 14 14,249 GS 6,509 25,996 0 2,387 0 25 0 0 0 93 0 61 0 6 6,509 HSBC 2,512 568 17 951 0 38 0 11 1 19 3 24 0 1 2,532 WFC 4,728 2,077 0 431 26 58 0 2 1 1 2 17 29 24 0 0 0 0 0 0 0 | 44 744 | 00.405 | unter | C | Cleared | Counter | Cleared | Counter | Cleared | |
| C 20,061 10,461 302 11,962 56 394 2 6 317 1,276 94 381 66 66 14,249 BAC 13,831 4,346 27 4,901 89 284 0 0 249 373 54 188 0 14 6,509 GS 6,509 25,996 0 2,387 0 25 0 0 0 93 0 61 0 6 6,509 HSBC 2,512 568 17 951 0 38 0 11 1 19 3 24 0 1 2,532 WFC 4,728 2,077 0 431 26 58 0 2 1 1 2 17 29 24 4,787 MS 0 0 0 0 0 0 0 0 0 | 41,711 | · · · | 787 | | 80 | 643 | 254 | 619 | 352 | 22 | 0 | 1,356 | 700 | 11,853 | 127 | 26,431 | 21,891 | JPM |
| BAC 13,631 4,346 27 4,301 69 264 0 0 249 373 54 166 0 14 GS 6,509 25,996 0 2,387 0 25 0 0 93 0 61 0 6,509 2,532 HSBC 2,512 568 17 951 0 38 0 11 1 19 3 24 0 1 2,532 WFC 4,728 2,077 0 431 26 58 0 2 1 1 2 17 29 24 4,787 MS 0 0 0 0 0 8 0 2 0 0 | 24,590 | · · · · | 86 | | 66 | 381 | 94 | 1,278 | 317 | 8 | 2 | 394 | 58 | 11,962 | 302 | 10,481 | 20,681 | С |
| GS 0,509 23,996 0 2,387 0 25 0 0 93 0 61 0 6 HSBC 2,512 568 17 951 0 38 0 11 1 19 3 24 0 1 2,532 WFC 4,728 2,077 0 431 26 58 0 2 1 1 2 17 29 24 4,787 MS 0 1 0 0 0 0 8 0 2 0 0 | 10,106 | · · · | 14 | | 0 | 188 | 54 | 373 | 249 | 0 | 0 | 284 | 89 | 4,901 | 27 | 4,346 | 13,831 | BAC |
| HSBC 2,512 506 17 951 0 56 0 11 1 19 5 24 0 1 WFC 4,728 2,077 0 431 26 58 0 2 1 1 2 17 29 24 4,787 MS 0 1 0 0 0 0 8 0 2 0 0 0 | 28,568 | · · · · · · · · · · · · · · · · · · · | 6 | | 0 | 61 | 0 | 93 | 0 | 0 | 0 | 25 | 0 | 2,387 | 0 | 25,996 | 6,509 | GS |
| WFC 4,728 2,077 0 431 26 58 0 2 1 1 2 17 29 24 4,787 MS 0 1 0 343 0 0 0 0 8 0 2 0 0 0 | 1,611 | | 1 | | 0 | 24 | 3 | 19 | 1 | 11 | 0 | 38 | 0 | 951 | 17 | 568 | 2.512 | HSBC |
| | 2,609 | 4,787 | 24 | | 29 | 17 | 2 | 1 | 1 | 2 | 0 | 58 | 26 | 431 | 0 | 2.077 | 4,728 | |
| | 354 | 0 | 0 | | 0 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 343 | 0 | 1 | 0 | |
| Grand Total 70,152 69,899 472 32,827 874 2,156 2 43 920 2,391 407 1,318 176 917 73,003 | 109,550 1 | 73,003 | 917 | | 176 | 1,318 | 407 | 2,391 | 920 | 43 | 2 | 2,156 | 874 | 32,827 | 472 | 69,899 | 70,152 | |

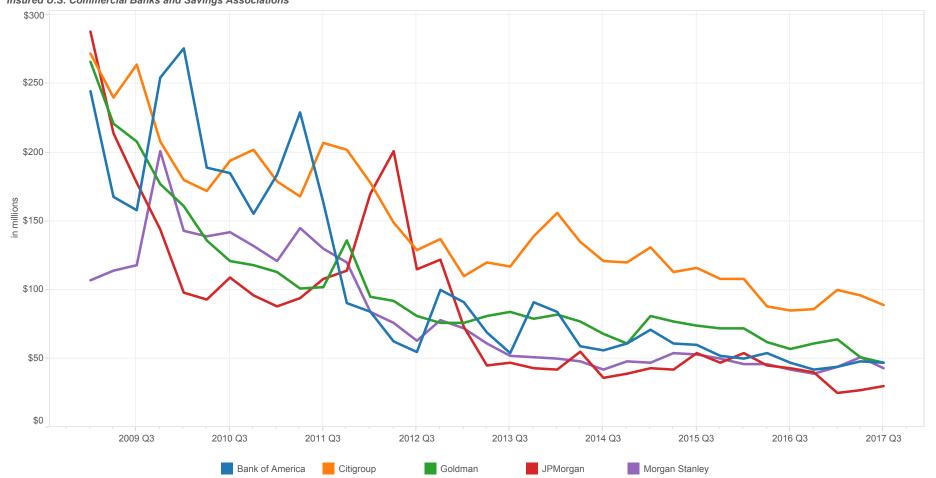
1,446 1,117 0 2,648 0 30 0 0 0 7 0 13 1 45 1,447 3,860 5,307 TOTAL 71,598 71,015 473 35,475 874 2,185 2 43 920 2,398 407 1,331 177 962 74,450 113,410 187,860

| % of Total | of Total | | | | | | | | | | | | | | | I Total |
|--------------|-----------|-----------|------------------|-----------|-----------|-----------|-----------------|-----------|------------------|-----------|----------------|----------------|-----------|-----------|-----------------------------|-----------|
| | Interes | st Rate | Foreign Exchange | | Equity | | Precious Metals | | | Cre | edit | | Otl | ner | Tota Centrally | over-the- |
| | | | | | | | | | Investment Grade | | Non-Inv Gra | estment ade | | | Cleared as a % o Tota | fasa%of |
| Bank Name | Centrally | Over-the- | Centrally | Over-the- | Centrally | Over-the- | Centrally | Over-the- | Centrally | Over-the- | Centrally | Over-the- | Centrally | Over-the- | Notiona | |
| Dalik Naille | Cleared | Counter | Cleared | Counter | Cleared | Counter | Cleared | Counter | Cleared | Counter | Cleared | Counter | Cleared | Counter | Notiona | Notional |
| JPM | 45% | 55% | 1% | 99% | 34% | 66% | 0% | 100% | 36% | 64% | 28% | 72% | 9% | 91% | 36% | 64% |
| С | 66% | 34% | 2% | 98% | 13% | 87% | 20% | 80% | 20% | 80% | 20% | 80% | 43% | 57% | 47% | 53% |
| BAC | 76% | 24% | 1% | 99% | 24% | 76% | 0% | 100% | 40% | 60% | 22% | 78% | 0% | 100% | 59% | 41% |
| GS | 20% | 80% | 0% | 100% | 0% | 100% | | | 0% | 100% | 0% | 100% | 0% | 100% | 19% | 81% |
| HSBC | 82% | 18% | 2% | 98% | 0% | 100% | 0% | 100% | 6% | 94% | 10% | 90% | 0% | 100% | 61% | 39% |
| WFC | 69% | 31% | 0% | 100% | 31% | 69% | 0% | 100% | 51% | 49% | 12% | | 56% | 44% | 65% | |
| MS | 0% | 100% | 0% | 100% | 0% | 100% | | | 0% | 100% | 0% | 100% | | | 0% | |

Source: Call reports, Schedule RC-R.

