United States Senate

COMMITTEE ON
HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
WASHINGTON, DC 20510–6250

May 23, 2012

VIA U.S. MAIL & EMAIL (Carrie.Moore@OCC.treas.gov, Brian.j.gross@frb.gov,WilJones@FDIC.gov)

The Honorable Thomas J. Curry
Comptroller of the Currency
Office of the Comptroller of the Currency
U. S. Department of the Treasury
Independence Square
250 E Street, N.W.
Washington, D.C. 20219

The Honorable Ben S. Bernanke
Chairman
Federal Reserve Board of Governors
20th Street & Constitution Avenue, N.W.
Washington, D.C. 20551

The Honorable Martin Gruenberg
Chairman
Federal Deposit Insurance Commission
550 17th Street, N.W.
Washington, D.C. 20429

RE: **Proposed Regulatory Capital Rules**
Docket Nos. OCC-2012-008, 009, and 010

Dear Messrs. Curry, Bernanke, and Gruenberg:

This letter offers comments regarding your agencies' proposed rules to implement revised regulatory capital requirements for the financial institutions you oversee, including rules implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act")[1] and agreements arising from the Basel Committee on Banking Supervision.[2]

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[1] Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), P.L. 111-203, codified at 15 U.S.C. § 8301 et seq. (2010).

[2] The Basel Committee on Banking Supervision (BCBS), first established in 1974, is an international body composed of representatives from countries with major banking centers, including the United States and the G-20 countries. See "Basel Committee on Banking Supervision," BCBS, Bank for International Settlements, http://www.bis.org/bcbs/index.htm. The Basel Committee's recommendations do not have the force of law, but must be implemented by individual member countries using national laws and regulations. See "History of the Basel Committee and its Membership," BCBS, http://www.bis.org/bcbs/history.htm. Over time, the Basel Committee has issued four sets of capital standards. Basel I, issued in 1988, provided the first international capital

While these comments relate to a number of your proposed rules, they are particularly focused on the three proposed "Regulatory Capital Rules": (1) Regulatory Capital, Implementation of Basel III, Minimum Regulatory Capital Ratios, Capital Adequacy, Transition Provisions, and Prompt Corrective Action ("Basel III NPR"),[3] (2) Standardized Approach for Risk-Weighted Assets; Market Discipline and Disclosure ("Standardized RWA NPR"),[4] and (3) Advanced Approaches Risk-Based Capital Rule; Market Risk Capital Rule ("Advanced Approaches NPR").[5]

The purpose of this letter is to express support for all three proposed rules which seek to strengthen capital requirements for U.S. banks.[6] In particular, this letter explains how a recent investigation into JPMorgan Chase Bank supports many of the provisions in the proposed rules. In addition, since both the proposed rules and a parallel set of rules that took effect for certain other depository institutions as of January 2013 (hereinafter "January 2013 rules"), will require further interpretation as they are implemented, this letter takes the opportunity respectfully to offer several recommendations to strengthen those implementation efforts.

(1) **Limit Excessive Bank Discretion Over Models.** To prevent model manipulation, facilitate cost effective regulatory oversight, and ensure adequate capital levels, regulators should use both the proposed rules and the January 2013 rules to promote bank use of standardized models incorporating best practices, and limit the grant of excessive bank discretion over the development and implementation of risk and capital models.

(2) **Assess Bank Use of Multiple Base VaR Models.** Regulators should assess whether to continue to allow banks to use one set of VaR models for regulatory purposes and a different set of VaR models for risk management or investor reporting purposes, since differing models complicate oversight, provide different information to different parties, and introduce complexity and confusion into bank practices, for no apparent gain.

(3) **Increase Credit Derivative Risk Weights.** Given the price volatility, unpredictability, and significant losses often associated with credit derivatives, regulators should use their authority to increase the risk weights assigned to credit derivatives that are not used as risk-mitigating hedges, and coordinate those risk weights with the capital charges authorized for "permitted activities" under the Volcker Rule.

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standards; Basel II, issued in 1999, revised the first Accord, and was finalized in 2004; Basel 2.5, issued in 2009, strengthened capital standards related to securitizations and trading book exposures in response to the financial crisis; and Basel III, issued in 2010, provided a broader set of reforms. See "Basel Committee on Banking Supervision," BCBS, http://www.bis.org/bcbs/index.htm (summarizing history of Basel Accords); October 2011 "Progress report on Basel III implementation," BCBS, http://www.bis.org/publ/bcbs203.pdf.

[3] 77 Fed. Reg. 169, 52792 (Aug. 30, 2012).

[4] Id. at 52888.

[5] Id. at 52978.

[6] For the purposes of this letter, "banks" includes insured depository institutions together with their on and off balance sheet affiliates and subsidiaries, including holding companies, affiliated broker-dealers, and investment funds.

(4) **Require Credit Derivative Hedging Documentation.** To prevent confusion, regulatory disputes, or malfeasance in connection with claims that a credit derivative is acting as a credit risk mitigant, regulators should use their authority to require banks to provide contemporaneous documentation identifying the specific assets whose credit risks are being mitigated, show how the credit derivative lowers bank risk, and demonstrate that the credit derivative qualifies for favorable accounting treatment as a dedicated hedge.

Subcommittee Investigations

The U.S. Senate Permanent Subcommittee on Investigations, which I chair, has conducted numerous investigations over the years into financial markets and financial institutions, including releasing reports and holding hearings on the recent financial crisis and related derivatives activities,[7] commodities trading,[8] bank anti-money laundering activities,[9] and bank participation in schemes to facilitate tax evasion.[10] These investigations provide detailed case histories offering insights into how financial institutions actually operate, the risks they incur, and their ability to withstand downturns and unexpected losses.

Most recently, the Subcommittee conducted a bipartisan investigation of a complex set of synthetic credit derivatives trades which, due to their enormous size, became known as the whale trades, and caused a loss of at least $6.2 billion at JPMorgan Chase in 2012. In connection with that investigation, the Subcommittee released a 300-page, bipartisan staff report entitled, "JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses," and held a hearing on March 15, 2013.[11] That investigation uncovered detailed, new information about how JPMorgan developed and used its risk and capital models in recent years, offering a case history with information relevant to the three proposed rules as well as implementation of the January 2013 rules. Key facts uncovered by the investigation include the following.

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[7] See, e.g., "Wall Street and the Financial Crisis: Anatomy of a Financial Collapse," U.S. Senate Permanent Subcommittee on Investigations, S.Hrg. 112-675 (April 13, 2011) (Report and Appendix), Vol. 5, Part 1.

[8] See, e.g., U.S. Senate Permanent Subcommittee on Investigations, "Excessive Speculation and Compliance with the Dodd-Frank Act," S.Hrg. 112-313 (Nov. 3, 2011); "The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat," S.Prt. 109-65 (June 27, 2006); "Excessive Speculation in the Natural Gas Market," S. Hrg. 110-235 (June 25 and July 9, 2007); and "Excessive Speculation in the Wheat Market," S.Hrg. 110-235 (June 25 and July 9, 2007).

[9] See, e.g., U.S. Senate Permanent Subcommittee on Investigations, "U.S. Vulnerabilities to Money Laundering, Drugs, and Terrorist Financing: HSBC Case History," S.Hrg. 112-597 (July 17, 2012); "Keeping Foreign Corruption out of the United States," S.Hrg. 111-540 (Feb. 4, 2010); "Money Laundering and Foreign Corruption: Enforcement and Effectiveness of the Patriot Act," S.Hrg. 108-633 (July 15, 2004); "Role of U.S. Correspondent Banking in International Money Laundering," S.Hrg. 107-84 (March 1, 2 and 6, 2001); and "Private Banking and Money Laundering: A Case Study of Opportunities and Vulnerabilities," S.Hrg. 106-428 (Nov. 9 and 10, 1999).

