

**Report of JPMorgan Chase & Co. Management Task Force
Regarding 2012 CIO Losses**

January 16, 2013

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This Report summarizes the review of the JPMorgan Chase & Co. (“JPMorgan” or the “Firm”) Management Task Force regarding the losses incurred in 2012 by the Firm’s Chief Investment Office (“CIO”).¹ These observations are based on a review conducted by the Task Force and its legal advisors, which has included a significant number of interviews of current and former JPMorgan employees, and an examination of millions of documents and tens of thousands of audio files. The Task Force has shared and discussed these observations with the Review Committee established by the Board of Directors (the “Board”) as well as the full Board.

I. Executive Summary

This Report addresses three basic questions. First, it addresses *what happened* by describing the trading strategies and activities that in 2012 led to large losses in a portfolio managed by CIO (the “Synthetic Credit Portfolio”). Second, the Report addresses *how it happened* by offering observations about the flawed trading strategies, lapses in oversight, deficiencies in risk management, and other shortcomings this incident has highlighted. Finally, the Report addresses *where the Firm is now* by summarizing the comprehensive remedial measures the Firm has undertaken in light of the lessons learned.

¹ The Task Force was led by Michael Cavanagh, currently co-Chief Executive Officer of the Corporate and Investment Bank.

A. Summary of Events²

The Synthetic Credit Portfolio managed by CIO was intended generally to offset some of the credit risk that JPMorgan faces, including in its CIO investment portfolio and in its capacity as a lender. The Synthetic Credit Portfolio was composed of both long and short positions in credit default swap indices and related instruments.³

By late December 2011, CIO was considering major changes to the Synthetic Credit Portfolio, both because senior Firm management and CIO management had a more positive view of the economy, and because the Firm was in the midst of an effort to reduce its “risk-weighted assets” (“RWA”), in connection with which senior Firm management directed CIO to reduce RWA. In particular, CIO was considering reducing the size of the Synthetic Credit Portfolio and, as explained afterwards by CIO, also moving it to a more credit-neutral position (a shift from its short risk orientation in the fourth quarter of 2011). CIO was led at this time by the

² The description of “what happened” is not a technical analysis of the Synthetic Credit Portfolio or the price movements in the instruments held in the Synthetic Credit Portfolio. Instead, it focuses on the trading decision-making process and actions taken (or not taken) by various JPMorgan personnel. The description of activities described in this Report (including the trading strategies) is based in significant measure on the recollections of the traders (and in particular the trader who had day-to-day responsibility for the Synthetic Credit Portfolio and was the primary architect of the trades in question) and others. The Task Force has not been able to independently verify all of these recollections.

³ In simple terms, positions in credit default swap indices can be analogized to buying protection similar to insurance policies on the credit risk presented by groups of companies. Trader A sells Trader B protection (in the form of credit default swaps) against a range of corporate credit events (for example, bankruptcy, failure to pay, and/or restructuring) in exchange for periodic premiums. In this scenario, Trader A is said to be “long risk” and Trader B is “short risk.” Unlike most insurance policies, it is unnecessary for the buyer of protection to own the underlying credit risk.

Firm's Chief Investment Officer, Ina Drew, and responsibility for implementing these changes belonged primarily to her, together with the Synthetic Credit Portfolio's managers and traders.⁴

CIO initially considered achieving these goals by unwinding some of the positions in the Synthetic Credit Portfolio, including certain high-yield short positions. In mid-January, however, one of the traders advised Ms. Drew that their unwind efforts had been costly. In response, Ms. Drew said that the team might have additional flexibility on the RWA reduction mandate, and that the team should be more sensitive to the profit-and-loss impact of their trading activities. Thereafter, that trader informed another of the traders who managed the Synthetic Credit Portfolio that he was not to worry as much about RWA reduction, and that he should instead focus on profits and losses. Around this same time, this latter trader was also directed to ensure that the Synthetic Credit Portfolio was well-positioned for future corporate defaults.

In the ensuing weeks, the traders began to add substantially to their investment-grade long positions, and by January 26, the Synthetic Credit Portfolio had a roughly credit-neutral position⁵ (as reflected in a measure called CSW 10%).⁶ By the end of January, the portfolio's

⁴ The names of certain UK-based individuals have been excluded from this document in order to comply with United Kingdom data privacy laws.

⁵ It continued to fluctuate thereafter.

⁶ Credit spread widening of 10% ("CSW 10%") is one of several different measurements of how long or short risk a credit book is. CSW 10% stresses all credit spreads in a book upwardly by 10% and then calculates the resulting profit-and-loss effect. This one measure is not determinative of the overall risk status of a portfolio as complex as the Synthetic Credit Portfolio. CSW 10% assumes that all spreads on all instruments for all maturities change by the same percentage at the same time. CSW 10% ignores the historical relationships among various instruments as well as any relationships among them that may be inferred from the market, both of which might provide a more realistic risk predictor. In addition, CSW

year-to-date, mark-to-market losses were approximately \$100 million. The traders continued to add to the investment-grade long positions in February. The concept of “defending” their positions may have played a role in these transactions.⁷ The traders also at this time began to add substantial high-yield short positions. The traders hoped that the combined effect of these additions would allow them, among other things, to earn premiums (from the addition of the long positions); position the Synthetic Credit Portfolio to earn revenues in the event of corporate defaults (from the short positions); and potentially prevent RWA from substantially increasing (from a combination of both). The losses continued to grow, however: by the end of February, the Synthetic Credit Portfolio had experienced an additional \$69 million in reported mark-to-market losses.

The traders continued to grow the Synthetic Credit Portfolio throughout much of March. In the latter half of the month, the traders concluded that the portfolio remained short (notwithstanding the fact that under CSW 10%, it appeared relatively balanced), and they therefore significantly added to its long exposure over the course of several days. By the time Ms. Drew suspended trading in the portfolio on or about March 23, the traders had significantly increased both the overall notional size and the long exposure of the Synthetic Credit Portfolio.

10% does not reflect the impact on a portfolio of a corporate default. The CSW 10% measure is explained in more detail in Section II.D.3.

⁷ For an explanation of “defending” positions, see Section II.C.1.

The portfolio's year-to-date mark-to-market losses as of the end of the first quarter of 2012 were approximately \$718 million.⁸

On April 5, Ms. Drew informed the JPMorgan Operating Committee that the *Wall Street Journal* and Bloomberg were planning to run stories about CIO's trading and specifically about one trader, who was referred to in the articles as the "London Whale." CIO was asked to and did provide information and analyses about the Synthetic Credit Portfolio to JPMorgan Chief Executive Officer Jamie Dimon, Chief Financial Officer Douglas Braunstein and Chief Risk Officer John Hogan. These analyses concluded, in broad terms, that the Synthetic Credit Portfolio was generally "balanced," that the market was currently dislocated, and that mark-to-market losses were temporary and manageable. One of the traders in particular expressed confidence that mark-to-market prices in the Synthetic Credit Portfolio would "mean revert."⁹ On an April 13 analyst call, Mr. Dimon agreed with an analyst's characterization of the publicity surrounding the Synthetic Credit Portfolio as a "tempest in a teapot" and Mr. Braunstein stated that the Firm was "very comfortable" with its positions.

The losses in the Synthetic Credit Portfolio, however, increased in the weeks after the April 13 earnings call. These losses prompted senior Firm management in late April to direct

⁸ This figure includes a \$155 million liquidity reserve that was taken on certain of the portfolio's positions, but does not reflect the additional losses reported in the Firm's first-quarter restatement described in Section II.C.5.