Graph 16

Value-at-Risk (VaR) Insured U.S. Commercial Banks and Savings Associations



| In millions of dolla | irs | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-------|-------|-------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 2011 | | | | 2012 | | | 2013 | | | 2014 | | | | | 201 | 5 | | | 201 | 6 | | 2017 | | | | |
| | 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 |
| Bank of America | \$184 | \$229 | \$164 | \$90 | \$84 | \$63 | \$55 | \$100 | \$91 | \$69 | \$54 | \$91 | \$84 | \$59 | \$56 | \$61 | \$71 | \$61 | \$60 | \$52 | \$50 | \$54 | \$47 | \$42 | \$44 | \$48 | \$47 |
| Citigroup | 179 | 168 | 207 | 202 | 178 | 149 | 129 | 137 | 110 | 120 | 117 | 139 | 156 | 135 | 121 | 120 | 131 | 113 | 116 | 108 | 108 | 88 | 85 | 86 | 100 | 96 | 89 |
| Goldman | 113 | 101 | 102 | 136 | 95 | 92 | 81 | 76 | 76 | 81 | 84 | 79 | 82 | 77 | 68 | 61 | 81 | 77 | 74 | 72 | 72 | 62 | 57 | 61 | 64 | 51 | 47 |
| JPMorgan | 88 | 94 | 108 | 114 | 170 | 201 | 115 | 122 | 73 | 45 | 47 | 43 | 42 | 55 | 36 | 39 | 43 | 42 | 54 | 47 | 54 | 45 | 43 | 40 | 25 | 27 | 30 |
| Morgan Stanley | 121 | 145 | 130 | 120 | 84 | 76 | 63 | 78 | 72 | 61 | 52 | 51 | 50 | 48 | 42 | 48 | 47 | 54 | 53 | 50 | 46 | 46 | 42 | 39 | 44 | 51 | 43 |
| Total | 685 | 737 | 711 | 662 | 611 | 581 | 443 | 513 | 422 | 376 | 354 | 403 | 414 | 374 | 323 | 329 | 373 | 347 | 357 | 329 | 330 | 295 | 274 | 268 | 277 | 273 | 256 |

Data Source: 10Q, 10k U.S.Securities and Exchange Commission Reports

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | | LEGAL ENTITY | TOTAL | TOTAL | TOTAL FUTURES | TOTAL OPTIONS | TOTAL FORWARDS | TOTAL SWAPS | TOTAL OPTIONS | TOTAL CREDIT DERIVATIVES | SPOT |
|--------|---|----------------------|--------------|---------------|------------------|------------------|-------------------|----------------|------------------|--------------------------------|-------------|
| RANK | BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | (EXCH TR) | (EXCH TR) | (OTC) | (OTC) | (OTC) | (OTC) | FX |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$1,875,791 | \$2,334,113 | \$10,148,840 | \$27,416,368 | \$9,008,870 | \$1,826,975 | \$619,798 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 2,788,718 | 1,339,533 | 6,376,310 | 30,061,597 | 8,617,527 | 2,083,825 | 931,200 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 2,099,557 | 6,573,662 | 2,891,647 | 21,889,379 | 9,800,581 | 161,402 | 61,424 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 1,303,674 | 249,053 | 5,717,522 | 12,895,179 | 1,611,060 | 840,937 | 430,003 |
| 5 | WELLS FARGO BANK NA | KB1H1DSPRFMYMCUFXT09 | 1,737,980 | 7,988,553 | 177,060 | 222,301 | 2,572,122 | 4,081,474 | 903,479 | 32,117 | 7,406 |
| 6 | HSBC NA | 1IE8VN30JCEQV1H4R804 | 195,907 | 4,493,807 | 180,238 | 14,912 | 1,005,719 | 2,975,301 | 221,724 | 95,914 | 45,123 |
| 7 | STATE STREET BANK&TRUST CO | 571474TGEMMWANRLN572 | 232,359 | 1,626,248 | 14,190 | 0 | 1,581,653 | 4,337 | 26,068 | 0 | 62,955 |
| 8 | BANK OF NEW YORK MELLON | HPFHU00Q28E4N0NFVK49 | 281,342 | 906,817 | 32,287 | 90 | 505,541 | 342,493 | 26,226 | 180 | 64,170 |
| 9 | PNC BANK NATIONAL ASSN | AD6GFRVSDT01YPT1CS68 | 363,681 | 428,204 | 40,850 | 22,400 | 24,735 | 306,383 | 26,863 | 6,974 | 1,135 |
| 10 | MORGAN STANLEY BANK NA | G1MLHIS0N32I3QPILB75 | 126,898 | 368,871 | 0 | 0 | 69,512 | 261,038 | 27,927 | 10,394 | 6,412 |
| 11 | U S BANK NATIONAL ASSN | 6BYL5QZYBDK8S7L73M02 | 452,252 | 348,741 | 4,423 | 675 | 56,977 | 212,171 | 69,380 | 5,116 | 4,610 |
| 12 | NORTHERN TRUST CO | 6PTKHDJ8HDUF78PFWH30 | 130,997 | 330,552 | 0 | 0 | 313,618 | 15,808 | 1,126 | 0 | 12,432 |
| 13 | SUNTRUST BANK | IYDOJBGJWY9T8XKCSX06 | 203,381 | 264,535 | 24,103 | 20,009 | 20,647 | 137,275 | 56,831 | 5,671 | 131 |
| 14 | TD BANK NATIONAL ASSN | 03D0JEWFDFUS0SEEKG89 | 285,495 | 180,309 | 0 | 0 | 4,797 | 174,500 | 642 | 371 | 0 |
| 15 | MUFG UNION BANK NA | OX3PU53ZLPQKJ4700D47 | 118,553 | 155,595 | 2,979 | 0 | 77,045 | 68,982 | 6,589 | 0 | 580 |
| 16 | CAPITAL ONE NATIONAL ASSN | 207ALC1P1YM0OVDV0K75 | 290,965 | 123,660 | 244 | 0 | 3,119 | 116,811 | 455 | 3,031 | 28 |
| 17 | KEYBANK NATIONAL ASSN | HUX2X73FUCYHUVH1BK78 | 134,819 | 95,042 | 4,175 | 0 | 7,885 | 76,394 | 6,095 | 494 | 557 |
| 18 | CITIZENS BANK NATIONAL ASSN | DRMSV1Q0EKMEXLAU1P80 | 120,725 | 90,066 | 0 | 0 | 3,967 | 74,959 | 8,471 | 2,670 | 244 |
| 19 | REGIONS BANK | EQTWLK1G7ODGC2MGLV11 | 122,472 | 89,786 | 5,258 | 0 | 24,297 | 52,974 | 4,143 | 3,115 | 26 |
| 20 | FIFTH THIRD BANK | QFROUN1UWUYU0DVIWD51 | 139,988 | 76,808 | 622 | 407 | 5,979 | 51,988 | 14,489 | 3,322 | 268 |
| 21 | BRANCH BANKING&TRUST CO | JJKC32MCHWDI71265Z06 | 214,780 | 59,844 | 231 | 0 | 7,248 | 43,992 | 8,373 | 0 | 23 |
| 22 | BOKF NATIONAL ASSN | FU7RSW4CQQY98A2O7J66 | 33,102 | 55,987 | 551 | 358 | 50,109 | 3,457 | 1,511 | 1 | 19 |
| 23 | COMPASS BANK | C90VT034M03BN29IRA40 | 84,701 | 46,677 | 795 | 0 | 1,403 | 34,520 | 9,918 | 41 | 44 |
| 24 | CAPITAL ONE BANK USA NA | LKE37K2B8CFZUR7F9816 | 116,456 | 43,413 | 0 | 0 | 8,607 | 34,806 | 0 | 0 | 27 |
| 25 | HUNTINGTON NATIONAL BANK | 2WHM8VNJH63UN14OL754 | 102,068 | 37,789 | 41 | 0 | 2,447 | 32,661 | 816 | 1,824 | 3 |
| TOP 25 | COMMERCIAL BANKS, SAS & TCS WITH DERIVA | ATIVES | \$10,932,413 | \$187,723,424 | \$8,555,786 | \$10,777,512 | \$31,481,744 | \$101,364,846 | \$30,459,164 | \$5,084,372 | \$2,248,617 |
| | COMMERCIAL BANKS, SAS & TCS WITH DERIVA | | 4,510,613 | 600,932 | 5,352 | 3,618 | 75,742 | 443,849 | 66,515 | 5,856 | 1,619 |
| | COMMERCIAL BANKS, SAS & TCS WITH DERIVA | | 15,443,026 | 188,324,356 | 8,561,138 | 10,781,130 | 31,557,486 | 101,808,695 | 30,525,679 | 5,090,228 | 2,250,236 |