[10] See, e.g., U.S. Senate Permanent Subcommittee on Investigations, "Tax Haven Banks and U.S. Tax Compliance: Obtaining the Names of U.S. Clients with Swiss Accounts," S.Hrg. 111-30 (March 4, 2009); "Dividend Tax Abuse: How Offshore Entities Dodge Taxes on U.S. Stock Dividends," S.Hrg. 110-778 (Sept. 11, 2008); "Tax Haven Banks and U.S. Tax Compliance," S.Hrg. 110-614 (July 17 and 25, 2008); and "Tax Haven Abuses: The Enablers, The Tools and Secrecy," S.Hrg. 109-797 (Aug. 1, 2006); and "Fishtail, Bacchus, Sundance, and Slapshot: Four Enron Transactions Funded and Facilitated by U.S. Financial Institutions," S.Hrg. 107-82 (Jan. 2, 2003).

[11] "JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses," U.S. Senate Permanent Subcommittee on Investigations (3/15/2013) (hereinafter "Levin-McCain Report").

(1) Trading credit derivatives can be a high risk activity even when conducted by trading experts.

(2) Risk and capital models provide powerful tools to influence bank conduct.

(3) Some risk models have proven accurate in predicting risk and dollar losses.

(4) Some risk and capital models have been manipulated to understate bank risk and capital requirements.

(5) Weak bank model development procedures undermine the integrity of their results and justify stronger model requirements.

(6) Some bank personnel disregard risk warnings even at a bank with a reputation for sound risk management.

Due to their relevance to the proposed rules as well as other rules intended to strengthen U.S. bank capital requirements, this letter requests that the enclosed Levin-McCain report, enclosed hearing exhibits, and all other related hearing materials be considered as included in the administrative record for the proposed rules named above, as well as any other relevant proposed rule or guidance, and considered during the course of the rulemaking process.

Summary of JPMorgan Whale Trades

A brief description of the JPMorgan whale trades helps explain their relevance to the proposed Regulatory Capital Rules as well as the implementation of those and the January 2013 rules. The JPMorgan whale trades involved swaps referencing either synthetic credit indices or credit index tranches; and functioned as wagers on the creditworthiness of various corporations around the world. They were undertaken in connection with an investment program called the Synthetic Credit Portfolio (SCP) and recorded in an SCP trading book. The SCP and its trading book were created and run by JPMorgan's Chief Investment Office (CIO).

The CIO is a division of JPMorgan Chase Bank. It is headquartered in New York City, its offices are within the bank, and it is overseen by the bank's primary regulator, the Office of the Comptroller of the Currency (OCC). It is headed by a Chief Investment Officer, who is one of the most senior executives at the bank. Among other activities, the CIO invests the U.S. bank's excess deposits, a portion of which are federally insured by the Federal Deposit Insurance Corporation (FDIC).

In addition to its U.S. operations, the CIO operates a relatively small branch office in London which conducts derivatives trading, among other activities. The CIO's senior personnel in New York hire and supervise the CIO personnel in London, who operate in the same office space as JPMorgan's London banking and investment operations. All of the whale trades, as with other SCP trades, were executed by CIO traders employed by the London office, using money from the U.S. bank's excess deposits, a portion of which was FDIC insured.

To analyze risk and establish appropriate risk limits, the CIO's London office used JPMorgan's Value-at-Risk (VaR) and other risk management models and software. The CIO's

London office also relied on risk management personnel in both London and New York. To determine its compliance with regulatory capital requirements, the CIO's New York and London offices used JPMorgan's standard models and software, including the models used to calculate Risk-Weighted Assets (RWA) and its key components, VaR, stress VaR, the Comprehensive Risk Measure (CRM), and Incremental Risk Charges (IRC).

The whale trades took place over a three-month period, from January to March 2012, after which the Chief Investment Officer, Ina Drew, ordered all Synthetic Credit Portfolio trading stopped. During those three months, the notional size of the SCP trading book tripled, from about $51 billion to about $157 billion. The London traders conducted credit derivatives trades on a daily basis, sometimes conducting hundreds of trades in a day. By March 2012, the SCP trading book contained a high risk mix of over one hundred different credit derivatives, referencing investment grade and noninvestment grade corporations in the United States, Europe and Asia; specifying a variety of maturity dates; and extending from one to ten years in duration.

In January 2012, the SCP trading book began incurring sustained losses. As the quarter continued, while the losses per day were generally under $10 million, on a few days, the losses were in the hundreds of millions of dollars, totaling $415 million, even $570 million in a single day. By the end of the quarter, in March 2012, JPMorgan reported internally that the SCP trading book had lost a total of $719 million. A few months later, the bank determined that the London traders had been understating SCP losses by overvaluing its credit derivative holdings. In July 2012, JPMorgan restated its first quarter earnings, increasing the SCP's first quarter losses by $660 million, a 70% increase, to a total of more than $1.4 billion. In addition, although CIO headquarters had ordered a stop to new SCP trades on March 23, 2012, the losses from the existing derivative positions continued to mount through the second and third quarters of 2012. By December 2012, the whale trade losses exceeded $6.2 billion, or approximately 45% of the bank's pre-tax earnings through September.[12] Those losses, which were three times the revenues produced by the SCP in its first five years combined, took place in a relatively benign credit environment.

Powerful Tools

One key product of the JPMorgan whale trades investigation is a wealth of evidence demonstrating that risk and capital regulatory requirements can exert a powerful influence over bank conduct.

Numerous internal bank emails, memoranda and analyses from 2011 and 2012, show that senior JPMorgan managers spent significant time and resources calculating RWA totals for specific bank portfolios and bank divisions; developing RWA reduction targets; and devising plans to reduce RWA totals. For example, in late 2011, JPMorgan Chase senior management directed the bank's Chief Investment Office (CIO) to reduce its RWA levels by a specified amount.[13] The head of the CIO, Ina Drew, responded by directing CIO personnel to analyze the

[12] See Levin-McCain Report at 93.

[13] See, e.g., testimony of Jamie Dimon, "A Breakdown in Risk Management: What Went Wrong at JPMorgan Chase?" before the U.S. Senate Committee on Banking, Housing, and Urban Affairs, S. Hrg. 112-715 (June 13, 2012) ("In December 2011, as part of a firm wide effort and in anticipation of new Basel Cap[ital] requirements, we instructed CIO to reduce risk weighted assets and associated risk."); 2013 JPMorgan Chase Task Force Report, at 2,

Synthetic Credit Portfolio (SCP), which registered a high RWA total, and devise ways to reduce its RWA. In that request, Ms. Drew noted that the bank was "trying to work with ccar submission for [the] firm that is acceptable [to regulators] for an increased [stock] buyback plan."[14]

In response, CIO risk managers, quantitative analysts, and derivatives traders spent considerable time working to understand the bank's RWA model and its component parts, analyzing the SCP's RWA, and working on ways to lower the SCP's RWA.

One option was to reduce the size of certain SCP positions over a relatively brief period of time. To dispose of those positions, the CIOs traders provided bank management with cost estimates ranging from $400 million to $516 million.[15] Ms. Drew told the Subcommittee that, when informed of the high costs associated with disposing of SCP positions, she asked the traders to see if it were possible to reduce its RWA without holding a "fire sale."[16]

In response, the CIO crafted a plan to offset the risks incurred from the SCP's short positions by purchasing certain long positions, in the expectation that the offsetting assets would lower the SCP's RWA.[17] Execution of this plan led to the whale trades which included the purchase of massive long positions.[18] As those trades were executed, CIO management continued to track the SCP's RWA, expressing increasing dismay as it became clear that, far from lowering the RWA, the whale trades were producing a portfolio of increasing size, complexity, and risk. In April 2012, CIO personnel developed "a crisis action plan" for "achieving our targeted RWA objectives for the end of Q2 [the second quarter]," warning: "We must insure that we don't overtrade, or alter the risk profile to an uncertain RWA result. ... [W]e must 'price' the best economic solution in terms of average and final Q2 RWA."[19]

Internal bank documents related to the JPMorgan whale trades show that all levels of bank personnel, from senior management to risk managers to derivatives traders, were fully aware of the bank's RWA requirements and knew that lower RWA led to lower capital requirements. When instructed to reduce RWA, bank personnel at all levels worked hard to achieve that outcome. Together, the evidence demonstrates that RWA and capital requirements offer powerful tools to shape bank conduct. The evidence also indicates that the proposed

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28, http://files.shareholder.com/downloads/ONE/1934577619x0x628656/4cb574a0-0bf5-4728-9582-625e4519b5ab/Task_Force_Report.pdf; Levin-McCain Report at 64, footnote 405.