⁹ In this context, the phrase "mean revert" refers to the potential for the prices or correlations of certain instruments held in the Synthetic Credit Portfolio to return to their historic average relationships to other instruments.

non-CIO personnel to review and, ultimately, assume control of the Synthetic Credit Portfolio. A team led by a senior member of Firm-wide Market Risk examined the portfolio, and after analyzing, among other things, correlations of the positions and sensitivities under a range of market scenarios, the team concluded – and informed senior Firm management – that the portfolio faced much greater exposure than previously reported by CIO. The team also found that the market’s knowledge of CIO’s positions would make it even more challenging to reduce the risks presented by those positions.

In addition to this risk-related review, in preparation for the filing of its Form 10-Q for the first quarter of 2012, the Firm undertook a review relating to the valuations of certain positions in the Synthetic Credit Portfolio. Based on this review, the Firm concluded that its marks at March 31 for the Synthetic Credit Portfolio complied with U.S. Generally Accepted Accounting Principles (“U.S. GAAP”). This conclusion was reached in consultation with the Firm’s outside auditors, PricewaterhouseCoopers LLP (“PwC”).

On May 10, the Firm disclosed that there were significant problems with the trading strategy for the Synthetic Credit Portfolio. In Mr. Dimon’s words, the strategy was “flawed, complex, poorly reviewed, poorly executed, and poorly monitored.” The Firm disclosed that the Synthetic Credit Portfolio had incurred slightly more than \$2 billion in mark-to-market losses up to that point in the second quarter, with the possibility of additional future losses and volatility.

Shortly after May 10, a Task Force was formed to investigate the causes of the losses. In the course of the Task Force’s ensuing work, it became aware of evidence – primarily in the

form of electronic communications and taped conversations – that raised questions about the integrity of the marks in the Synthetic Credit Portfolio in March 2012. After consulting with PwC, the Firm concluded that it was no longer confident that the March 31 marks reflected good-faith estimates of the fair value of all the instruments in the Synthetic Credit Portfolio. Accordingly, on July 13, the Firm announced that it would be restating its first-quarter net income, to lower it by \$459 million. At the same time, the Firm also announced that it had been expeditiously reducing risk in the Synthetic Credit Portfolio and that the cumulative year-to-date losses through June 30, 2012 had grown to approximately \$5.8 billion.

B. Key Observations

The Task Force has made five key observations based on its review. These observations reflect the Task Force’s view that direct and principal responsibility for the losses lies with the traders who designed and implemented the flawed trading strategy. They also reflect the Task Force’s view that responsibility for the flaws that *allowed* the losses to occur lies primarily with CIO management but also with senior Firm management.

To this end, and before outlining its Key Observations, the Task Force offers its perspective on the roles of some of the Firm’s senior-most managers in these events. In particular, the Task Force believes that as the Firm’s Chief Investment Officer, Ina Drew failed in three critical areas with respect to the Synthetic Credit Portfolio: *first*, by failing to ensure that CIO management properly understood and vetted the flawed trading strategy and appropriately monitored its execution; *second*, by failing to ensure that the CIO control functions – including

the CIO Risk and Finance organizations – were performing well and were providing effective oversight of CIO’s trading strategy; and, *third*, by failing to appreciate the magnitude and significance of the changes in the Synthetic Credit Portfolio during the first quarter of 2012, including the increases in RWA, size, complexity and riskiness of the portfolio.

The Task Force also believes that Barry Zubrow, as head of the Firm-wide Risk organization before he left the position in January 2012,¹⁰ bears significant responsibility for failures of the CIO Risk organization, including its infrastructure and personnel shortcomings, and inadequacies of its limits and controls on the Synthetic Credit Portfolio. The CIO Risk organization was not equipped to properly risk-manage the portfolio during the first quarter of 2012, and it performed ineffectively as the portfolio grew in size, complexity and riskiness during that period.

As the Firm’s Chief Financial Officer, Douglas Braunstein bears responsibility, in the Task Force’s view, for weaknesses in financial controls applicable to the Synthetic Credit Portfolio, as well as for the CIO Finance organization’s failure to have asked more questions or to have sought additional information about the evolution of the portfolio during the first quarter of 2012. This includes the failure by CIO Finance to have sufficiently questioned the size of the positions, the increase in RWA notwithstanding the RWA reduction mandate and the Synthetic

¹⁰ John Hogan, who succeeded Mr. Zubrow as the Firm’s Chief Risk Officer in January 2012, did not have sufficient time to ensure that the CIO Risk organization was operating as it should. Nevertheless, the Task Force notes that there were opportunities during the first and second quarters of 2012 when further inquiry might have uncovered issues earlier.

Credit Portfolio's profit-and-loss performance. And while the Task Force believes that the principal control missteps here were risk-related, the CIO Finance organization could have done more. That they did not stems, in part, from too narrow a view of their responsibilities – *i.e.*, a view that many of the issues related to the Synthetic Credit Portfolio were for the Risk organization and not for Finance to flag or address.

The Task Force's views regarding Firm Chief Executive Officer Jamie Dimon are consistent with the conclusions he himself has reached with respect to the Synthetic Credit Portfolio. Mr. Dimon has stated:

CIO, particularly the Synthetic Credit Portfolio, should have gotten more scrutiny from both senior management, and I include myself in that, and the Firm-wide Risk control function. . . . Make sure that people on risk committees are always asking questions, sharing information, and that you have very, very granular limits when you're taking risk. . . . In the rest of the company we have those disciplines in place. We didn't have it here.

* * *

These were egregious mistakes. They were self-inflicted, we were accountable and what happened violates our own standards and principles by how we want to operate the company. This is not how we want to run a business.

As Chief Executive Officer, Mr. Dimon could appropriately rely upon senior managers who directly reported to him to escalate significant issues and concerns. However, he could have better tested his reliance on what he was told. This Report demonstrates that more should have been done regarding the risks, risk controls and personnel associated with CIO's activities, and

Mr. Dimon bears some responsibility for that. Importantly, once Mr. Dimon became aware of the seriousness of the issues presented by CIO, he responded forcefully by directing a thorough review and an internal program of remediation. Mr. Dimon reports to the Board, and the Board will weigh the extent of Mr. Dimon's responsibility.

* * * * *

The Task Force's five key observations are summarized as follows:

First, CIO's judgment, execution and escalation of issues in the first quarter of 2012 were poor, in at least six critical areas: (1) CIO management established competing and inconsistent priorities for the Synthetic Credit Portfolio without adequately exploring or understanding how the priorities would be simultaneously addressed;¹¹ (2) the trading strategies that were designed in an effort to achieve the various priorities were poorly conceived and not fully understood by CIO management and other CIO personnel who might have been in a position to manage the risks of the Synthetic Credit Portfolio effectively; (3) CIO management (including CIO's Finance function) failed to obtain robust, detailed reporting on the activity in the Synthetic Credit Portfolio, and/or to otherwise appropriately monitor the traders' activity as closely as they should have; (4) CIO personnel at all levels failed to adequately respond to and escalate (including to senior Firm management and the Board) concerns that were raised at various points during the

¹¹ As discussed below, these priorities included (1) balancing the risk in the Synthetic Credit Portfolio, (2) reducing RWA, (3) managing profits and losses, (4) managing or reducing VaR, and (5) providing "jump-to-default" protection.

trading; (5) certain of the traders did not show the full extent of the Synthetic Credit Portfolio's losses; and (6) CIO provided to senior Firm management excessively optimistic and inadequately analyzed estimates of the Synthetic Credit Portfolio's future performance in the days leading up to the April 13 earnings call.