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 total due to rounding. Source: Call reports, Schedule RC-L

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS (HOLDING COMPANIES) TOP 25 HOLDING COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, 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 | CITIGROUP INC. | 6SHG14ZSSLCXXQSBB395 | \$1,889,133 | \$54,751,534 | \$2,930,361 | \$5,585,973 | \$7,668,579 | \$28,337,146 | \$8,442,833 | \$1,786,642 | \$927,641 |
| 2 | GOLDMAN SACHS GROUP, INC., THE | 784F5XWPLTWKTBV3E584 | 930,161 | 53,054,605 | 3,285,137 | 7,590,138 | 7,242,084 | 22,013,819 | 11,525,713 | 1,397,714 | 418,958 |
| 3 | JPMORGAN CHASE & CO. | 8I5DZWZKVSZI1NUHU748 | 2,563,074 | 51,981,312 | 1,883,033 | 2,521,003 | 10,485,464 | 26,561,056 | 8,679,980 | 1,850,776 | 610,022 |
| 4 | BANK OF AMERICA CORPORATION | 9DJT3UXIJIZJI4WXO774 | 2,285,062 | 36,673,926 | 1,761,042 | 1,025,601 | 8,252,264 | 20,897,250 | 3,587,546 | 1,150,223 | 400,583 |
| 5 | MORGAN STANLEY | IGJSJL3JD5P30I6NJZ34 | 853,693 | 32,394,340 | 3,110,607 | 1,694,441 | 3,309,448 | 16,946,318 | 6,614,119 | 719,407 | 57,462 |
| 6 | WELLS FARGO & COMPANY | PBLD0EJDB5FWOLXP3B76 | 1,934,939 | 7,881,903 | 185,244 | 242,819 | 2,614,176 | 3,909,333 | 900,191 | 30,140 | 7,373 |
| 7 | HSBC NORTH AMERICA HOLDINGS INC. | 213800JCL1FHBQK3M654 | 286,418 | 7,098,673 | 705,494 | 685,600 | 1,006,734 | 4,375,005 | 229,927 | 95,914 | 45,122 |
| 8 | MIZUHO AMERICAS LLC | | 42,411 | 5,243,365 | 10,375 | 2,185 | 435,605 | 4,755,979 | 38,356 | 865 | 1,044 |
| 9 | STATE STREET CORPORATION | 549300ZFEEJ2IP5VME73 | 236,000 | 1,634,104 | 14,277 | 0 | 1,581,929 | 11,830 | 26,068 | 0 | 62,955 |
| 10 | RBC USA HOLDCO CORPORATION | | 138,285 | 1,247,575 | 167,047 | 813,496 | 198,112 | 68,088 | 458 | 374 | 97 |
| 11 | CREDIT SUISSE HOLDINGS (USA), INC. | 549300YHT5NGRKJD1R94 | 219,902 | 961,090 | 31,887 | 22,530 | 773,657 | 76,210 | 4,293 | 52,514 | 0 |
| 12 | BANK OF NEW YORK MELLON CORPORATION, THE | WFLLPEPC7FZXENRZV188 | 354,397 | 905,062 | 33,252 | 1,815 | 526,704 | 316,887 | 26,224 | 180 | 64,125 |
| 13 | BARCLAYS US LLC | 213800H14XVWOV87OI72 | 175,284 | 587,569 | 37,434 | 200,314 | 244,935 | 26,770 | 0 | 78,116 | 104 |
| 14 | PNC FINANCIAL SERVICES GROUP, INC., THE | CFGNEKW0P8842LEUIA51 | 375,256 | 425,389 | 41,065 | 22,400 | 27,315 | 300,772 | 26,863 | 6,974 | 1,135 |
| 15 | U.S. BANCORP | N1GZ7BBF3NP8GI976H15 | 459,227 | 350,831 | 4,423 | 675 | 56,262 | 214,976 | 69,380 | 5,115 | 4,610 |
| 16 | NORTHERN TRUST CORPORATION | 549300GLF98S992BC502 | 131,400 | 329,802 | 0 | 0 | 313,618 | 15,058 | 1,126 | 0 | 12,432 |
| 17 | BNP PARIBAS USA, INC. | 549300QVEGJN81E8T563 | 146,032 | 285,768 | 5 | 2,552 | 255,522 | 24,928 | 2,761 | 0 | 34 |
| 18 | TD GROUP US HOLDINGS LLC | 549300ARWZ5E3L64UH29 | 374,293 | 277,662 | 52,403 | 12,250 | 27,105 | 184,795 | 642 | 468 | 0 |
| 19 | SUNTRUST BANKS, INC. | 7E1PDLW1JL6TS0BS1G03 | 208,366 | 261,564 | 24,179 | 20,009 | 20,647 | 135,227 | 55,831 | 5,671 | 131 |
| 20 | DB USA CORPORATION | 529900RO45LRDMWLRI57 | 164,939 | 199,777 | 4,608 | 132,080 | 38,600 | 17,019 | 5,065 | 2,405 | 0 |
| 21 | CAPITAL ONE FINANCIAL CORPORATION | ZUE8T73ROZOF6FLBAR73 | 361,402 | 179,465 | 244 | 0 | 11,875 | 163,860 | 455 | 3,031 | 54 |
| 22 | MUFG AMERICAS HOLDINGS CORPORATION | | 154,852 | 176,507 | 8,457 | 28 | 92,250 | 69,182 | 6,589 | 0 | 580 |
| 23 | CITIZENS FINANCIAL GROUP, INC. | 2138004JDDA4ZQUPFW65 | 151,764 | 101,334 | 0 | 0 | 3,967 | 84,777 | 9,395 | 3,195 | 244 |
| 24 | KEYCORP | RKPI3RZGV1V1FJTH5T61 | 137,130 | 100,506 | 4,175 | 0 | 9,607 | 79,097 | 7,143 | 484 | 557 |
| 25 | REGIONS FINANCIAL CORPORATION | CW05CS5KW59QTC0DG824 | 123,518 | 87,686 | 5,258 | 0 | 24,297 | 50,874 | 4,143 | 3,115 | 26 |
| TOP 25 | HOLDING COMPANIES WITH DERIVATIVES | | \$14.696.938 | \$257,191,351 | \$14.300.006 | \$20.575.909 | \$45.220.757 | \$129.636.257 | \$40.265.101 | \$7,193,322 | \$2.615.290 |
| 101 201 | | | ΨIT,070,730 | Ψ 2 07,171,301 | ΨIT,300,000 | Ψ20,010,707 | Ψτ0,220,101 | ψ127,030,237 | ψτ0,200,101 | ψι, ι το, 322 | ψ2,013,2 |