[14] Subcommittee Hearing Exhibit 46, 12/22/2011 email from Ina Drew to colleagues, "Rwa", JPM-CIO-PSI 0000034.

[15] See, e.g., Levin-McCain Report at 62; JPMorgan Chase Task Force interview of Bruno Iksil, CIO (partial readout to the Subcommittee on 8/27/2012); 12/28/2011 email from Javier Martin-Artajo, CIO, to Ina Drew, CIO, "10B RWA Target Reduction.ppt," JPM-CIO-PSI 0000037, at 039; 2013 JPMorgan Chase Task Force Report, at 28 ("[A] 35% proportional unwind of the [SCP] would result in a $10 billion RWA reduction, but could cost slightly more than $500 million").

[16] Subcommittee interview of Ina Drew, CIO (9/7/2012); Levin-McCain Report at 62. See also Subcommittee Hearing Exhibit 7, 1/10/2012 email from Ms. Drew to Mr. Martin-Artajo, "International Credit Consolidated P&L 09-Jan-2012," JPM-CIO-PSI 0000075.

[18] See Levin-McCain Report at 75-76, 79, 81-82, 84.

[18] See Levin-McCain Report at 75-76, 79, 81-82, 84.

[19] Subcommittee Hearing Exhibit 23, 3/30/2012 email from Achilles Macris to his CIO colleagues, "synthetic credit – crisis action plan," JPM-CIO-PSI 0001221.

Regulatory Capital Rules provide an important opportunity, not only to increase bank capital, but also to create incentives to reduce bank risk.

Model Accuracy

A second key product of the JPMorgan whale trades investigation is evidence that some bank risk models can accurately predict risk and dollar losses, providing useful risk management tools for both bank personnel and regulators.

The best example involves the model developed by JPMorgan's Quantitative Research (QR) office to calculate the bank's Comprehensive Risk Measure (CRM). JPMorgan did not use CRM as a day-to-day risk management tool, but because it provided a key input into RWA calculations, the bank began providing CRM results to relevant bank divisions starting in 2011. CRM produces a dollar figure representing the potential losses that could be incurred by a specific portfolio or bank division during the course of a year in markets undergoing a high level of stress. As JPMorgan's top quantitative analyst expressed it to the Subcommittee, at JPMorgan, CRM represented how much money a portfolio could lose in a worst case scenario in a year, with a 99% level of confidence.[20]

At the end of February 2012, the CIO's CRM levels suddenly shot up, predicting that the CIO risked annual losses totaling $6.3 billion.[21] That figure represented an increase of more than 300% over a period of less than seven weeks.[22] At the time, a senior CIO risk manager dismissed the CRM result as "difficult for us to imagine" and "garbage."[23] When the CIO confronted the QR office about the dollar figure, the QR head defended the CRM prediction as a consequence of the CIO's increasing its Synthetic Credit Portfolio by $33 billion in new credit derivatives during the seven-week period.[24] At the Subcommittee's hearing, a senior CIO risk manager testified that, while he had dismissed it at the time, the February 2012 $6.3 billion CRM prediction turned out to be accurate.[25] Had the bank heeded the CRM warning when given, it would have been in time to prevent the disastrously large SCP trades made in the second half of March which magnified the bank's risk and subsequent losses.

A second risk model – this one used to calculate VaR results – also proved accurate in predicting increasing levels of risk. Using historical profit and loss data, JPMorgan developed a VaR model that quantified the total amount of money that a portfolio of assets could be expected to lose over the course of a single day in ordinary market conditions, with either a 95% or 99%

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[20] See Levin-McCain Report at 186; Subcommittee interview of C.S. Venkatakrishnan, JPMorgan Chase (10/25/2012). See also 8/30/12 Joint Final Rule, "Risk-Based Capital Guidance: Market Risk," 77 Fed. Reg. 53106 (defining CRM).

[21] See Levin-McCain Report at 188; Subcommittee Hearing Exhibit 49, 3/8/2012 email from Ina Drew to Javier Martin-Artajo and others, "CIO CRM Results," JPM-CIO-PSI 0000373.

[22] Subcommittee Hearing Exhibit 49, 3/8/2012 email from Ina Drew to Javier Martin-Artajo and others, "CIO CRM Results," JPM-CIO-PSI 0000373.

[23] Subcommittee Hearing Exhibit 47, 3/2/2012 email from Peter Weiland, CIO risk manager, "CIO CRM Results," JPM-CIO-PSI 0000338.

[24] Subcommittee Hearing Exhibit 47, 3/7/2012 email from C.S. Venkatakrishnan to Ina Drew and others, "CIO CRM Results," JPM-CIO-PSI 0001815.

[25] See testimony of Peter Weiland, Subcommittee hearing (3/15/2013).

level of confidence.[26] In January 2012, the bank's then standard VaR-95 model showed the CIO to be experiencing increasing levels of risk which, by the end of the month, breached, not only the CIO's VaR limit, but also the VaR limit established for the entire bank.[27] Rather than heed that risk warning, however, CIO personnel criticized the standard VaR model for overstating risk and convinced the bank to allow the CIO to implement a new VaR model which produced much lower VaR results.[28] Four months later, in May 2012, the bank determined that the new CIO model significantly understated the risks posed by the whale trades and reinstated the prior VaR model.[29] When the Subcommittee prepared a chart comparing the two models, the chart showed not only that the two produced very different results over time, but also that the earlier VaR model was much more accurate in its portrayal of risk than the latter.[30]

In short, the JPMorgan whale trades investigation demonstrates that bank risk models can provide highly useful risk information, and that some models are more accurate than others. The significance for the proposed Regulatory Capital Rules is that best practices can increase the accuracy of risk and capital models, and the rules should be designed and implemented to promote bank use of best practices.

Manipulating Models

A third key product of the JPMorgan whale trades investigation is evidence that efforts to reduce RWA may lead to an improper manipulation of the models used to calculate RWA in ways that may result in a material understatement of risk.

Two of the strategies used by JPMorgan CIO personnel were to: (1) change the component VaR model to produce lower VaR results; and (2) utilize two other component models, involving CRM and IRC, in a way designed to produce a lower RWA outcome.

Proposal to Manipulate Models. The decision to reduce RWA in part by manipulating its component models was explicitly proposed by CIO personnel. In December 2011, the CIO's head of Credit and Equity Trading, Javier Martin-Artajo, sent an email to the CIO's head, Ina Drew, proposing that the CIO meet its RWA reduction targets in part by utilizing three "model reduction" strategies.[31] Essentially, his proposal was to change three component models that fed into the RWA model to reduce the CIO's overall RWA outcome by an estimated $7 billion.[32] The three component models calculated VaR, stress VaR, and CRM results for the CIO's portfolios, including the SCP.

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[26] Levin-McCain Report at 166. See also 12 CFR Part 3, Appendix B, Section 2 (defining VaR). A stress VaR model performs the same calculation for a market undergoing a high level of stress.

[27] See Levin-McCain Report at173.

[28] See id. at 179-180.

[29] See id. at 185.

[30] See chart comparing new and old models, Levin-McCain Report at 181.

[31] Subcommittee Hearing Exhibit 46, 12/22/2011 email from Javier Martin-Artajo, CIO, to Ina Drew and John Wilmot, CIO, "RWA – Tranche Book," JPM-CIO-PSI 0000032-034, at 033.

[32] Id. In comparison, he recommended changing the SCP's actual derivative positions to achieve an RWA reduction of only $2 billion. Id.