The Task Force has also considered whether compensation might have played a role in these matters. Here, the Task Force has concluded that, although the Firm could have done a better job in communicating to the traders that they would be fairly compensated notwithstanding the eventual wind-down of the Synthetic Credit Portfolio, the Firm's compensation system did not unduly incentivize the trading activity that led to the losses.

Second, the Firm did not ensure that the controls and oversight of CIO evolved commensurately with the increased complexity and risks of CIO's activities. As a result, significant risk management weaknesses developed within CIO that allowed the traders to pursue their flawed and risky trading strategies. On this point, the Task Force has concluded that senior Firm management's view of CIO had not evolved to reflect the increasingly complex and risky strategies CIO was pursuing in the Synthetic Credit Portfolio; instead, they continued to view CIO as the manager of a stable, high-quality, fixed-income portfolio. As a result, they were less focused on CIO relative to client-facing businesses, and did not do enough to verify that CIO was well managed or that the Firm was fully applying its various risk and other controls to the

Synthetic Credit Portfolio's activities.¹² Compounding the matter, the CIO Finance function failed to ensure that its price-testing procedures for the Synthetic Credit Portfolio were being properly and rigorously implemented, and that it produced robust reporting and analytics regarding the portfolio's performance and characteristics. More generally, although primary responsibility for managing risk lies with the business head and Risk organization, the CFO of CIO (like the other members of CIO senior management) missed a number of opportunities during the first quarter to meaningfully challenge the trading strategy.

Third, CIO Risk Management lacked the personnel and structure necessary to manage the risks of the Synthetic Credit Portfolio. With respect to personnel, a new CIO Chief Risk Officer was appointed in early 2012, and he was learning the role at the precise time the traders were building the ultimately problematic positions. More broadly, the CIO Risk function had been historically understaffed, and some of the CIO risk personnel lacked the requisite skills. With respect to structural issues, the CIO Risk Committee met only infrequently, and its regular attendees did not include personnel from outside CIO. As a result, the CIO Risk Committee did not effectively perform its intended role as a forum for constructive challenge of practices, strategies and controls. Furthermore, at least some CIO risk managers did not consider themselves sufficiently independent from CIO's business operations and did not feel empowered

¹² The Task Force recognizes that, by the time the Firm's new Chief Risk Officer was appointed in January 2012, separate initiatives were underway both to ensure that appropriate risk management practices were in place throughout the Firm, and to review and revamp risk limits within CIO. These initiatives came too late to prevent the losses.

to ask hard questions, criticize trading strategies or escalate their concerns in an effective manner to Firm-wide Risk Management. And finally, the Task Force has concluded that CIO management, along with Firm-wide Risk Management, did not fulfill their responsibilities to ensure that CIO control functions were effective or that the environment in CIO was conducive to their effectiveness.

CIO Risk Management made a number of key missteps, including failures to (1) review the appropriateness of the CIO risk limits used from 2009 to 2012; (2) ensure that the change to the CIO Value-at-Risk (“VaR”) model for the Synthetic Credit Portfolio in January 2012 was appropriate and being properly implemented;¹³ and (3) appreciate the significance of the changes in the Synthetic Credit Portfolio during early 2012.

Fourth, the risk limits applicable to CIO were not sufficiently granular. There were no limits by size, asset type or risk factor specific to the Synthetic Credit Portfolio; rather, limits in CIO were applied only to CIO as a whole. The absence of granular limits played a role in allowing the flawed trading strategies to proceed in the first quarter, especially as the positions grew in size.

Fifth, approval and implementation of the new CIO VaR model for the Synthetic Credit Portfolio in late January 2012 were flawed, and the model as implemented understated the risks presented by the trades in the first quarter of 2012. As discussed in detail in Appendix A, the

¹³ For more information on the issues that were identified by the Task Force with respect to the action plans embedded in the CIO VaR model’s approval, see Appendix A below.

model suffered from significant operational shortcomings that received inadequate scrutiny by CIO Market Risk, the Model Review Group, and the model's developer in the model approval process. Moreover, although the model produced significantly different results from its predecessor, the personnel involved in reviewing and approving the new model required only limited back-testing.

C. Remedial Measures

The Firm has taken comprehensive remedial steps to address deficiencies identified since the losses. These include the following:

First, the Firm has replaced the individuals within CIO responsible for the losses. It has terminated the employment or accepted the resignations of the traders and managers who were responsible for the trades that generated the losses, and is pursuing the maximum clawback of their compensation. It has also accepted Ms. Drew's retirement, as well as her voluntary agreement to return or waive amounts that the Firm otherwise deemed subject to a clawback.¹⁴

The Firm has also substantially reduced (in some cases, to zero) the 2012 incentive compensation for a number of employees and, in addition to reductions for specific CIO employees, has also reduced the 2012 incentive compensation pool for all of CIO.

¹⁴ Three of the individuals whose employment was terminated also subsequently agreed to the Firm's clawback demands. In addition, as described in Section IV.A.2, the Firm also expanded the existing protection-based vesting provisions in certain equity awards to include a specific threshold for CIO. These provisions permit the Firm to conduct a review of an employee's compensation in the event the financial results for that employee's business or function fall below a certain threshold and, as appropriate, claw back portions of that employee's compensation.

Second, the Firm has appointed a new, experienced CIO leadership team, headed initially by Matthew Zames and now by Craig Delany as the new Chief Investment Officer,¹⁵ Marie Nourie as the new CIO Chief Financial Officer, and Chetan Bhargiri as the new Chief Risk Officer for CIO, Treasury and Corporate. The new leadership team began promptly to reposition CIO to focus on its basic mandate, and the Firm also has increased resources for key support functions within CIO, including Finance and Risk Management.

Third, the Firm has adopted a variety of governance measures to improve its oversight of CIO, and ensure that CIO is better integrated into the rest of the Firm. For example, the Firm has instituted new and robust committee structures within CIO, and has taken steps to enhance the Firm's internal audit coverage of CIO activities and ensure tight linkages among CIO, Corporate Treasury and other operations within the Firm's Corporate sector.¹⁶ The Firm has also integrated the existing CIO Valuation Control Group ("VCG") staff into the Investment Bank's Valuation Control Group. In addition, the Firm has established a CIO Valuation Governance Forum ("VGF") as part of a Firm-wide initiative to strengthen the governance of valuation activities. The Firm has also mandated that the CIO Corporate Business Review be conducted with increasing frequency, and with the same rigor as similar reviews for the Firm's client-facing lines of business.

¹⁵ Mr. Delany reports to Mr. Zames, who has been named co-Chief Operating Officer of the Firm.

¹⁶ The Corporate sector (also referred to as the "Corporate/Private Equity" sector) comprises Private Equity, Treasury, Chief Investment Office, and Other Corporate, which includes corporate staff units (such as Audit, Finance, Human Resources, and others) and other centrally managed expense.

Fourth, the Firm has overhauled the Risk Committee for CIO and enhanced the independence of the CIO Risk function. For example, the new CIO Chief Risk Officer's functional reporting practices now conform to his official reporting line; there is no confusion about his accountability to the Firm-wide Risk function. His compensation and career advancement will be controlled by the Firm Chief Risk Officer, with input about his performance from others, as appropriate. CIO's Risk Committee has been renamed the CIO, Treasury and Corporate Risk Committee, and now has broader responsibilities, covering Treasury and Corporate functions as well as CIO, and significant representation beyond CIO. The committee now meets on a weekly basis. Meetings are chaired by Mr. Bhargiri as the Chief Risk Officer for CIO, Treasury and Corporate, and Mr. Zames as the Firm's co-Chief Operating Officer. Attendees also now include other members of senior management, from within and outside of CIO.