Note: Currently, the Y-9 report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total 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 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 SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | | LEGAL | | | PERCENT | PERCENT | PERCENT | PERCENT | PERCENT | PERCENT |
|----------|--|--------------------------------|--------------|---------------|--------------|---------------|---------------|--------------|-----------|-------------|
| | | ENTITY | TOTAL | TOTAL | EXCH TRADED | отс | INT RATE | FOREIGN EXCH | OTHER | CREDIT |
| RANK | BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | CONTRACTS | CONTRACTS | CONTRACTS | CONTRACTS | CONTRACTS | DERIVATIVES |
| | | | | | (%) | (%) | (%) | (%) | (%) | (%) |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | 8.0 | 92.0 | 68.7 | 22.8 | 5.0 | 3.5 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 8.1 | 91.9 | 67.2 | 26.7 | 2.1 | 4.1 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 20.0 | 80.0 | 93.9 | 5.7 | 0.1 | 0.4 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 6.9 | 93.1 | 72.9 | 21.8 | 1.6 | 3.7 |
| 5 | WELLS FARGO BANK NA | KB1H1DSPRFMYMCUFXT09 | 1,737,980 | 7,988,553 | 5.0 | 95.0 | 91.2 | 5.6 | 2.9 | 0.4 |
| 6 | HSBC NA | 1IE8VN30JCEQV1H4R804 | 195,907 | 4,493,807 | 4.3 | 95.7 | 73.9 | 21.5 | 2.5 | 2.1 |
| 7 | STATE STREET BANK&TRUST CO | 571474TGEMMWANRLN572 | 232,359 | 1,626,248 | 0.9 | 99.1 | 1.1 | 97.4 | 1.6 | 0.0 |
| 8 | BANK OF NEW YORK MELLON | HPFHU00Q28E4N0NFVK49 | 281,342 | 906,817 | 3.6 | 96.4 | 35.5 | 64.4 | 0.1 | 0.0 |
| 9 | PNC BANK NATIONAL ASSN | AD6GFRVSDT01YPT1CS68 | 363,681 | 428,204 | 14.8 | 85.2 | 92.7 | 4.1 | 1.5 | 1.6 |
| 10 | MORGAN STANLEY BANK NA | G1MLHISON32I3QPILB75 | 126,898 | 368,871 | 0.0 | 100.0 | 1.1 | 96.0 | 0.1 | 2.8 |
| 11 | U S BANK NATIONAL ASSN | 6BYL5QZYBDK8S7L73M02 | 452,252 | 348,741 | 1.5 | 98.5 | 83.4 | 14.8 | 0.3 | 1.5 |
| 12 | NORTHERN TRUST CO | 6PTKHDJ8HDUF78PFWH30 | 130,997 | 330,552 | 0.0 | 100.0 | 4.2 | 95.7 | 0.1 | 0.0 |
| 13 | SUNTRUST BANK | IYDOJBGJWY9T8XKCSX06 | 203,381 | 264,535 | 16.7 | 83.3 | 77.6 | 2.7 | 17.5 | 2.1 |
| 14 | TD BANK NATIONAL ASSN | 03D0JEWFDFUS0SEEKG89 | 285,495 | 180,309 | 0.0 | 100.0 | 95.6 | 4.2 | 0.0 | 0.2 |
| 15 | MUFG UNION BANK NA | OX3PU53ZLPQKJ4700D47 | 118,553 | 155,595 | 1.9 | 98.1 | 94.0 | 3.9 | 2.1 | 0.0 |
| 16 | CAPITAL ONE NATIONAL ASSN | 207ALC1P1YM0OVDV0K75 | 290,965 | 123,660 | 0.2 | 99.8 | 91.0 | 0.8 | 5.7 | 2.5 |
| 17 | KEYBANK NATIONAL ASSN | HUX2X73FUCYHUVH1BK78 | 134,819 | 95,042 | 4.4 | 95.6 | 89.4 | 9.4 | 0.7 | 0.5 |
| 18 | CITIZENS BANK NATIONAL ASSN | DRMSV1Q0EKMEXLAU1P80 | 120,725 | 90,066 | 0.0 | 100.0 | 85.8 | 11.3 | 0.0 | 3.0 |
| 19 | REGIONS BANK | EQTWLK1G7ODGC2MGLV11 | 122,472 | 89,786 | 5.9 | 94.1 | 93.8 | 1.9 | 0.8 | 3.5 |
| 20 | FIFTH THIRD BANK | QFROUN1UWUYU0DVIWD51 | 139,988 | 76,808 | 1.3 | 98.7 | 77.0 | 12.7 | 5.9 | 4.3 |
| 21 | BRANCH BANKING&TRUST CO | JJKC32MCHWDI71265Z06 | 214,780 | 59,844 | 0.4 | 99.6 | 99.1 | 0.9 | 0.0 | 0.0 |
| 22 | BOKF NATIONAL ASSN | FU7RSW4CQQY98A2O7J66 | 33,102 | 55,987 | 1.6 | 98.4 | 95.1 | 0.9 | 4.0 | 0.0 |
| 23 | COMPASS BANK | C90VT034M03BN29IRA40 | 84,701 | 46,677 | 1.7 | 98.3 | 93.5 | 3.1 | 3.3 | 0.1 |
| 24 | CAPITAL ONE BANK USA NA | LKE37K2B8CFZUR7F9816 | 116,456 | 43,413 | 0.0 | 100.0 | 80.2 | 19.8 | 0.0 | 0.0 |
| 25 | HUNTINGTON NATIONAL BANK | 2WHM8VNJH63UN14OL754 | 102,068 | 37,789 | 0.1 | 99.9 | 85.9 | 3.9 | 5.4 | 4.8 |
| | | | | | | | | | | |
| TOP 25 (| COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | \$10,932,413 | \$187,723,424 | \$19,333,299 | \$168,390,126 | \$140,684,532 | \$37,430,372 | \$63 | \$5,084,372 |
| OTHER (| COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | 4,510,613 | 600,932 | 8,970 | 591,962 | 559,228 | 26,759 | 606 | 5,856 |
| TOTAL F | OR COMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | 15,443,026 | 188,324,356 | 19,342,268 | 168,982,088 | 141,243,760 | 37,457,131 | 670 | 5,090,228 |
| | | | | (21) | (0.1) | (24) | (21) | (0.1) | (24) | (21) |
| | | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| | COMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMERC | | | 99.7 | 10.3 | 89.4 | 74.7 | 19.9 | 0.0 | 2.7 |
| | COMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMERCI | | | 0.3 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 |
| TOTAL F | OR COMMERCIAL BANKS, SAs & TCs: % OF TOTAL COMM | ERCIAL BANKS, SAs & TCs WITH I | DERIVATIVES | 100.0 | 10.3 | 89.7 | 75.0 | 19.9 | 0.0 | 2.7 |