Two weeks after that initial proposal, in January 2012, Bruno Iksil, a CIO trader in London, followed up by sending Ms. Drew a presentation that included a chart comparing the CIO's RWA when calculated using the bank's standard RWA model versus a model then under development by the CIO.[33] The presentation stated that the SCP's RWA when using the bank's standard model was $40.3 billion, while under the CIO's model it would be about half that amount, $20.9 billion.[34] The next day, Mr. Martin-Artajo sent Ms. Drew an email outlining four scenarios for reducing the SCP's RWA, with accompanying cost estimates.[35] The four options revolved in large part around whether the CIO could convince bank management to allow it to use its own RWA model in place of the bank's standard model. Using the CIO's model was portrayed as producing lower RWA more quickly and at a lower cost compared to the bank's standard RWA model.

VaR Model Change. Earlier in 2011, even before the "model reduction" strategies were proposed to senior CIO management, CIO personnel had taken action on one of the strategies involving the VaR model. In the early summer of 2011, Mr. Martin-Artajo asked the CIO's senior quantitative analyst, Patrick Hagan, to create new models to calculate the CIO's VaR and stress VaR results, with the goal of producing lower outcomes for both.[36]

Evidence indicates that multiple CIO personnel, including CIO head Ina Drew, viewed the bank's standard VaR model as overstating CIO risk, which is why Mr. Hagan was directed to develop VaR models that would produce lower amounts.[37] Those lower VaR amounts, when fed into the RWA model, would also produce lower RWA outcomes. JPMorgan later explained that the new model was developed to bring the CIO into compliance with Basel 2.5, making no reference to the goal of also lowering the bank's VaR results.[38]

Mr. Hagan began work on the new VaR and stress VaR models in the early summer of 2011. In a later document summarizing his work on the VaR model, he described the new model

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[33] Subcommittee Hearing Exhibit 8, 1/18/2012 email from Bruno Iksil, CIO, to Julien Grout, CIO, "Meeting materials for 11am meeting," JPM-CIO-PSI 0000098-104, conveying presentation entitled, "Core Credit Book Highlights." The CIO's lead quantitative analyst, Patrick Hagan, told the Subcommittee that while he had not developed a fully functioning RWA model for the CIO at the time the presentation was submitted, he had worked on several of its component models, including new VaR, stress VaR, and CRM models, and provided the estimates used in the December 2011 email and January 2012 chart. Subcommittee interview of Patrick Hagan (2/7/2013).

[34] Subcommittee Hearing Exhibit 8, 1/18/2012 email from Bruno Iksil, CIO, to Julien Grout, CIO, "Meeting materials for 11am meeting," JPM-CIO-PSI 0000098-104, conveying presentation entitled, "Core Credit Book Highlights." Mr. Hagan told the Subcommittee that, while he had provided the $20.9 billion figure, he believed it was "not realistic," because it was far from clear that the bank's QR group would adopt the model changes he was advocating. Subcommittee interview of Patrick Hagan, CIO (2/7/2013).

[35] Subcommittee Hearing Exhibit 9, 1/19/2012 email from Javier Martin-Artajo, CIO, to Ina Drew, CIO, and others, "Credit book Decision Table – Scenario Clarification," at JPM-CIO-PSI 0000106.

[36] See Levin-McCain Report at 168-169; Subcommittee interview of Patrick Hagan (2/7/2013).

[37] See Levin-McCain Report at 169; 2013 JPMorgan Chase Task Force Report, at 79, footnote 98 ("The previous model was viewed as too conservative and the VaR that it was producing thus was considered to be too high. The new model was thought to be a substantial improvement that would more accurately capture the risks in the portfolio.") and 122, footnote 120; Subcommittee interview of Ina Drew, CIO (9/7/2012); Subcommittee interview of Patrick Hagan (2/7/2013) (Mr. Hagan told the Subcommittee that the bank's regulatory VaR model had been designed so that traders were expected to exceed the VaR total produced by the model on at least 5 days out of 100, but the bank had not exceeded the VaR total on a single day during the prior year, thereby allegedly "proving" that VaR model "overstated the risk.").

[38] 2013 JPMorgan Chase Task Force Report, at 121-122.

as "conservative," making no reference to the goal of producing lower VaR outcomes.[39] In October 2011, Mr. Martin-Artajo made another request, asking Mr. Hagan to produce a related VaR model to calculate the bank's "10-Q VaR," meaning the VaR results that the bank would report in its public filings with the Securities and Exchange Commission (SEC).[40] The bank also used that VaR model internally on a day-to-day basis to measure risk. Mr. Hagan told the Subcommittee he was under pressure to produce the new 10-Q VaR model quickly and did so in two months, during the same period when the SCP was increasing in size and producing higher VaR results that threatened to exceed the CIO's VaR limit.

In January 2013, for four consecutive days, the CIO actually breached, not only its own VaR limit, but also the VaR limit established for the entire bank.[41] To cure the breach, rather than change the actual positions held by the SCP, CIO personnel hurriedly pushed through approval of the new VaR model developed by Mr. Hagan, explaining that it was expected to immediately lower the SCP's VaR by 44%.[42] The bank's Model Review Group approved the new model despite outstanding questions about how the model operated and how it would be implemented.[43] On the day the new model took effect, it immediately lowered the SCP's VaR outcome by 50%, bringing the CIO and the bank well below their limits.[44]

By reducing the CIO's VaR, the new VaR model enabled the CIO traders to purchase billions of dollars of additional credit derivatives, which increased the SCP's risk profile over the next two months.[45] Overall, the SCP tripled in size during the first three months of 2012, increasing from about $51 billion to $157 billion in notional size. The old VaR model would have portrayed that larger portfolio as breaching both the CIO's and bank's VaR limits, but the new model produced such low VaR numbers, that no additional breach occurred.[46]

Four months after putting the new VaR model into effect, after suffering billions of dollars in losses, JPMorgan withdrew the new VaR model and reinstated the prior VaR model.[47] The bank made this change after bank personnel realized it was not working properly and was producing inaccurate results.[48] The bank later admitted that the new model had been poorly implemented, using spreadsheets rather than an automated database to input daily trading information used in the model, among other problems. Those spreadsheets had required manual entry of trading data, which led to data errors, and the formulas integrating the spreadsheet data

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[39] See Levin-McCain Report at 169; undated "VaR Methodology," prepared by Patrick Hagan and Keith Stephan, JPM-CIO-PSI-0000041, at 45.

[40] Subcommittee interview of Patrick Hagan, CIO (2/7/2013).

[41] See Levin-McCain Report at 173.

[42] See, e.g., id. at 174-175; Subcommittee Hearing Exhibit 42, 1/20/2012 email from Irvin Goldman to John Hogan, "CIO VaR," JPM-CIO-PSI 0000151 ("The estimated impact of the new VaR model based on Jan 18 data will be a CIO VaR reduction in the tranche book by 44% ... with the CIO being well under its overall limits.").

[43] See Levin-McCain Report at179-180.

[44] See id. at 178.

[45] See, e.g., testimony of Jamie Dimon, Chairman & CEO, JPMorgan Chase & Co., before the U.S. Senate Committee on Banking, Housing and Urban Affairs, S. Hrg. 112-715 (June 13, 2012), at 1, http://files.shareholder.com/downloads/ONE/2156234165x0x577097/c0734566-d05f-4b7a-9fa4-ec12a29fb2da/JPM_News_2012_6_13_Current.pdf.

[46] See chart comparing new and old models, Levin-McCain Report at 181.

[47] Levin-McCain Report at 185, 295; Subcommittee Hearing Exhibit 96, 5/10/2012 "Business Update Call," JPMorgan transcript, at 2-3.