Fifth, CIO has implemented more than 200 new or restructured risk limits covering a broad set of risk parameters, including geographic and concentration risks. With respect to the Synthetic Credit Portfolio in particular, a total of 25 new granular limits were applied in May 2012, including limits specific to the Synthetic Credit Portfolio and limits measuring geographic exposure, credit-type exposure, single-index positions (effectively a notional-type limit), and curve shifts and compression.

Finally, under the guidance of its Chief Risk Officer, the Firm has conducted a comprehensive self-assessment of its entire Risk organization and, as a result, has implemented a

series of improvements both Firm-wide and within the lines of business. In addition to working to improve model development, review, approval, and monitoring, the Firm is reaffirming and, where appropriate, revising its market risk limits across all of its lines of business, and has already introduced additional granular and portfolio-level limits. It has strengthened the Firm-wide limit excession policy to provide for more rapid escalation and a more thorough review. It is working to further improve market-risk reporting, and has made substantial enhancements to risk reports presented to the Board of Directors' Risk Policy Committee ("DRPC").¹⁷ The Firm also has restructured its Firm-wide Risk Operating Committee in order to increase focus on identifying and implementing best practices across the Firm. Finally, the Firm has enhanced the structure of its Risk Governance Committee and established a Firm-wide Risk Committee.

The Task Force noted that while substantial progress has been made with respect to each of these initiatives, the Firm considers the improvement of its risk practices to be a continuing exercise and thus, its work in this area is ongoing.

¹⁷ According to its charter, the DRPC is responsible for oversight of management's responsibilities to assess and manage the corporation's credit risk, market risk, interest rate risk, investment risk, liquidity risk and reputation risk, and is also responsible for review of the Firm's fiduciary and asset management activities.

II. Key Facts

A. **Relevant Personnel**

The key individuals discussed in this Report include:

Senior Firm Management

- **Jamie Dimon:** Mr. Dimon is the Chief Executive Officer and Chairman of JPMorgan. Mr. Dimon became CEO on January 1, 2006, and one year later also became Chairman of the Board. He was named President and Chief Operating Officer upon the Firm's merger with Bank One Corporation on July 1, 2004.
- **Douglas Braunstein:** Mr. Braunstein was the Chief Financial Officer and a member of the Operating Committee¹⁸ of JPMorgan between 2010 and the end of 2012, reporting until July 2012 to Mr. Dimon and thereafter to Mr. Zames. He recently stepped down from his role as CFO and currently serves as a Vice Chairman of the Firm. Marianne Lake, the former Chief Financial Officer of the Firm's Consumer & Community Banking business, succeeded Mr. Braunstein as CFO.
- **John Hogan:** Mr. Hogan is the Chief Risk Officer and a member of the Operating Committee of JPMorgan, reporting to Mr. Dimon. Mr. Hogan was

¹⁸ The Operating Committee is the most senior management committee responsible for the major lines of business and functions of the Firm.

appointed to this position in January 2012, and previously served as the Chief Risk Officer for JPMorgan's Investment Bank since 2006.

- **Barry Zubrow:** Mr. Zubrow is the Head of Corporate and Regulatory Affairs. He previously served as Chief Risk Officer of JPMorgan. He reported to Mr. Dimon from the date he joined the Firm in 2007 until July 2012, when he began reporting to Mr. Zames. He served on the Firm's Operating Committee from 2007 until October 2012. Mr. Zubrow announced his retirement from JPMorgan in October 2012; his retirement is effective February 2013.

CIO Management and Traders

- **Ina Drew:** Ms. Drew was JPMorgan's Chief Investment Officer from 2005 until May 2012, when she retired from the Firm. She was a member of the Firm's Operating Committee and reported to Mr. Dimon.
- Other UK-based CIO managers and traders with responsibility for the Synthetic Credit Portfolio who are not named in this document due to United Kingdom data privacy laws.

CIO Risk Personnel

- **Irvin Goldman:** Mr. Goldman was CIO's Chief Risk Officer from January through mid-May 2012, reporting to Mr. Hogan with "dotted line" reporting to Ms. Drew. Prior to becoming Chief Risk Officer, Mr. Goldman had served as CIO's Head of Strategy. He resigned in July 2012.

- **Peter Weiland:** Mr. Weiland was the Head of Market Risk for CIO and the most senior risk officer within CIO prior to mid-January 2012, when he began reporting to Mr. Goldman. Mr. Weiland resigned in October 2012. From 2009 until mid-January 2012, Mr. Weiland reported to Mr. Zubrow, with “dotted line” reporting to Ms. Drew. From January 2012 until May 2012, Mr. Weiland reported to Mr. Goldman. Thereafter, Mr. Weiland reported to Mr. Bhargiri until October 2012.

CIO Finance Personnel

- **John Wilmot:** From January 2011 to mid-May 2012, Mr. Wilmot was CIO’s Chief Financial Officer, reporting to Ms. Drew, with “dotted line” reporting to Mr. Braunstein. Prior to serving as the CFO of CIO, Mr. Wilmot was responsible for Bank Owned Life Insurance and JPMorgan Partners Private Equity Investments within CIO. Mr. Wilmot has announced his resignation and is expected to leave JPMorgan in 2013.

Other CIO Personnel

- Other UK-based CIO personnel who were involved at various times with the Synthetic Credit Portfolio but who are not named in this document due to United Kingdom data privacy laws.

Risk Personnel

- **C.S. Venkatakrisnan:** Mr. Venkatakrisnan is the Head of Model Risk and Development. Mr. Venkatakrisnan assumed this position in February 2012, and reports to Mr. Hogan. Prior to February 2012, Mr. Venkatakrisnan was the Head of Investment Bank Structuring and Pricing Direct.
- Other UK-based Risk Personnel who were involved at various times with the Synthetic Credit Portfolio but who are not named in this document for data protection purposes.

B. Overview of CIO and its Functions

JPMorgan is a global financial services firm and one of the largest banking institutions in the United States, with more than 250,000 employees. The Firm had \$2.3 trillion in assets and \$183.6 billion in stockholders' equity as of December 31, 2011. The Firm's major businesses include financial services for consumers and small businesses (including mortgage lending, student and auto lending, credit card lending and branch banking), commercial banking, financial transaction processing, investment banking and asset management.

JPMorgan's businesses take in more in deposits than they make in loans and, as a result, the Firm has excess cash that must be invested to meet future liquidity needs and provide a reasonable return. The primary responsibility of CIO, working with JPMorgan's Treasury, is to manage this excess cash. CIO is part of the Corporate sector at JPMorgan and, as of December 31, 2011, it had 428 employees, consisting of 140 traders and 288 middle and back office

employees. Ms. Drew ran CIO from 2005 until May 2012 and had significant experience in CIO's core functions.¹⁹ Until the end of her tenure, she was viewed by senior Firm management as a highly skilled manager and executive with a strong and detailed command of her business, and someone in whom they had a great deal of confidence.

CIO invests the bulk of JPMorgan's excess cash in high credit quality, fixed-income securities, such as municipal bonds, whole loans, and asset-backed securities, mortgage-backed securities, corporate securities, sovereign securities, and collateralized loan obligations. The bulk of these assets are accounted for on an available-for-sale basis ("AFS"), although CIO also holds certain other assets that are accounted for on a mark-to-market basis.