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 total due to rounding. Source: Call reports, Schedule RC-L

CREDIT EQUIVALENT EXPOSURES TOP 25 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | | | | | | BILATERALLY | | TOTAL CREDIT | (%) |
|----------|---|----------------------|--------------|---------------|-------------|----------------|-----------|--------------|-------------|
| | | LEGAL | | | TOTAL | NETTED CURRENT | POTENTIAL | EXPOSURE T | OTAL CREDIT |
| | | ENTITY | TOTAL | TOTAL | RISK-BASED | CREDIT | FUTURE | FROM ALL | EXPOSURE |
| RANK | BANK NAME | INDENTIFIER | ASSETS I | DERIVATIVES | CAPITAL | EXPOSURE | EXPOSURE | CONTRACTS | TO CAPITAL |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$197,962 | \$134,926 | \$250,299 | \$385,225 | 195 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 154,424 | 70,375 | 194,125 | 264,500 | 171 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 27,508 | 57,156 | 62,041 | 119,197 | 433 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 164,735 | 38,350 | 59,277 | 97,627 | 59 |
| 5 | WELLS FARGO BANK NA | KB1H1DSPRFMYMCUFXT09 | 1,737,980 | 7,988,553 | 162,723 | 13,913 | 29,249 | 43,162 | 27 |
| 6 | HSBC NA | 1IE8VN30JCEQV1H4R804 | 195,907 | 4,493,807 | 26,432 | 7,581 | 12,590 | 20,172 | 76 |
| 7 | STATE STREET BANK&TRUST CO | 571474TGEMMWANRLN572 | 232,359 | 1,626,248 | 17,477 | 5,303 | 9,824 | 15,127 | 87 |
| 8 | BANK OF NEW YORK MELLON | HPFHU0OQ28E4N0NFVK49 | 281,342 | 906,817 | 21,185 | 4,922 | 4,840 | 9,762 | 46 |
| 9 | PNC BANK NATIONAL ASSN | AD6GFRVSDT01YPT1CS68 | 363,681 | 428,204 | 35,116 | 2,906 | 1,402 | 4,308 | 12 |
| 10 | MORGAN STANLEY BANK NA | G1MLHIS0N32I3QPILB75 | 126,898 | 368,871 | 15,110 | 275 | 3,147 | 3,422 | 23 |
| 11 | U S BANK NATIONAL ASSN | 6BYL5QZYBDK8S7L73M02 | 452,252 | 348,741 | 45,012 | 796 | 4,609 | 5,405 | 12 |
| 12 | NORTHERN TRUST CO | 6PTKHDJ8HDUF78PFWH30 | 130,997 | 330,552 | 9,789 | 1,465 | 2,506 | 3,971 | 41 |
| 13 | SUNTRUST BANK | IYDOJBGJWY9T8XKCSX06 | 203,381 | 264,535 | 21,806 | 1,070 | 2,945 | 4,015 | 18 |
| 14 | TD BANK NATIONAL ASSN | 03D0JEWFDFUS0SEEKG89 | 285,495 | 180,309 | 25,996 | 1,385 | 1,119 | 2,503 | 10 |
| 15 | MUFG UNION BANK NA | OX3PU53ZLPQKJ4700D47 | 118,553 | 155,595 | 15,517 | 873 | 332 | 1,205 | 8 |
| 16 | CAPITAL ONE NATIONAL ASSN | 207ALC1P1YM0OVDV0K75 | 290,965 | 123,660 | 26,724 | 650 | 2,003 | 2,653 | 10 |
| 17 | KEYBANK NATIONAL ASSN | HUX2X73FUCYHUVH1BK78 | 134,819 | 95,042 | 14,891 | 469 | 335 | 804 | 5 |
| 18 | CITIZENS BANK NATIONAL ASSN | DRMSV1Q0EKMEXLAU1P80 | 120,725 | 90,066 | 13,745 | 598 | 653 | 1,251 | 9 |
| 19 | REGIONS BANK | EQTWLK1G70DGC2MGLV11 | 122,472 | 89,786 | 14,198 | 317 | 643 | 960 | 7 |
| 20 | FIFTH THIRD BANK | QFROUN1UWUYU0DVIWD51 | 139,988 | 76,808 | 16,344 | 391 | 976 | 1,367 | 8 |
| 21 | BRANCH BANKING&TRUST CO | JJKC32MCHWDI71265Z06 | 214,780 | 59,844 | 22,707 | 495 | 476 | 971 | 4 |
| 22 | BOKF NATIONAL ASSN | FU7RSW4CQQY98A2O7J66 | 33,102 | 55,987 | 3,116 | 192 | 211 | 403 | 13 |
| 23 | COMPASS BANK | C90VT034M03BN29IRA40 | 84,701 | 46,677 | 9,038 | 242 | 187 | 429 | 5 |
| 24 | CAPITAL ONE BANK USA NA | LKE37K2B8CFZUR7F9816 | 116,456 | 43,413 | 15,600 | 100 | 121 | 221 | 1 |
| 25 | HUNTINGTON NATIONAL BANK | 2WHM8VNJH63UN14OL754 | 102,068 | 37,789 | 11,068 | 320 | 494 | 814 | 7 |
| TOP 25 C | OMMERCIAL BANKS, SAs & TCs WITH DERIV | ΔΤΙΛΕς | \$10,932,413 | \$187,723,424 | \$1,088,221 | \$345,070 | \$644,405 | \$989,475 | 91 |
| | OMMERCIAL BANKS, SAS & TCS WITH DERIV | | 4,510,613 | 600,932 | 486,484 | 3,299 | 4,492 | 7,791 | 71 0 |
| | MOUNT FOR COMMERCIAL BANKS, SAS & TCS WITH DERIV. | | 15,443,026 | 188,324,356 | 1,574,705 | 348,369 | 648,897 | 997,266 | 63 |
| | NOONT FOR COMMENCIAL DAMAS, SAS & TO | | 13,775,020 | 100,524,550 | 1,574,705 | 5-10,007 | 040,077 | ///,200 | 03 |

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 total due to rounding.

Source: Call reports, Schedule RC-R.