[48] Subcommittee interview of Patrick Hagan, CIO (2/7/2013).

had required multiple corrections that also created problems and led to understating the value at risk.[49] When the prior VaR model was reinstated, the CIO's VaR results nearly doubled.[50]

After reinstating the prior VaR model, JPMorgan continued work to revise the model and, in September 2012, put into effect a new VaR model for the third time.[51] The newest VaR model "resulted in a reduction" in VaR results for the CIO, JPMorgan's investment bank, and the bank as whole, lowering results by about 20%.[52]

In sum, the evidence indicates that JPMorgan: (1) put a revised VaR model into place in January 2012 with the intention of lowering the CIO's VaR results, (2) approved the new model to cure an ongoing breach of the bank's VaR limit, (3) approved the revised model despite inadequate implementation plans, and (4) exploited the new VaR by engaging in additional high risk credit trades that produced massive losses. The Subcommittee investigation did not examine internal bank documents to determine why the bank put another revised VaR model into place in September 2012, but producing lower VaR results was one clear outcome. It is difficult to understand how JPMorgan's credit derivatives could become 50% less risky overnight, then 50% more risky, then 20% less risky, again on an overnight basis. But those changes in its publicly reported VaR results took place last year, with no contemporaneous objections from regulators.

The JPMorgan case shows how the bank manipulated its VaR model to lower its VaR outcomes. A related issue involves JPMorgan's use of one VaR model, with a 99% confidence level, for regulatory capital purposes and in bank call reports, and a different model, with a 95% confidence level, for its internal risk analysis and public SEC filings. The Subcommittee's investigation was unable to identify any public policy reason for the bank's providing different VaR results to regulators compared to investors and the public.

CRM-IRC Optimization. The effort of some CIO personnel to lower RWA through model revisions reached beyond the VaR. In early March 2012, the CIO's head of Credit and Equity Trading, Javier Martin-Artajo, sent an email to CIO head Ina Drew proposing to undertake a similar "model reduction" strategy related to the bank's CRM model which was producing results which he viewed as "too high."[53] To address the CRM model, he proposed "to do what we have done with the reduction of RWA due to VAR and StressVAR. (We are getting positive results here in line with expectations)."[54] At Mr. Martin-Artajo's direction, the CIO's quantitative expert, Patrick Hagan, initiated work on a revised CRM model, but the extent to which his revisions were actually adopted by the bank and led to changes in the bank's standard CRM model remain unclear.

CIO personnel were more successful in pursuing another "model reduction" strategy to reduce its RWA by manipulating the application of the models used to calculate CRM and IRC.

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[49] See Levin-McCain Report at 184-185; 2013 JPMorgan Chase Task Force Report at 105.
[50] See Levin-McCain Report at 296.
[51] JPMorgan Chase & Co. Form 10-Q for the period ending 9/30/2012, filed with the SEC (11/8/2012), at 22.
[52] Id. at 98; Levin-McCain Report at 185.
[53] Subcommittee Hearing Exhibit 49, 3/8/2012 email from Ina Drew to Javier Martin-Artajo and others, "CIO CRM Results," JPM-CIO-PSI 0000373.
[54] Id.

The CRM and IRC models played key roles at the CIO, because virtually all of the credit derivatives in the Synthetic Credit Portfolio had to undergo analysis by one or the other of the two models as part of the CIO's RWA calculations. On March 21, 2012, the CIO's lead quantitative analyst, Patrick Hagan, sent an email to a number of colleagues within the bank outlining a strategy to reduce the CIO's RWA, using the subject heading, "Optimizing regulatory capital."[55] Mr. Hagan wrote:

> "To optimize the firm-wide capital charge, I believe we should optimize the split between the tranche and index books. The bank may be leaving $6.3bn [billion] on the table, much of which may be recoverable ....
>
> The split between the index book (subject to IRC) and the tranch[e] book (subject to CRM) should be a theoretical split, a matter of labeling for the capital calculations. If there is a natural split which helps us think about the positions, that's different, but for the purposes of the capital calculation, the books should be combined and split on the optimal basis ....
>
> [T]he idea would be for QR [Quantitative Research] to find the value ... which results in the minimum post-diversification capital charge for the bank as a whole ....
>
> The new rules have too many arbitrary factors of three for the regulatory capital to rationally reflect our risks. I don't think we should treat this as a regulatory arbitrage. Instead we should treat the regulatory capital calculation as an exercise of automatically finding the best results of an immensely arbitrary and complicated formula."[56]

Essentially, Mr. Hagan advocated establishing a system to "optimize" which of the CIO's credit derivative positions would be subject to the CRM calculation and which would be subject to the IRC calculation, depending upon which allocation would produce the lowest overall RWA results.

Several colleagues castigated Mr. Hagan for setting out a regulatory optimization strategy in an email and told him not to put such proposals in writing.[57] Nevertheless, QR analysts worked with him to analyze ways to categorize SCP derivative positions in a way that would reduce their collective CRM, IRC, and RWA results.[58] The final arrangement allowed the CIO to design an initial split of the SCP credit derivatives into two trading books to produce the lowest possible CRM, IRC, and RWA results, but also determined that, once a derivative was

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[55] Subcommittee Hearing Exhibit 50, 3/21/2012 email from Patrick Hagan to Irvin Goldman, CIO, and others, "Optimizing regulatory capital," JPM-CIO-E 0011025-26. See also Levin-McCain Report at 191.

[56] Subcommittee Hearing Exhibit 50, 3/21/2012 email from Patrick Hagan to Irvin Goldman, CIO, and others, "Optimizing regulatory capital," JPM-CIO-PSI 0011025.

[57] See, e.g., Subcommittee Hearing Exhibits 51a – 51b, 3/21/2012 recorded telephone conversations between Anil Bangia, JPMorgan Chase, and Patrick Hagan, JPM-CIO-PSI-A 0000089 and JPM-CIO-PSI-A 0000090; Subcommittee Hearing Exhibit 51c, 3/21/2012 recorded telephone conversation between Peter Weiland, CIO, and Patrick Hagan, JPM-CIO-PSI-A 0000091; Levin-McCain Report at 193-195.

[58] See Levin-McCain Report at 193, 195.

assigned to either the credit tranche or credit index trading book, it had to stay there.[59] At the end of March 2012, Mr. Hagan participated in that initial split of the Synthetic Credit Portfolio to minimize RWA.[60] He told the Subcommittee that as new trades were made after that, the CIO was allowed to categorize them in order to optimize RWA, but existing positions could not then be re-categorized for the same purpose.[61]

The CIO's efforts to understand and influence its RWA outcomes did not end there. In an email dated April 3, 2012, Achilles Macris, head of the CIO office in London, informed Ina Drew that a QR analyst "is now in our office and he is 100% involved with the RWA projections of our book and ways to bringing it lower."[62]

The evidence of model manipulation uncovered in connection with the JPMorgan whale trades aimed at lowering the bank's RWA is consistent with other evidence on the Internet suggesting a cottage industry of accounting and analytical firms advocating ways for banks to "optimize" their RWA to produce lower RWA outcomes. The fact that banks can and do engage in model manipulation is critical for your agencies to acknowledge as work continues to implement the Regulatory Capital Rules; and it should also inform future efforts to understand and monitor the risks inherent in banks' trading books. Because reducing RWA outcomes is such a powerful motivator, the rules governing development of RWA models, including their component models, should be deliberately designed and implemented in ways that minimize opportunities for manipulation and maximize bank use of best practices.

Poor Model Development and Approval Process

One consequence of the JPMorgan whale trades was that its primary regulator, the OCC, conducted a detailed examination of the bank's VaR model development process. That examination uncovered a host of wide ranging problems, not just with the bank's VaR models, but also with its model development process as a whole.[63] Those problems also need to be kept in mind as work continues to finalize and implement the Regulatory Capital Rules and to understand and monitor the risks in banks' trading books.

Despite JPMorgan's reputation for sound risk management, the OCC examination made a number of findings critical of the bank's VaR model development and approval process: "VaR Model risk management is weak and constitutes an unsafe and unsound banking practice." "Processes and practices do not ensure compliance with regulations and relevant supervisory guidance." "[There are] deficiencies in VaR model development, model review and control, VaR

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[59] See id. at 195; Subcommittee interview of Patrick Hagan (2/7/2013).