Beginning in 2007, CIO launched the Synthetic Credit Portfolio, which was generally intended to protect the Firm against adverse credit scenarios. The Firm, like other lenders, is structurally "long" credit, including in its AFS portfolio, which means that the Firm tends to perform well when credit markets perform well and to suffer a decline in performance during a credit downturn. Through the Synthetic Credit Portfolio, CIO generally sought to establish positions that would generate revenue during adverse credit scenarios (*e.g.*, widening of credit

¹⁹ Prior to assuming her role as the Firm's Chief Investment Officer, Ms. Drew had more than 20 years of experience performing asset-liability management for the Firm and its predecessors, including as head of the Treasury function.

spreads and corporate defaults) – in short, to provide protection against structural risks inherent in the Firm’s and CIO’s long credit profile.²⁰

The positions in the Synthetic Credit Portfolio consisted of standardized indices (and related tranches²¹) based on baskets of credit default swaps (“CDS”) tied to corporate debt issuers. CIO bought, among other things, credit protection on these instruments, which means that it would be entitled to payment from its counterparties whenever any company in the basket defaulted on certain payment obligations, filed for bankruptcy, or in some instances restructured its debt.²² In exchange for the right to receive these payments, CIO would make regular payments to its counterparties, similar to premiums on insurance policies. As described in greater detail below, the actual trading strategies employed by CIO did not involve exclusively

²⁰ Although the Task Force has reviewed certain general background information on the origin of the Synthetic Credit Portfolio and its development over time, the Task Force’s focus was on the events at the end of 2011 and the first several months of 2012 when the losses occurred.

²¹ CDS index tranches are financial instruments based on a CDS index, where each tranche references a different segment of the loss distribution of the underlying CDS index. Tranches have been issued on several indices, including the CDX North American Investment Grade Index (the “CDX.NA.IG”). The lowest tranche, known as the equity tranche, absorbs the first losses on the index due to defaults up to a maximum of 3% of the total index. The next tranche (mezzanine) absorbs losses of 3–7%. Further losses are absorbed by higher-ranking tranches (senior and super-senior tranches). In return for being more likely to suffer losses, the equity tranche yields the highest coupon (or stream of payments); conversely, the super-senior tranche yields the smallest coupon.

²² For certain indices, the triggering criteria include other types of adverse credit scenarios. The list of events that trigger payment is established in the CDS contracts, and the question of whether a triggering event has occurred is determined by an industry panel convened by the International Swaps and Derivatives Association.

buying protection or always maintaining a net credit short position (under CSW 10%);²³ rather, CIO traded in an array of these products, with long and short positions in different instruments.²⁴

The standardized indices in which CIO traded are created by a company named Markit, and like equity indices, such as the Dow Jones Industrial Average or the S&P 500, these credit indices can be used by market participants to express general market views rather than a view as to one particular company. There are two primary CDS index groups, CDX and iTraxx. CDX is a group of North American and Emerging Markets indices, and iTraxx is a group of European and Asian indices. Each index group has a number of more specialized indices, such as those focused on “investment-grade” (“IG” for CDX, or “MN” for iTraxx) or “high-yield” (“HY” for CDX, or “XO” for iTraxx) companies.

Markit creates a new series of each index every six months; by way of example, the CDX investment-grade index issued in September 2012 is “IG-19” and a corresponding index issued in September 2007 is “IG-9.” The newly created indices have updated reference entities: new companies are added to replace those no longer qualifying for inclusion in a particular index

²³ The Synthetic Credit Portfolio’s trading strategies sought, among other things, to take advantage of changes in the relative prices (the “basis”) among different CDS indices and tranche instruments. These relationships reflect supply and demand in the market, theoretically driven by views on such matters as the relative strength of U.S. versus European credit, or investment-grade versus high-yield corporate credit; the likelihood of deteriorating credit in the short term versus strengthening credit in the longer term; and the likelihood that there will be some, but not too many defaults. In addition, some market participants trade the “skew,” or the basis between the index CDS price and prices for the single name CDS that make up the index.

²⁴ Even when the Synthetic Credit Portfolio was net long under CSW 10%, it could still maintain “jump-to-default” protection.

because of corporate actions, ratings changes, lack of liquidity or other reasons. The date on which a new index is published is referred to as the “roll” date, and because many market participants seek to take positions in the new index, the roll date is typically a time when there is a significant amount of trading and liquidity in the market. After the roll date, the older (“off-the-run”) series continue to be traded, and some of those series are liquid, but liquidity typically is concentrated in the newly issued “on-the-run” series. All of these instruments are issued in different maturities, of which the most widely traded are the five and ten years.

As of December 31, 2011, the Synthetic Credit Portfolio contained²⁵ approximately \$51 billion in net notional positions of credit index and tranche positions.

C. Key Events²⁶

1. Trading

From its inception until late 2011, the Synthetic Credit Portfolio generated roughly \$2 billion in gross revenues.²⁷ Coming into the end of 2011, the Synthetic Credit Portfolio contained sizeable long and short positions in many of the CDX high-yield and CDX investment-

²⁵ The Synthetic Credit Portfolio, on a gross basis, held a larger total of long and short positions. However, when the long and short positions are netted against each other, these positions result in a portfolio of approximately \$51 billion in net notional positions.

²⁶ This Report sets out the facts that the Task Force believes are most relevant to understanding the causes of the losses. It reflects the Task Force’s view of the facts. Others (including regulators conducting their own investigations) may have a different view of the facts, or may focus on facts not described in this Report, and may also draw different conclusions regarding the facts and issues. In addition, the Task Force notes that its mandate did not include drawing any legal conclusions, and accordingly, this Report does not purport to do so.

²⁷ This figure reflects the aggregate mark-to-market net gains (profit) for all Synthetic Credit Portfolio transactions, including the impact of premiums paid and received.

grade series, among others, including both off-the-run and on-the-run series and spanning multiple maturities and tranche positions. In the fourth quarter of 2011, the Synthetic Credit Portfolio was in an overall short risk posture (as measured by CSW 10%), with a short risk position in high-yield offset to some extent by a long-risk investment-grade position.

In late 2011, CIO considered making significant changes to the Synthetic Credit Portfolio. In particular, it focused on both reducing the Synthetic Credit Portfolio, and as explained afterwards by CIO, moving it to a more credit-neutral position. There were two principal reasons for this. First, senior Firm management had directed that CIO – along with the lines of business – reduce its use of RWA. Second, both senior Firm management and CIO management were becoming more optimistic about the general direction of the global economy, and CIO management believed that macro credit protection was therefore less necessary.

Under a series of international agreements known as the Basel Accords, banking organizations must maintain certain capital ratios. The amount of capital that a banking organization is required to hold, under most regulatory capital ratios, is measured against the amount of its RWA, which, broadly speaking, considers the nature of the assets held by the banking organization, and certain off-balance sheet exposures. Two of the recent Basel Accords, commonly referred to as “Basel II.5” and “Basel III,” alter the RWA calculation for JPMorgan and other banking organizations. As the new standards become effective over a phase-in period, certain assets held by banking organizations such as JPMorgan will generally be assigned a higher risk-weighting than they are under the current standards; in practical terms, this means

JPMorgan will be required to either increase the amount of capital it holds or reduce its RWA. Basel III has not yet become effective, but JPMorgan has begun voluntarily disclosing estimated calculations under Basel III in its financial reporting.