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | | | | | TOTAL | % | TOTAL | % |
|----------|--|--|--------------------|---------------------|---------------------|--------------------|-------------|---------|
| | | LEGAL | | | HELD FOR | HELD FOR | NOT FOR | NOT FOR |
| | | ENTITY | TOTAL | TOTAL | TRADING | TRADING | TRADING | TRADING |
| RANK | BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | & MTM | & MTM | MTM | MTM |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$50,469,659 | 99.4 | \$314,323 | 0.6 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 49,134,172 | 99.9 | 49,513 | 0.1 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 43,231,861 | 99.9 | 22,965 | 0.1 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 20,909,341 | 96.0 | 867,147 | 4.0 |
| | | | | | | | | |
| TOP 4 CC | OMMERCIAL BANKS, SAs & TCs WITH DERIVATI | VES | \$5,443,493 | \$169,912,120 | \$163,745,033 | 99.2 | \$1,253,948 | 0.8 |
| OTHER C | COMMERCIAL BANKS, SAs & TCs WITH DERIVAT | TVES | 9,999,533 | 18,412,236 | 16,591,552 | 91.0 | 1,643,596 | 9.0 |
| TOTAL A | MOUNT FOR COMMERCIAL BANKS, SAs & TCs V | VITH DERIVATIVES | 15,443,026 | 188,324,356 | 180,336,585 | 98.4 | 2,897,544 | 1.6 |
| | rrently, the call report does not differentiate bet mbers may not total due to rounding. | ween traded and not-traded credit derivation | ves. Credit deriva | tives have been exc | cluded from the sum | of total derivativ | ves here. | |

Source: Call reports, Schedule RC-L

GROSS FAIR VALUES OF DERIVATIVE CONTRACTS TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | | | | | TRAD | DING | NOT FOR | TRADING | CREDIT DE | RIVATIVES |
|----------|---|----------------------|-------------|---------------|-------------|--------------|-------------|--------------|-------------|--------------|
| | | LEGAL | | | GROSS | GROSS | GROSS | GROSS | GROSS | GROSS |
| | | ENTITY | TOTAL | TOTAL | POSITIVE | NEGATIVE | POSITIVE | NEGATIVE | POSITIVE | NEGATIVE |
| RANK | BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | FAIR VALUE* | FAIR VALUE** | FAIR VALUE* | FAIR VALUE** | FAIR VALUE* | FAIR VALUE** |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$739,405 | \$707,419 | \$3,390 | \$2,634 | \$24,737 | \$25,283 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 395,869 | 384,312 | 917 | 359 | 27,801 | 29,236 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 507,856 | 495,418 | 48 | 80 | 2,849 | 2,746 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 168,576 | 162,332 | 19,127 | 24,717 | 10,871 | 11,624 |
| TOP 4 CO | OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | \$5,443,493 | \$169,912,120 | \$1,811,706 | \$1,749,481 | \$23,482 | \$27,790 | \$66,258 | \$68,889 |
| OTHER C | OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | 9,999,533 | 18,412,236 | 122,996 | 120,044 | 8,444 | 10,386 | 1,789 | 1,984 |
| TOTAL A | MOUNT FOR COMMERCIAL BANKS, SAS & TCs WITH | DERIVATIVES | 15,443,026 | 188,324,356 | 1,934,702 | 1,869,525 | 31,926 | 38,176 | 68,047 | 70,873 |

Note: Currently, the call report does not differentiate between traded and non-traded credit derivatives. Credit derivatives have been included in the sum of total derivatives here. Numbers may not sum due to rounding. *Market value of contracts that have a positive fair value as of the end of the quarter. **Market value of contracts that have a negative fair value as of the end of the quarter.

Source: Call reports, Schedule RC-L

TRADING REVENUES FROM CASH INSTRUMENTS AND DERIVATIVES TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS NOTE: REVENUE FIGURES ARE FOR THE QUARTER (NOT YEAR-TO-DATE)

| RANK | BANK NAME | LEGAL ENTITY INDENTIFIER | TOTAL ASSETS | TOTAL DERIVATIVES | TOTAL TRADING REV FROM CASH & OFF BAL SHEET POSITIONS | TRADING REV FROM INT RATE POSITIONS | TRADING REV FROM FOREIGN EXCH POSITIONS | TRADING REV FROM EQUITY POSITIONS | TRADING REV FROM COMMOD & OTH POSITIONS | TRADING REV FROM CREDIT POSITIONS |
|---------|---|--------------------------------|--|--|--|--|--|--|--|--|
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$2,677 | \$959 | \$653 | \$725 | \$110 | \$230 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 1,510 | 897 | 383 | 183 | 31 | 16 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 99 | 466 | (604) | 3 | 0 | 234 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 762 | 178 | 309 | 234 | 46 | (5) |
| OTHER C | MMERCIAL BANKS, SAS & TCS WITH DERIVATIV OMMERCIAL BANKS, SAS & TCS WITH DERIVATIV MOUNT FOR COMMERCIAL BANKS, SAS & TCS WI | /ES | \$5,443,493 9,999,533 15,443,026 | \$169,912,120 18,412,236 188,324,356 | \$5,048 1,348 6,396 | \$2,500 418 2,918 | \$741 799 1,540 | \$1,145 38 1,183 | \$187 97 284 | \$475 (5) |

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 sum due to rounding. Source: Call reports, Schedule RI

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY (INTEREST RATE, FX AND GOLD) TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | LEGAL ENTITY | TOTAL | TOTAL | INT RATE MATURITY | INT RATE MATURITY | INT RATE MATURITY | INT RATE ALL | FX and GOLD MATURITY | FX and GOLD MATURITY | FX and GOLD MATURITY | FX and GOLD ALL |
|--|----------------------|--|--|---|---|---|--|---|-------------------------------------|-------------------------------------|---|
| RANK BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | < 1 YR | 1 - 5 YRS | > 5 YRS | MATURITIES | < 1 YR | 1 - 5 YRS | > 5 YRS | MATURITIES |
| 1 JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$22,876,106 | \$16,223,206 | \$9,222,604 | \$48,321,916 | \$8,619,725 | \$2,229,275 | \$1,131,049 | \$11,980,049 |
| 2 CITIBANK NATIONAL ASSN | E570DZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 14,267,982 | 10,856,404 | 6,037,644 | 31,162,030 | 10,627,477 | 1,181,701 | 454,768 | 12,263,946 |
| 3 GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 20,058,171 | 6,445,392 | 6,000,921 | 32,504,484 | 1,050,312 | 720,520 | 615,754 | 2,386,586 |
| 4 BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 9,462,672 | 5,725,265 | 2,989,699 | 18,177,636 | 4,122,597 | 577,146 | 227,420 | 4,927,163 |
| TOP 4 COMMERCIAL BANKS, SAS & TCS WITH D OTHER COMMERCIAL BANKS, SAS & TCS WITH I TOTAL AMOUNT FOR COMMERCIAL BANKS, SAS | DERIVATIVES | \$5,443,493 9,999,533 15,443,026 | \$169,912,120 18,412,236 188,324,356 | \$66,664,931 5,477,685 72,142,616 | \$39,250,267 4,180,056 43,430,323 | \$24,250,868 2,789,232 27,040,100 | \$130,166,066 12,446,973 142,613,039 | \$24,420,111 3,996,332 28,416,443 | \$4,708,642 278,507 4,987,149 | \$2,428,991 114,820 2,543,811 | \$31,557,744 4,389,659 35,947,403 |

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 due to rounding. Note: Numbers may not add due to rounding. Note: Effective 2015 01, the reporting form and call report instructions changed. Schedule RC-R now requires banks to report FX and gold notional amounts in aggregate, rather than separately. Source: Call reports, Schedule RC-R