[60] Subcommittee interview of Patrick Hagan (2/7/2013); 2/4/2012 email exchanges among QR personnel, CIO personnel, and Mr. Hagan, "Final split?" JPM-CIO-E 00033939-41 ("For perfect clarity, I am forwarding back what I understand has been selected as the final split. Please let me know if this is not the correct one. Otherwise, this is what we'll proceed with.").

[61] Subcommittee interview of Patrick Hagan (2/7/2013).

[62] Subcommittee Hearing Exhibit 52, 4/3/2012 email from Achilles Macris, CIO, to Ina Drew, CIO, no subject line, JPM-CIO-PSI 0000497-498.

[63] See 11/6/2012 OCC Supervisory Letter JPM-2012-53, "Examination of VAR Model Risk Management," PSI-OCC-17-000019, at 3; 8/14/2012 OCC Supervisory Letter JPM-2012-37, "Model Approvals and Risk Weighted Assets," PSI-OCC-17-000001.

model implementation, and operational processes."[64] "[T]he bank did not receive required regulatory approval to use the Specific Risk VAR calculations" for the SCP, and is using "certain models that were disapproved by the company's model validation group."[65]

The examination supported those sobering findings with multiple examples of troubling practices. JPMorgan's risk and capital models are supposed to be reviewed and approved by its internal Model Review Group (MRG), but the OCC determined that the MRG had little clout within the bank, was unable to obtain requested information needed to complete reviews, and was in some cases simply disregarded, even after it disapproved proposed models. The OCC determined, for example, that JPMorgan was "using 40 VaR models disapproved by its model validation group for its Basel I VaR calculations."[66] The OCC also reported: "With respect to the CIO Basel I VaR model, MRG indicated that a review had not been completed since model developers had not provided the required documentation requested by MRG [which] resulted in the VaR model being used for several years without required internal approval. We note that MRG did not escalate this to senior management."[67] More broadly, the OCC observed that the "VaR model development process is weak and fragmented," "the "modeling responsibility is decentralized," and "many VaR model developers from Market Risk lack adequate technical model development skills."[68] It also found that "[m]ethodology documentation is insufficient to meet regulatory expectations," and "[m]odel documents reviewed do not provide support for all modeling choice selections and assumptions."[69] In addition, the OCC found that the MRG "is not currently able to provide effective challenge to model developers and the lines of business as required by regulatory guidance," and the "MRG is also not fully aware of how VaR models and the underlying pricing models were implemented or used."[70] The OCC wrote: "[I]n some instances ... models were approved despite the identification by MRG of significant modeling deficiencies, ... indicat[ing] a lack of stature of MRG within the firm."[71] As a result of its findings, the OCC compelled JPMorgan to recalculate and increase its RWA.[72]

This inside look at the deficiencies in JPMorgan's modeling process is all the more startling, given the bank's prominence, resources, and reputation for effective risk management and strong capital reserves. The significance for the Regulatory Capital Rules is that the model development and approval process at even a major bank may be riddled with deficiencies that may undermine the integrity of the results, providing yet another rationale for strong minimum

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[64] 11/6/2012 OCC Supervisory Letter JPM-2012-53, "Examination of VAR Model Risk Management," PSI-OCC-17-000019, at 1.

[65] 8/14/2012 OCC Supervisory Letter JPM-2012-37, "Model Approvals and Risk Weighted Assets," PSI-OCC-17-000001, at 1.

[66] 11/6/2012 OCC Supervisory Letter JPM-2012-53, "Examination of VAR Model Risk Management," PSI-OCC-17-000019, at 3. See also 8/14/2012 OCC Supervisory Letter JPM-2012-37, "Model Approvals and Risk Weighted Assets," PSI-OCC-17-000001, at 2.

[67] 11/6/2012 OCC Supervisory Letter JPM-2012-53, "Examination of VAR Model Risk Management," PSI-OCC-17-000019, at 4.

[68] Id.

[69] Id.

[70] Id.

[71] Id.

[72] 8/14/2012 OCC Supervisory Letter JPM-2012-37, "Model Approvals and Risk Weighted Assets," PSI-OCC-17-000001, at 2.

requirements for risk and capital models and reduced reliance on bank discretion and representations regarding the development of those models.

Responding to Risk Warnings

Still another key product of the JPMorgan whale trades investigation is evidence that, even at a bank known for sound risk management such as JPMorgan, some bank personnel ignore risk warnings to the detriment of the bank, making adequate capital reserves a critical component to ensure banks operate in a safe and sound manner.

In 2012, JPMorgan Chase had in place five risk limits and advisories to warn of excessive risk taking in the Synthetic Credit Portfolio.[73] In the first quarter of 2012, the CIO breached all five as the SCP grew in size, complexity, and risk. A list prepared by the bank showed that, from January 1 through April 30, 2012, the SCP breached the CIO risk limits and advisories more than 330 times.[74] Those breaches had grown over time in both number and size. In the fourth quarter of 2011, for example, the Synthetic Credit Portfolio had caused the CIO to breach its risk limits only six times; in the first quarter of 2012, the risk limit breaches totaled 170; in April, the risk limit breaches totaled 160, almost as much in that one month as the three prior months combined. In one instance, the SCP breached a credit spread widening risk limit known as CS01 for 71 trading days in a row, exceeding it at the end by more than 1,000 percent.[75]

Despite the fact that the CIO was breaching more risk limits by greater amounts over time, CIO personnel, including CIO risk managers and senior officers, responded by disregarding the breaches, raising the limits, or challenging the results. For example, on April 19, 2012, when an OCC bank examiner asked Peter Weiland, a senior CIO risk manager, about breaches of the CIO's VaR, CS01, and stress limits, Mr. Weiland downplayed the breaches and remarked: "With respect to the CS01 limit, it is correct that we have been in excess for some time. ... We are working on a new set of limits for synthetic credit and the current CS01 will be replaced by something more sensible and granular."[76] On another occasion, when CIO head Ina Drew was told that the CIO's CS01 limit had been breached by $18.6 million, she wrote: "I have no memory of this limit. In any case it need[s] to be recast with other limits. [It is] old and outdated."[77] During the first quarter of 2012, no risk manager at the CIO or elsewhere in the bank took any action to investigate why so many risk limit breaches were piling up.

The significance of this evidence is that even banks reputed to have excellent risk management programs experience situations in which trusted personnel disregard or downplay risk warnings, either because they view the risk limits as overly restrictive or think they know

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[73] See Levin-McCain Report at 153.

[74] See id. at 209; Subcommittee Hearing Exhibit 39, 5/4/2012 email from Irvin Goldman, CIO, to Peter Weiland, JPMorgan Chase, and others, "Information Needed," JPM-CIO-PSI-H 0000627-636.

[75] See Levin-McCain Report at 202; Subcommittee Hearing Exhibit 47, 3/2/2012 email from Peter Weiland, CIO, to Kevin Krug, JPMorgan Chase, and others, "CIO CRM Results," JPM-CIO-PSI 0000338; 6/8/2012 email from Elwyn Wong, OCC, to Jairam Kamath, OCC, and others, "Weekly Capital and RWA Schedule," OCC-SPI-00085027.

[76] Subcommittee Hearing Exhibit 65, 4/19/2012 email from Peter Weiland, CIO, to James Hohl, OCC, "Info on VaR, CSBPV, and stress status and limits," OCC-SPI-00022340. See also Levin-McCain Report at 202.

[77] Subcommittee Hearing Exhibit 54, 2/13/2012 email from Irvin Goldman, CIO, to Ina Drew, CIO, "Csbpv limit-please read," JPM-CIO-PSI-H 0002936. See also Levin-McCain Report at 200.

better. In the case of the JPMorgan whale trades, the result was that JPMorgan personnel allowed the CIO traders to engage in increasingly risky derivative trades that resulted in massive losses to the bank. After those losses were disclosed publicly in the bank's SEC filings, shareholders responded extremely negatively, with JPMorgan's stock price falling nearly 25%. It was only because of the bank's "fortress balance sheet" that the bank's losses and falling stock price did not cause more negative consequences for the bank. In such situations, solid capital reserves are critical to warding off financial disaster.