In 2011, JPMorgan was engaged in a Firm-wide effort to reduce RWA in anticipation of the effectiveness of Basel III. The Synthetic Credit Portfolio was a significant consumer of RWA, and the traders therefore worked at various points in 2011 to attempt to reduce its RWA. As part of this effort, in late 2011, CIO discussed unwinding certain positions in the Synthetic Credit Portfolio.

In the last week of December, Mr. Braunstein asked CIO to evaluate the impact of a further reduction of \$20, \$40 or \$60 billion of RWA (in addition to a \$30 billion reduction that, according to Mr. Wilmot, was already called for under the initial 2012 CIO RWA budget).²⁸ Ms. Drew, Mr. Wilmot and two senior members of the Synthetic Credit Portfolio team conferred as to how they could accomplish this in a manner that would minimize costs and trading losses, and in their internal discussions on the matter considered the possibility of unwinding additional positions in the Synthetic Credit Portfolio. According to one of the traders, on or about December 26, one of the Synthetic Credit Portfolio team members who had been party to these discussions called him and informed him that Ms. Drew wanted to know how much it would cost to reduce RWA by an additional amount. The trader informed him that, under the circumstances,

²⁸ Contemporaneous e-mails suggest that the initial 2012 CIO RWA budget called for a \$20 billion reduction.

he believed that the solution would be an unwind and that he would ask another trader to prepare an estimate of how much it would cost. Shortly thereafter, an analysis prepared by another trader and provided to Ms. Drew, Mr. Wilmot and an executive from the Synthetic Credit Portfolio team indicated that a 35% proportional unwind of the Synthetic Credit Portfolio would result in a \$10 billion RWA reduction, but could cost slightly more than \$500 million. These cost estimates included trading and execution costs associated with reducing the positions, as well as the prospective loss of premiums received for any long-risk positions that CIO unwound.²⁹ Ultimately, the Firm chose not to modify its initial RWA budget, and for 2012, CIO as a whole was only required to make the RWA reduction contemplated by its original budget.

In early January, the Synthetic Credit Portfolio incurred mark-to-market losses of approximately \$15 million. On January 10, one of the traders informed Ms. Drew that the losses resulted from the fact that (among other things) it “ha[d] been somewhat costly to unwind” positions in the portfolio. Ms. Drew responded that there might be additional flexibility on the RWA reduction mandate, and requested a meeting to review the unwind plan to “maximize p [&] l.”³⁰

²⁹ Other materials from this time indicate that the traders also believed that an unwind of short positions would cause them to forfeit revenue that they were positioned to earn upon the occurrence of defaults.

³⁰ Shortly before this exchange, Ms. Drew and Mr. Wilmot had notified Messrs. Dimon and Braunstein that CIO (as part of its budgeted RWA reduction) would reduce the Synthetic Credit Portfolio’s RWA by year-end 2012, from \$43 billion to \$20.5 billion. They explained that this would be accomplished by allowing existing positions to expire (\$13 billion), as well as via “active reduction” (\$10 billion). Ms. Drew discussed the RWA mandate around this time with Mr. Braunstein, who informed her that the deadline for CIO to meet its RWA requirement was the end of 2012.

Around this time, Ms. Drew participated in a conference call with Mr. Wilmot and members of the Synthetic Credit Portfolio team, during which the RWA reduction mandate was discussed. According to one of the traders, he informed Ms. Drew during that call that the only certain approach to RWA reduction was to unwind positions, and he advised her that unwinding 25% of the Synthetic Credit Portfolio would cost approximately \$500 million. After the meeting, one of the more senior members of the Synthetic Credit Portfolio team who attended the meeting instructed the trader to formulate multiple options for RWA reduction for Ms. Drew to consider.

On or about January 18, Ms. Drew, Mr. Wilmot, Mr. Weiland and two senior members of the Synthetic Credit Portfolio team met to further discuss the Synthetic Credit Portfolio and RWA reduction. According to a trader who had not attended the meeting, after the meeting ended, one of the Synthetic Credit Portfolio team members who had attended the meeting informed him that they had decided not to reduce the Synthetic Credit Portfolio, and that the trader's focus in managing the Synthetic Credit Portfolio at that point should be on profits and losses. Nonetheless, RWA continued to be a matter of real concern for that individual and CIO, and he thus also sent a follow-up e-mail to the meeting participants in which he set out a number of options for achieving RWA reduction by the end of 2012. In that e-mail, he stated that the preferred approach was to select an option under which CIO would attempt to convince the Firm to modify the model that it used to calculate RWA for the Synthetic Credit Portfolio, and delay

any efforts to reduce RWA through changes in positions in the Synthetic Credit Portfolio until mid-year.

At approximately the same time as the mid-January discussions were taking place, a significant corporate issuer defaulted on its debt. The Synthetic Credit Portfolio was not well positioned for this event, and a number of the portfolio's positions suffered significant losses as a result.³¹ These losses caused management to become concerned that the Synthetic Credit Portfolio was not providing sufficient credit loss protection. Management therefore instructed the relevant trader to avoid similar losses on defaults in the future, and to ensure that the Synthetic Credit Portfolio had appropriate "jump-to-default" protection in place.³²

In response to this instruction, the traders began to discuss adding high-yield short positions in order to better prepare the Synthetic Credit Portfolio for a future default.³³ The traders, in late January, also added to their long positions, including in the IG-9 index (and related tranches).³⁴ These long positions generated premiums, and (among other things) would help to fund high-yield short positions; the traders also believed that these long positions would

³¹ One of the traders expressed the view that these losses stemmed from the expiry or unwind of certain high-yield short positions in late 2011. The trading data confirms that certain high-yield short positions did expire or were unwound during this time, but also indicates that the traders largely replaced them at or around the same time.

³² "Jump-to-default" exposure refers to the risk that a position will experience losses through the instantaneous move to a default on a reference name as a result of a credit event, such as a bankruptcy.

³³ Trading data shows that the traders had been adding some high-yield short positions throughout much of January, prior to this instruction. However, the additions increased substantially in the period after this instruction.

³⁴ As described below, the traders continued to build this position in February.

help offset (from both a credit risk and, potentially, an RWA perspective) their high-yield short positions. The traders chose to use the IG-9 index for this offset because, as one of them explained, it had the liquidity of investment-grade credit derivatives but with a feature that allowed the traders to hedge part of the high-yield structural short as well. The feature to which that trader was referring is the fact that the IG-9 index contained a number of so-called “fallen angels,” which are companies whose debt had been considered investment-grade at the time of the IG-9’s issuance in September 2007, but had subsequently become high-yield. Because the IG-9 index contained these high-yield reference entities, the traders believed that a long position in the IG-9 would offset to some degree the high-yield short positions.³⁵

By the end of January, the Synthetic Credit Portfolio traders had added approximately \$20 billion in long-risk notional positions to their 10-year IG-9 position. At the same time, however, they also added \$12 billion in 5-year IG-9 short risk notional positions – *i.e.*, they bought credit protection on the same companies for which they were selling protection – except that the maturities for this short position were five years from the creation of the index rather than ten years.³⁶ The net effect of these additions was to increase the Synthetic Credit Portfolio’s long credit exposure, both because they added more long positions than short positions, and also

³⁵ Because not all of the reference entities in the IG-9 instruments overlapped with those in the high-yield instruments, this strategy also introduced new risks into the Synthetic Credit Portfolio.