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY (PRECIOUS METALS) TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, 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 | \$2,153,028 | \$52,610,957 | \$21,427 | \$546 | \$0 | \$21,973 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 8,534 | 1,148 | 0 | 9,682 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 0 | 0 | 0 | 0 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 31 | 0 | 0 | 31 |
| | | | | | | | | |
| TOP 4 | COMMERCIAL BANKS, SAs & TCs WITH | DERIVATIVES | \$5,443,493 | \$169,912,120 | \$29,992 | \$1,694 | \$0 | \$31,686 |
| OTHER | COMMERCIAL BANKS, SAs & TCs WITH | I DERIVATIVES | 9,999,533 | 18,412,236 | 12,216 | 863 | 39 | 13,118 |
| TOTAL | FOR COMMERCIAL BANKS, SAs & TCs \ | WITH DERIVATIVES | 15,443,026 | 188,324,356 | 42,208 | 2,557 | 39 | 44,804 |

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 total due to rounding. Source: Call reports, Schedule RC-R

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY (OTHER COMMODITY AND EQUITY) TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | | LEGAL | | | OTHER COMM | OTHER COMM | OTHER COMM | OTHER COMM | EQUITY | EQUITY | EQUITY | EQUITY |
|----------|-------------------------------------|----------------------|-------------|---------------|------------|------------|------------|-------------|-------------|-----------|-----------|-------------|
| | | ENTITY | TOTAL | TOTAL | MATURITY | MATURITY | MATURITY | ALL | MATURITY | MATURITY | MATURITY | ALL |
| RANK | BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | < 1 YR | 1 - 5 YRS | > 5 YRS | MATURITIES | < 1 YR | 1 - 5 YRS | > 5 YRS | MATURITIES |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$734,969 | \$115,090 | \$16,954 | \$867,013 | \$1,445,907 | \$516,495 | \$93,893 | \$2,056,295 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 102,042 | 46,721 | 4,009 | 152,772 | 312,438 | 130,443 | 9,268 | 452,149 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 2,616 | 3,135 | 95 | 5,846 | 7,897 | 13,413 | 4,127 | 25,437 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 9,133 | 4,514 | 573 | 14,220 | 306,309 | 60,157 | 6,895 | 373,361 |
| | | | | | | | | | | | | |
| TOP 4 CO | OMMERCIAL BANKS, SAs & TCs WITH DEF | RIVATIVES | \$5,443,493 | \$169,912,120 | \$848,760 | \$169,460 | \$21,631 | \$1,039,851 | \$2,072,551 | \$720,508 | \$114,183 | \$2,907,242 |
| OTHER C | COMMERCIAL BANKS, SAs & TCs WITH DE | RIVATIVES | 9,999,533 | 18,412,236 | 34,133 | 63,672 | 1,162 | 98,966 | 87,082 | 60,326 | 5,008 | 152,417 |
| TOTAL F | OR COMMERCIAL BANKS, SAs & TCs WITH | H DERIVATIVES | 15,443,026 | 188,324,356 | 882,893 | 233,132 | 22,793 | 1,138,817 | 2,159,633 | 780,834 | 119,191 | 3,059,659 |

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 total due to rounding.

Source: Call reports, Schedule RC-R

NOTIONAL AMOUNTS OF CREDIT DERIVATIVE CONTRACTS BY CONTRACT TYPE AND MATURITY (INVESTMENT GRADE AND SUB-INVESTMENT GRADE) TOP 4 COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| | LEGAL | | | | | CREDIT DERI INVESTMENT | | | CREDIT DERIVATIVES SUB-INVESTMENT GRADE | | | | |
|--|----------------------|--|--|-------------------------------------|------------------------------------|------------------------------------|-------------------------------|------------------------------------|--|--------------------------------|--------------------------------|------------|--|
| | ENTITY | TOTAL | TOTAL | TOTAL CREDIT | MATURITY | MATURITY | MATURITY | ALL | MATURITY | MATURITY | MATURITY | ALL | |
| RANK BANK NAME | INDENTIFIER | ASSETS | DERIVATIVES | DERIVATIVES | < 1 YR | 1 - 5 YRS | > 5 YRS | MATURITIES | < 1 YR | 1 - 5 YRS | > 5 YRS | MATURITIES | |
| 1 JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$52,610,957 | \$1,826,975 | \$448,364 | \$620,438 | \$136,578 | \$1,205,380 | \$204,027 | \$348,274 | \$69,294 | \$621,595 | |
| 2 CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 51,267,510 | 2,083,825 | 446,442 | 1,034,205 | 123,481 | 1,604,128 | 135,148 | 316,134 | 28,415 | 479,697 | |
| 3 GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,416,228 | 161,402 | 31,059 | 49,828 | 17,930 | 98,817 | 17,643 | 32,058 | 12,884 | 62,585 | |
| 4 BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 22,617,425 | 840,937 | 276,740 | 325,699 | 57,915 | 660,354 | 105,928 | 49,903 | 24,752 | 180,583 | |
| TOP 4 COMMERCIAL BANKS, SAS & TCS WITH DER OTHER COMMERCIAL BANKS, SAS & TCS WITH DEI TOTAL AMOUNT FOR COMMERCIAL BANKS, SAS & | RIVATIVES | \$5,443,493 9,999,533 15,443,026 | \$169,912,120 18,412,236 188,324,356 | \$4,913,139 177,089 5,090,228 | \$1,202,605 13,829 1,216,434 | \$2,030,170 55,251 2,085,421 | \$335,904 9,216 345,120 | \$3,568,679 78,295 3,646,974 | \$462,746 17,751 480,497 | \$746,369 67,421 813,790 | \$135,345 13,621 148,966 | 98,793 | |