Recommendations

The JPMorgan whale trades offer solid support for actions taken to strengthen capital requirements for U.S. banks. They demonstrate that credit derivative trades, even when carried out by expert traders at a sophisticated bank and even when cleared through an exchange, can create unanticipated risks and multi-billion-dollar losses, whose negative consequences may require sufficient bank capital to counteract. Given that many of the largest U.S. financial institutions now engage in massive derivatives trades, the already higher capital levels set out in the Basel III NPR are clearly justified. The hidden risks associated with massive credit derivative portfolios suggest that those capital levels should be increased further still for banks engaged in substantial amounts of credit derivatives trading.

In addition, the whale trades exposed how one major bank manipulated its risk and capital models to produce artificially low outcomes and to understate its capital requirements. Those actions more than justify proposals in the Standardized RWA NPR and Advanced Approaches NPR to narrow bank discretion and produce more standardized RWA and component models. More uniform models will not only further best practices in measuring risk and capital needs, but also enable regulators to perform more cost effective oversight and comparative analyses across financial institutions.

The whale trades also indicate that the bank capital safeguards would further benefit if regulators implementing the proposed rules and the January 2013 rules took the following steps.

(1) Limit Excessive Bank Discretion Over Models. The proposed Regulatory Capital Rules offer useful provisions that encourage more uniform risk and capital models, but they also continue to give banks considerable discretion over how to develop their risk and capital models and calculate risk-weighted assets – discretion that could be misused to manipulate RWA outcomes and capital levels or, due to poor model development procedures, lead to poorly designed models that are less accurate than they can and should be. The JPMorgan whale trades suggest that the opposite approach – narrowing excessive bank discretion – is more appropriate.

Both the proposed rules and the January 2013 rules incorporate a variety of "alternatives" for calculating and assigning risk weights to particular categories of assets. Proliferating alternatives add complexity to the rules, complicate regulatory oversight, and invite the type of improper gaming techniques uncovered by the JPMorgan investigation. The OCC examination of JPMorgan's VaR model process noted explicitly, for example, that "[i]n some instances, the bank has inconsistently applied alternative treatments approved by the FRB [Federal Reserve

Board], and it does not have an action plan to address these gaps."[78] When implementing the rules, regulators should favor simplicity over complexity, promote the use of standardized models incorporating best practices, and to the extent possible, avoid granting banks excessive discretion over how to develop and implement their risk and capital models.

A related issue involves bank use of nonstandard techniques in risk and capital models. In the JPMorgan whale trades case, the CIO included in its new VaR model a nonstandard element referred to as the "West End" analytic suite, which was untested by either the bank's Model Review Group or regulators, yet was incorporated into the model and contributed to its malfunctioning.[79] Currently, Section 2040.1 of the Federal Reserve's Manual for Trading and Capital Markets Supervision states:

> Financial algorithms for complex, exotic products should be well documented as part of the policies and procedures manual and the functional specifications. Hazards are more likely to arise for instruments that have nonstandard or option-like features. The use of proprietary models that employ unconventional techniques that are not widely agreed upon by market participants should lead to further questioning by examiners.

In light of the model manipulation exposed by the JPMorgan whale trades, this approach appears no longer sufficient. Instead of placing the burden on regulators to question banks about nonstandard or unconventional model techniques, regulators should reposition the burden of proof and essentially bar use of nonstandard or unconventional model techniques until a bank demonstrates to the regulator's satisfaction that the new technique produces results that are at least as accurate and reliable as those used in a prior model.

Ultimately, to stop model manipulation, enable cost effective regulatory oversight, and ensure adequate capital levels, regulators should consider requiring banks to use standardized models to calculate RWA, including standardized component models used to calculate VaR, stress VaR, CRM and IRC outcomes.

(2) Assess Allowing Multiple Base VaR Models. Regulators implementing the risk and capital requirement rules should also assess whether they should continue to allow banks to use one set of VaR models for regulatory purposes and a different set for risk management or public reporting purposes. Bank development and use of differing sets of VaR models for regulators versus others is a practice that appears to have taken hold over time, outside of the regulatory framework and without a formal assessment of whether the practice should be permitted.

In the JPMorgan case, the bank used one VaR model, with a 99% level of confidence, in its call reports and regulatory capital calculations, and a different VaR model, with different key elements and a 95% level of confidence, in its public filings and day-to-day risk management.[80] In addition, the bank spun off multiple variations of the VaR-95 models, ultimately producing 40

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[78] 11/6/2012 OCC Supervisory Letter JPM-2012-53, "Examination of VAR Model Risk Management," PSI-OCC-17-000019, at 3.

[79] See Levin-McCain Report at 184-185, footnote 1048; 2013 JPMorgan Chase Task Force Report at 125-126, 128.

[80] See Levin-McCain Report at 168, 288.

VaR models that were disapproved by its Model Review Group, but which the bank put into effect anyway.[81]

Using multiple VaR models introduced complexity and confusion into JPMorgan's risk management and public reporting practices for no apparent gain. For example, when the bank developed its new 10-Q VaR model, the bank failed to submit the model to the OCC for approval, since it did not plan to use that model for regulatory purposes. The OCC failed to take notice of the model change at the time, but later determined that regulatory approval should have been obtained due to its nonstandard features and understatement of risk, which later led to the OCC's unilaterally increasing the bank's RWA.[82] Additional confusion arose when investors and the public were given VaR data in JPMorgan's public filings, but were not told a new model had been substituted for a prior model, and that the new model produced lower VaR outcomes than would have been produced by the prior model, thereby concealing an increase in risk.[83]

The practice of using different types of VaR models with different elements and confidence levels from the VaR model used for regulatory purposes appears to have devolved into an inconsistent and confusing patchwork of models that make effective regulatory and shareholder oversight extremely difficult. The Subcommittee investigation identified no public policy reason why investors and the public should be provided with VaR results that differ from the VaR results provided to regulators. In light of the JPMorgan whale trades investigation, regulators should assess the practice and determine whether banks should be required to use the same set of VaR models, not only for regulatory purposes, but also for risk management and reporting purposes.

(3) Increase Risk Weights Assigned to Credit Derivatives. When implementing the Capital Regulatory Rules, regulators should also carefully review a bank's credit derivatives holdings to ensure adequate risk weights are assigned to its credit derivatives activity.

Credit derivatives that do not perform a hedging function are nothing more than bets on the creditworthiness of particular bonds, companies, or sovereignties over specified time periods. Those wagers are inherently risky, since they involve synthetic financial instruments that have no underlying assets and whose values are largely dependent upon fluctuating market perceptions of creditworthiness. JPMorgan credit traders – in their documents and in their interviews – seemed to view the credit derivatives they traded every day as not particularly risky. Internal bank documents predicted that the most money the whale trades could lose, for example, was in the range of $200 to $500 million.[84] A senior risk manager, when told the CRM warned that the CIO could lose $6.3 billion over a year in a worst case scenario, dismissed that warning as

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[81] See 11/6/2012 OCC Supervisory Letter JPM-2012-53, "Examination of VAR Model Risk Management," PSI-OCC-17-000019, at 3; 8/14/2012 OCC Supervisory Letter JPM-2012-37, "Model Approvals and Risk Weighted Assets," PSI-OCC-17-000001, at 1-2.

[82] See 8/14/2012 OCC Supervisory Letter JPM-2012-37, "Model Approvals and Risk Weighted Assets," PSI-OCC-17-000001.

[83] See Levin-McCain Report at 289-292, 296-299.

[84] See id. at 76, footnote 485; Subcommittee Hearing Exhibit 31, 4/6/2012 email from Achilles Macris to Ina Drew, "Update," JPM-CIO-PSI 0001429 ("the potential loss due to market moves or any economic scenario including defaults would not exceed a number higher than -200 MM USD at the end of Q2 with the current book as it is").

"garbage."[85] Yet the whale trades actually lost $6.2 billion and may have lost more. If the whale trades proved nothing else, they proved that credit derivative trades can produce massive losses that even experienced credit trading experts failed to appreciate or predict.