³⁶ The traders referred to this trade (the “IG-9 Forward Trade”) as the forward trade, or at times, as a flattener.

because longer-dated trades are more sensitive to movements in credit spreads than shorter-dated trades,³⁷ due to the fact that the exposure to risk is for a longer period.³⁸

Ms. Drew did not receive detailed trading or position reports on the Synthetic Credit Portfolio in the ordinary course, did not request any such reports during this time,³⁹ and regularly monitored only the Synthetic Credit Portfolio's profits and losses, VaR and stress VaR.⁴⁰ She did understand generally around this time that the traders were planning to add long positions in order to balance the Synthetic Credit Portfolio, and she also participated in a number of meetings at which RWA and the profits and losses of the Synthetic Credit Portfolio were discussed.⁴¹

³⁷ A longer-dated CDS instrument will move more in price to a given change in a credit spread in the same way that a longer-dated bond's price moves more to a given change in credit spreads or interest rates than a shorter-dated bond.

³⁸ A trader from the Synthetic Credit Portfolio team appears to have described this trading strategy in a January 26 "Core Credit Book Highlights" PowerPoint that he circulated to other traders on January 26 and on February 2. In that PowerPoint, the trader described the technical details of the "trades that make sense," which involved building a long position and then adding various short positions in the event of a market rally.

³⁹ Among other things, there is no evidence that Ms. Drew received the January 26 PowerPoint described in Footnote 38.

⁴⁰ Stress VaR is a charge for market risk under Basel II.5 based on a 10-day, 99%-confidence level VaR that incorporates inputs using historical data from a one-year period of significant financial stress relevant to the Firm's portfolio. While VaR assumes volatility consistent with recent market conditions, stress VaR assumes difficult market conditions.

⁴¹ With respect to RWA reduction, Mr. Weiland sent an email to a member of the Synthetic Credit Portfolio team on February 3 expressing concern that the member was providing overly optimistic estimates to Ms. Drew as to the likelihood that CIO would be able to convince the Firm to modify its RWA calculation model.

By January 26, the Synthetic Credit Portfolio was roughly balanced, as measured by CSW 10%.⁴² One of the trader's contemporaneous e-mails reflect that he understood this, but also reflect that he began to have concerns – which he shared with other members of the Synthetic Credit Portfolio team – about the continued mark-to-market losses in the Synthetic Credit Portfolio. Around the same time, in light of these losses, an executive responsible for the Synthetic Credit Portfolio directed the senior-most trader to focus solely on the Synthetic Credit Portfolio to the exclusion of his other responsibilities. On January 31, that executive sent an e-mail to the same trader – which he also forwarded to Ms. Drew – in which he stated that the Synthetic Credit Portfolio was not behaving as intended and described the Synthetic Credit Portfolio's performance as “worrisome.” In the same e-mail, he included one of several late January e-mails reflecting another trader's concern about the Synthetic Credit Portfolio's positions.⁴³ In that e-mail, the trader explained that, as designed, the Synthetic Credit Portfolio “would lose money now on a default in us hy and make money if the default occurs in ig world.” According to this trader, however, the high-yield positions were losing more money than expected, and the investment-grade positions were earning less money than expected (*i.e.*, the price movements were not correlating as expected, leading to mark-to-market losses).

⁴² By January 31, the Synthetic Credit Portfolio had moved to a modest net long position as measured by CSW 10%, and it continued to fluctuate thereafter. Although the Synthetic Credit Portfolio was long as measured by CSW 10% by this time, it could continue to maintain substantial protection against corporate defaults.

⁴³ This was one in a series of e-mails that the other trader wrote to himself and to other traders in the last two days of January, all expressing similar views about the performance of the Synthetic Credit Portfolio, and the options available as to how best to manage it.

In separate e-mails on January 30, the same trader suggested to another (more senior) trader that CIO should stop increasing “the notionals,” which were “becom[ing] scary,” and take losses (“full pain”) now; he further stated that these increased notionals would expose the Firm to “larger and larger drawdown pressure versus the risk due to notional increases.” While the documentary record does not reflect how, if at all, the more senior trader responded to these concerns, the traders nonetheless continued to build the notional size of the positions through late March.

By early February, the trader’s concern about the losses – including his lack of understanding as to why they were occurring – prompted him to request a meeting with his managers, including Ms. Drew, in order to discuss the Synthetic Credit Portfolio. He prepared a presentation for the meeting, which he sent to the more senior trader on February 2. The presentation was provided to Ms. Drew and an executive responsible for the Synthetic Credit Portfolio on February 3.⁴⁴

The trader did not present his slides at the meeting. Ms. Drew did ask the trader how much more he thought CIO could lose if they reduced the Synthetic Credit Portfolio. According to this trader, he explained that he thought that the Synthetic Credit Portfolio could lose a significant amount, perhaps an additional \$100 million, and that it was possible that they did not have the right long position in light of the characteristics of the IG-9 position and the relevant

⁴⁴ According to a calendar invite sent by Ms. Drew’s executive assistant for a February 3 meeting (likely the meeting in question), Mr. Wilmot, Mr. Goldman, Mr. Weiland and various members of the Synthetic Credit Portfolio team were invited, among others.

market dynamics. Ms. Drew appeared not to be overly concerned by this potential \$100 million loss for the portfolio, and instead focused on the Synthetic Credit Portfolio's RWA profile.⁴⁵

One week after this meeting, the same trader conferred with the attendees of that meeting (but not Ms. Drew) regarding an anticipated credit event involving another company.⁴⁶ He explained that in order to be better positioned for this event, he would need to buy further protection on the high-yield index, and finance that protection by adding long positions in an investment-grade index. He explained that this trading would increase RWA, but was instructed to proceed, and to concentrate on managing profits and losses. The executive with whom he conferred also instructed a senior trader to travel to JPMorgan's New York offices to see what could be done to remove the RWA constraint from the Synthetic Credit Portfolio.

Throughout February, the traders continued to add to their investment-grade long positions, and also at this time began to add significantly to their high-yield short positions. It appears that among the reasons for at least some of this trading (and possibly other trading during the first quarter) was that the traders sought to "defend the position" or "defend the P&L." The phrase was not defined in a consistent way by the traders who used it, but it appears to be a response to one or more concerns expressed by the traders throughout much of the first quarter.

⁴⁵ Also on February 3, Mr. Wilmot sent an email to Mr. Braunstein requesting "approval to raise [CIO's] 1Q12 RWA by \$7bn to \$167bn." Mr. Wilmot explained that it was a "one quarter request" and that CIO believed they were "on target to achieve the \$160bn level for 2Q12-4Q12." Mr. Wilmot wrote that CIO was "less confident in the RWA reduction from the MTM book, specifically the tranche book which is where [CIO hoped] to continue to achieve significant reductions throughout the year."

⁴⁶ The company in question ultimately filed for bankruptcy in the second quarter.

First, the traders appeared to be concerned about creating a perception in the market that CIO was reversing course on its trading strategy, which would cause other market participants to take advantage in pricing and trading behavior. Second, they expressed concern that the prices they were receiving from other market participants were distorted because those with opposing positions (*e.g.*, CIO was long where they were short) were engaged in tactical trading or were providing indicative prices that they would not stand behind. The traders appeared to believe that if they did not respond through additional trading, they would be forced to recognize losses.

Notwithstanding the continued trading, the Synthetic Credit Portfolio continued to experience mark-to-market losses. On February 13, 2012, a trader advised Ms. Drew of mark-to-market losses in the Synthetic Credit Portfolio, explaining in an e-mail that “we report a loss of 28m from last Tuesday close” and attributing most of the losses to the IG-9.⁴⁷ The trader in question subsequently forwarded this e-mail to senior members of the Synthetic Credit Portfolio team (but not Ms. Drew).