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 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 SEPTEMBER 30, 2017, 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 | | SOLD | SWAPS | SWAPS | OPTIONS | DERIVATIVES | SWAPS | SWAPS | OPTIONS | |
| 1 | JPMORGAN CHASE BANK NA | 7H6GLXDRUGQFU57RNE97 | \$2,153,028 | \$50,783,982 | \$1,826,975 | | \$899,093 | \$849,469 | \$16,732 | \$56,618 | \$5,063 | \$835,302 | \$6,179 | \$57,580 | \$32 |
| 2 | CITIBANK NATIONAL ASSN | E57ODZWZ7FF32TWEFA76 | 1,407,297 | 49,183,685 | 2,083,825 | 1,056,140 | 1,027,685 | 968,524 | 22,296 | 65,320 | 0 | 956,722 | 9,739 | 61,224 | 0 |
| 3 | GOLDMAN SACHS BANK USA | KD3XUN7C6T14HNAYLU02 | 157,953 | 43,254,826 | 161,402 | 88,609 | 72,793 | 79,535 | 2,128 | 6,895 | 51 | 63,865 | 2,128 | 6,800 | 0 |
| 4 | BANK OF AMERICA NA | B4TYDEB6GKMZO031MB27 | 1,725,215 | 21,776,488 | 840,937 | 422,501 | 418,436 | 377,980 | 9,990 | 34,531 | 0 | 373,367 | 12,059 | 33,010 | 0 |
| 5 | WELLS FARGO BANK NA | KB1H1DSPRFMYMCUFXT09 | 1,737,980 | 7,956,436 | 32,117 | 20,961 | 11,156 | 3,226 | 0 | 0 | 17,735 | 2,480 | 0 | 0 | 8,676 |
| 6 | HSBC NA | 1IE8VN30JCEQV1H4R804 | 195,907 | 4,397,893 | 95,914 | | 45,228 | 45,895 | 4,790 | 0 | 0 | 43,644 | 1,584 | 0 | 0 |
| 7 | STATE STREET BANK&TRUST CO | 571474TGEMMWANRLN572 | 232,359 | 1,626,248 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | BANK OF NEW YORK MELLON | HPFHU0OQ28E4N0NFVK49 | 281,342 | 906,637 | 180 | | 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | PNC BANK NATIONAL ASSN | AD6GFRVSDT01YPT1CS68 | 363,681 | 421,231 | 6,974 | 3,110 | 3,864 | 15 | 0 | 0 | 3,095 | 0 | 0 | 0 | 3,864 |
| 10 | MORGAN STANLEY BANK NA | G1MLHIS0N32I3QPILB75 | 126,898 | 358,477 | 10,394 | | 100 | 10,294 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| 11 | U S BANK NATIONAL ASSN | 6BYL5QZYBDK8S7L73M02 | 452,252 | 343,625 | 5,116 | 1,515 | 3,600 | 25 | 0 | 0 | 1,490 | 0 | 0 | 0 | 3,600 |
| 12 | NORTHERN TRUST CO | 6PTKHDJ8HDUF78PFWH30 | 130,997 | 330,552 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | SUNTRUST BANK | IYDOJBGJWY9T8XKCSX06 | 203,381 | 258,864 | 5,671 | 3,147 | 2,524 | 630 | 2,512 | 0 | 5 | 0 | 2,512 | 0 | 11 |
| 14 | TD BANK NATIONAL ASSN | 03D0JEWFDFUS0SEEKG89 | 285,495 | 179,938 | 371 | 366 | 5 | 366 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| 15 | MUFG UNION BANK NA | OX3PU53ZLPQKJ4700D47 | 118,553 | 155,595 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | CAPITAL ONE NATIONAL ASSN | 207ALC1P1YM0OVDV0K75 | 290,965 | 120,629 | 3,031 | 924 | 2,107 | 0 | 0 | 0 | 924 | 0 | 0 | 0 | 2,107 |
| 17 | KEYBANK NATIONAL ASSN | HUX2X73FUCYHUVH1BK78 | 134,819 | 94,548 | 494 | 375 | 119 | 375 | 0 | 0 | 0 | 26 | 93 | 0 | 0 |
| 18 | CITIZENS BANK NATIONAL ASSN | DRMSV1Q0EKMEXLAU1P80 | 120,725 | 87,397 | 2,670 | 0 | 2,670 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,670 |
| 19 | REGIONS BANK | EQTWLK1G7ODGC2MGLV11 | 122,472 | 86,671 | 3,115 | 921 | 2,194 | 38 | 0 | 0 | 884 | 38 | 0 | 0 | 2,157 |
| 20 | FIFTH THIRD BANK | QFROUN1UWUYU0DVIWD51 | 139,988 | 73,486 | 3,322 | 503 | 2,820 | 0 | 0 | 0 | 503 | 0 | 0 | 0 | 2,820 |
| 21 | BRANCH BANKING&TRUST CO | JJKC32MCHWDI71265Z06 | 214,780 | 59,844 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | BOKF NATIONAL ASSN | FU7RSW4CQQY98A2O7J66 | 33,102 | 55,986 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | COMPASS BANK | C90VT034M03BN29IRA40 | 84,701 | 46,636 | 41 | 0 | 41 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 |
| 24 | CAPITAL ONE BANK USA NA | LKE37K2B8CFZUR7F9816 | 116,456 | 43,413 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | HUNTINGTON NATIONAL BANK | 2WHM8VNJH63UN14OL754 | 102,068 | 35,965 | 1,824 | 1,186 | 638 | 0 | 0 | 0 | 1,186 | 0 | 0 | 0 | 638 |
| | | | | | | | | | | | | | | | |
| | OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | \$10,932,413 | \$182,639,053 | \$5,084,372 | | \$2,495,072 | \$2,336,552 | \$58,449 | \$163,364 | \$30,935 | \$2,275,590 | \$34,294 | \$158,614 | \$26,574 |
| | OMMERCIAL BANKS, SAs & TCs WITH DERIVATIVES | | 4,510,613 | 595,076 | 5,856 | | 3,556 | 11 | 79 | 0 | 2,210 | 349 | 2 | 0 | 3,204 |
| TOTAL AN | MOUNT FOR COMMERCIAL BANKS, SAS & TCS WITH DERIVATI | VES | 15,443,026 | 183,234,128 | 5,090,228 | 2,591,600 | 2,498,628 | 2,336,563 | 58,528 | 163,364 | 33,145 | 2,275,939 | 34,296 | 158,614 | 29,778 |
| | | | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| TOP 25 C | OMMERCIAL BANKS, SAS & TCs: % OF TOTAL COMMERCIAL B | ANKS SAS & TOS WITH DERIVATI | VES | | 99.9 | 50.9 | 49.0 | 45.9 | 1.1 | 3.2 | 0.6 | 44.7 | 0.7 | 3.1 | 0.5 |
| | OMMERCIAL BANKS, SAS & TCS: % OF TOTAL COMMERCIAL B | | | | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| | MOUNT FOR COMMERCIAL BANKS, SAS & TOS. % OF TOTAL COMMERCIAL BANKS, SAS & TCS: % OF TOTAL CO | | | TS . | 100.0 | 50.9 | 49.1 | 45.9 | 11 | 3.2 | 0.0 | 44.7 | 0.7 | 3.1 | 0.1 |
| TOTAL A | NOONT FOR COMMERCIAE DRINKS, SAS & TOS. /0 OF TOTAL CO | DIVINE ROTAL DAMAS, SAS & TOS W | | _0 | 100.0 | 30.9 | 47.1 | 4J.9 | 1.1 | 3.2 | 0.7 | 44.7 | 0.7 | J. I | 0.0 |
| | | | | | | | | | | | | | | | l |
| | dit derivatives have been excluded from the sum of total derivatives | atives here. | | | | | | | | | | | | | |
| | mbers may not total due to rounding. | | | | | | | | | | | | | | |
| Source: C | Call reports, Schedule RC-L | | | | | | | | | | | | | | |

TABLE 13

DERIVATIVES DATA REPORTED BY FFIEC 051 FILERS COMMERCIAL BANKS, SAVINGS ASSOCIATIONS AND TRUST COMPANIES IN DERIVATIVES SEPTEMBER 30, 2017, MILLIONS OF DOLLARS

| Total gross notional amount of interest rate derivatives held for trading | \$729 |
|--|-----------------|
| Total gross notional amount of all other derivatives held for trading | \$5 |
| Total gross notional amount of interest rate derivatives not held for trading | \$7,730 \$92 |
| Total gross notional amount of all other derivatives not held for trading | |
| all Report Schedule RC-R | |
| A. Notional principal amounts of over-the-counter derivative contracts covered by the regulatory capital rules: | |
| a. Interest rate | \$4,659 |
| b. Foreign exchange rate and gold | \$0 |
| c. Credit (investment grade reference asset) | \$14 |
| d. Credit (non-investment grade reference asset) | \$11 |
| e. Equity | \$0 |
| g. Other | \$5 |
| f. Precious metals (except gold) | \$0 |
| 8. Notional principal amounts of centrally cleared derivative contracts covered by the regulatory capital rules: | |
| a. Interest rate | \$343 |
| b. Foreign exchange rate and gold | \$0 |
| c. Credit (investment grade reference asset) | \$0 |
| d. Credit (non-investment grade reference asset) | \$0 |
| e. Equity | \$0 |
| f. Precious metals (except gold) | \$0 |
| g. Other | \$0 |
| C. Current credit exposure across all derivative contracts covered by the regulatory capital rules | \$57 |

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