Adding to their inherent riskiness is a historical pattern of banks amassing huge credit derivatives portfolios. In today's market, the vast majority of derivatives trading is conducted by a small number of large financial institutions.[86] The JPMorgan whale trades disclosed how those large banks often build up massive credit derivatives portfolios. One 2012 JPMorgan email disclosed, for example, that the four largest whale trade counterparties were Bank of America, Citigroup, Goldman Sachs, and Morgan Stanley, each of which had pending credit derivatives trades with JPMorgan totaling between $3 trillion and $4 trillion in notional value.[87] The next three largest whale trade counterparties were Deutsche Bank of Germany, Societe General of France, and UBS of Switzerland, each of which had pending credit derivatives trades with a total notional value of between $2 trillion and $3 trillion.[88] Those massive portfolios provide another rationale for assigning credit derivatives portfolios significant risk weights.

Still another reason for treating credit derivatives as deserving increased risk-weighting is the imprecise, subjective, and malleable process used for recording the derivatives' daily profits and losses and valuing the credit derivatives portfolio. The JPMorgan whale trades investigation exposed how CIO traders understated the losses incurred by the Synthetic Credit Portfolio by choosing to use prices at or near the boundaries of the daily bid-ask spread for specified derivatives instead of using prices at or near the midpoint.[89] Selecting more favorable prices within the bid-ask spread was found to be an acceptable practice by two internal bank reviews at JPMorgan, even though the CIO traders had changed their pricing practices when the SCP began losing money, the changes had minimized reported losses, and the prices favored the bank.[90] The mispricing was not transparent to parties outside of the bank, and the bank's regulator failed to take notice of the mispricing at the time it was occurring, which enabled the CIO to understate SCP losses by at least $660 million over a three month-period.[91] After the whale trades concluded, when JPMorgan was asked to review past prices, the bank informed the Subcommittee that no record existed of the daily bid-ask spreads over the past year, making a retrospective pricing review impossible. Those valuation problems are still another risk factor that supports assigning credit derivatives increased risk weights.

The proposed rules, like the rules finalized in January 2013, take a positive step forward by determining that banks should hold risk-based capital for all cleared derivative transactions,

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[85] Subcommittee Hearing Exhibit 47, 3/2/2012 emails sent by Peter Weiland, CIO risk manager, "CIO CRM Results," JPM-CIO-PSI 0000338.

[86] See, e.g., OCC Quarterly Report on Bank Trading and Derivatives Activity Second Quarter 2012, at 1, Graph 4, http://www2.occ.gov/topics/capital-markets/financial-markets/trading/derivatives/dq212.pdf ("Derivatives activity in the U.S. banking system continues to be dominated by a small group of large financial institutions. Four large commercial banks represent 93% of the total banking industry notional amounts and 81% of industry net current credit exposure.").

[87] See Subcommittee Hearing Exhibit 35, 4/20/2012 email from Phil Lewis to JPMorgan colleagues, "Collateral Disputes," (identifying SCP counterparties in the context of ongoing collateral disputes).

[88] Id.

[89] See Levin-McCain Report, Chapter IV, in particular, pp. 99-102, 106-114,141-145.

[90] Id. at 139-145.

[91] Id. at 150, 243-245.

due to risk concentration and systemic risk problems.[92] The JPMorgan whale trades fully support that analysis. The $157 billion credit derivatives portfolio compiled by the CIO consisted primarily of cleared credit derivative transactions, many of which were collateralized; neither factor stopped the portfolio from losing $6.2 billion. The rules also increase the risk weights assigned to uncleared credit derivatives, although it is far from clear that the weights assigned – with all of their exceptions, alternatives, and complexities – are sufficient to reflect the risks involved. Regulators implementing the rules should take care to ensure that the risk weights result in sufficient capital levels to protect the bank against unexpected and substantial losses. Regulators should also utilize their authority under Section 13 of the Bank Holding Company Act, otherwise known as the Volcker Rule, to assign additional capital charges for "permitted activities," including credit derivatives characterized as risk-mitigating hedges.

The proposed rule also seeks comment on its removal of a 50% cap on risk weighting for OTC derivatives.[93] Removing the 50% cap is a sensible decision that would give regulators greater flexibility to respond to complex derivatives with uncertain risk profiles, the historical willingness of banks to engage in high risk, massive derivative trades, and the fact that even derivative experts are unable to predict how a large derivatives portfolio will perform over time.

(4) Require Documentation for Credit Derivative Hedges. Finally, regulators should be careful when allowing banks to lower their RWA outcomes by citing credit derivatives serving as hedges to mitigate credit risks.[94] In many cases, it may be difficult to determine when a credit derivative is actually being used to mitigate a credit risk. This problem is not explicitly addressed in the proposed rules, even though it has been raised as a significant issue in other contexts, including the Volcker Rule.

The JPMorgan whale trades investigation contains ample evidence of how a bank can engage in unsupported and questionable assertions about when a credit derivative is acting as a risk-mitigating hedge. In the JPMorgan case, the bank repeatedly described the whale trades as hedges, yet was unable to produce any contemporaneous documentation identifying the specific assets being hedged or how the hedges were sized, targeted, or tested for effectiveness.[95] Nor was the bank able to explain why the SCP hedges were treated in ways different from other hedges at the CIO. At one point an OCC regulator dismissed the bank's claim, describing the SCP as a "make believe voodoo magic 'composite hedge.'"[96] JPMorgan CEO Jamie Dimon later told the Senate Banking Committee that, over time, the Synthetic Credit Portfolio had "morphed into something that rather than protect the firm, created new and potentially larger risks."[97] At the Subcommittee hearing, when asked about the SCP, a senior bank official

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[92] See 77 Fed. Reg. 169, 52904-905.
[93] See Question 11.
[94] See 77 Fed. Reg. 169, 52957, Section .36.
[95] See Levin-McCain Report at 42-49, 272-285.
[96] See id. at 49; Subcommittee Hearing Exhibit 27, 5/18/2012 email from OCC examiner Elwyn Wong to colleague Michael Kirk, "CIO Call with Mike Brosnan," OCC-SPI 00021602.
[97] See Levin-McCain Report at 4; Testimony of Jamie Dimon before the U.S. Senate Committee on Banking, "A Breakdown in Risk Management: What Went Wrong at JPMorgan Chase?" S.Hrg. 112-715 (6/13/2012).

contradicted numerous statements by the bank by testifying: "In hindsight, Senator, the position and the portfolio did not act as a hedge."[98]

The same types of problems could afflict the proposed rules and the January 2013 rules related to credit risk mitigants. To prevent confusion, regulatory disputes, and malfeasance in connection with claims that a credit derivative is acting as a credit risk mitigant warranting favorable risk weight and capital treatment, regulators should require banks to: (1) create contemporaneous hedging documentation, when the credit derivative is first entered into and as it changes over time, identifying the specific assets whose credit risks are being mitigated and how the hedge or risk mitigant created by the credit derivative was sized, targeted, and tested for effectiveness; (2) demonstrate that the credit derivative actually lowered bank risk with respect to the targeted assets; and (3) ensure the credit derivative is eligible to receive favorable treatment under Generally Accepted Accounting Principles for dedicated hedges that offset risks associated with specified assets. This documentation requirement would address the problems that arose in the JPMorgan case, where bank assertions that the Synthetic Credit Portfolio was a hedge had weak justification and no documentary support. The accounting requirement is one with which banks are long familiar and involves well-established rules for when a credit derivative functions as a risk-mitigating hedge. Those three criteria could be coordinated with any similar requirements developed under the Volcker Rule for permitted risk-mitigating hedging activities, since both sets of rules seek to ensure that banks use credit derivatives to lower bank risk, not increase it.

Thank you for the opportunity to submit these comments.

Sincerely,

Carl Levin

Carl Levin
Chairman
Permanent Subcommittee on Investigations

Enclosure

[98] Testimony of Douglas Braunstein, JPMorgan Chase, before the U.S. Senate Permanent Subcommittee on Investigations, (3/15/13).