By late February, the Synthetic Credit Portfolio had experienced year-to-date losses of approximately \$169 million. A trader observed around this time that, although credit spreads had stayed relatively constant, the IG-9 continued to lose ground. This was contrary to his expectations, and he therefore advised another Synthetic Credit Portfolio trader not to trade IG-9 because he wanted to observe its behavior. He also advised a more senior trader of his plans, but

⁴⁷ Ms. Drew also received separate daily profit-and-loss reports on the Synthetic Credit Portfolio.

the latter instructed him to trade because they needed to participate in the market to understand the price at which parties were actually willing to transact.

The trader engaged in a significant amount of trading at the end of February, after being directed by at least one senior member of the Synthetic Credit Portfolio team to increase the default protection in the Synthetic Credit Portfolio. The trader also traded at this time in order to determine the market prices of the positions. His trading was not limited to short positions; he also added a significant amount of long positions – specifically in the IG-9 index – in order to offset the cost and risk of the additional short positions. In an e-mail sent to another trader late in the evening of February 29, he explained, “I have sold important amounts of protection in ig9 10yr (close to 7bln all day or 3.5m cs01) and this will push the cs01 beyond the 25m limit. This is related to month end price moves that were all adverse although we could limit the damage.... I picked [the IG-9 10-year index] because this is the most obvious one when we analyze the lags we have in the core book.... This trade will also increase the rwa snapshot at month end I am afraid.”⁴⁸

On February 29, Ms. Drew, Mr. Wilmot, Mr. Goldman and an executive from the Synthetic Credit Portfolio participated in a regularly scheduled “business review” meeting with Messrs. Dimon, Braunstein, Hogan, Zubrow and others. The meeting covered all of CIO’s activities. With respect to the Synthetic Credit Portfolio, the primary focus of the discussion was

⁴⁸ It is unclear to what limit the trader was referring because neither CIO CS01 limit was \$25 million (the mark-to-market CS01 limit for CIO was \$5 million and the aggregate CS01 limit was \$12 million), and both limits had been exceeded by this point.

RWA reduction, and the written materials, which were prepared by individuals from Market Risk and the Synthetic Credit Portfolio team, indicate that CIO was taking steps to reduce RWA. CIO management did not disclose any significant problems or concerns with the Synthetic Credit Portfolio, and CIO management did not explain that CIO was not pursuing the expected course of action of achieving the RWA reduction via an unwind and was instead embarking on a more complicated and different strategy that entailed adding significantly to the size of the positions. The written materials prepared by CIO described the Synthetic Credit Portfolio at a very high level as a “Tail Risk Book,” and as an “option with positive convexity, positive carry and upside on large spread widening and default waves (similar to 2008-2009).”⁴⁹ The materials do not explain under what scenarios the Synthetic Credit Portfolio could be expected to lose money, or that:

- CIO had decided not to reduce the size of the Synthetic Credit Portfolio (at least in the near term);
- the Synthetic Credit Portfolio had increased substantially in both gross and net notional size; and

⁴⁹ A *tail event* is generally understood to be one that arises when the market environment moves more than three standard deviations from the mean based on predictions from a normal distribution of historical prices. *Carry* is generally understood to be the profit or loss experienced by a portfolio with the passage of time but with no change in any other market variable or additional trading. *Positive convexity* exists when a portfolio is predicted to profit more (or lose less) on a larger market move than the profits (or losses) predicted for a smaller market move would imply. *Negative convexity* exists when a portfolio is predicted to profit less (or lose more) on a larger market move as compared to the predicted profits (or losses) on a smaller market move. Using CSW 10% and CSW 50% as an example, if a portfolio is predicted to lose \$100 if credit spreads widen by 10%, but to lose \$400 if credit spreads widen by 50%, then the portfolio reflects positive convexity (a portfolio with no convexity would lose \$500). It is unclear if the written materials for the February 29 meeting were employing these definitions.

- the plan was no longer to reduce RWA by \$23 billion by allowing positions to expire and by active reduction (to the contrary, the February Business Review materials suggest that CIO was unwinding the portfolio, explaining that “the change in regulatory capital regime is likely to force a re-size / run-off of synthetic portfolio in order to maintain RWA targets for the Firm” and “CIO is currently working to reduce [RWA]).”

By the end of February, the Synthetic Credit Portfolio had experienced an additional \$69 million in mark-to-market losses, from approximately \$100 million (year-to-date through January) to \$169 million (year-to-date through February).

On March 1, the day after the CIO Business Review, an executive with responsibility for the Synthetic Credit Portfolio e-mailed one of the traders to express concern that if the traders needed to “[a]ctually reduce the [Synthetic Credit Portfolio]” in order to decrease RWA, they would not be able to “defend” their positions. This e-mail appears to address the concern that an unwind of positions to reduce RWA would be in tension with “defending” the position. The executive therefore informed the trader (among other things) that CIO would have to “win on the methodology” in order to reduce RWA. This phrase refers to the traders’ goal, described above, to convince the Firm that it should change the methodology of the model used to calculate RWA for the Synthetic Credit Portfolio.

On March 7, Mr. Venkatakrisnan reported to Ms. Drew, Mr. Hogan, Mr. Goldman, Mr. Weiland and a member of the Firm-wide Market Risk team on the results of model-related work he had been performing relating to the accuracy of CIO’s RWA calculation. Mr. Venkatakrisnan had gotten involved in early March in response to concerns in CIO about the

increase in RWA. Mr. Venkatakrishnan reported on March 7 that RWA for the Synthetic Credit Portfolio had increased significantly since the beginning of the year, and explained that this increase was “entirely explained by a \$33bn notional increase in short protection (long risk) in [CIO’s] portfolio between [January] and [February].” Ms. Drew forwarded this information to Mr. Goldman, Mr. Weiland and two members of the Synthetic Credit Portfolio team. In response, one of the recipients from the Synthetic Credit Portfolio team expressed the view that the notional amounts reflected in Mr. Venkatakrishnan’s calculations were incorrect,⁵⁰ despite the fact that this information had been provided by CIO’s middle office, and asked to discuss the methodology used to calculate RWA.⁵¹

By mid-March, the Synthetic Credit Portfolio was still experiencing mark-to-market losses.⁵² A trader performed a detailed analysis around this time and determined that, even though the Synthetic Credit Portfolio appeared to be balanced under CSW 10%, its actual performance – and in particular, the fact that it lost money when the markets rallied – suggested

⁵⁰ The relevant recipient may have been expecting Mr. Venkatakrishnan to calculate the notional amounts on a monthly basis (*i.e.*, January 1 to 31 and February 1 to 29) and not January 18 to February 22, as Mr. Venkatakrishnan had done.

⁵¹ Mr. Venkatakrishnan’s analysis, which was only of those positions that drove the increase in RWA, did not trigger further inquiry or concern within or outside CIO at this time regarding the size of the portfolio. CIO management likewise appears to have focused on the notional increase only insofar as it affected RWA. In addition, at that time, there were discussions within CIO and with Mr. Hogan that some of the positions in the Synthetic Credit Portfolio would more appropriately receive a different treatment for capital purposes than under the currently used method, and that this change would result in a reduction of RWA to acceptable levels. At the time, the rules under Basel II.5 and III, which alter the RWA calculation for JPMorgan and other banking organizations, had not been finalized by U.S. regulators.

⁵² As discussed below, the losses during this period were likely more substantial on at least some days than were being reflected in CIO’s daily valuation estimates.

that it continued to have a short bias. The trader attributed this to the significant amounts of protection that he had purchased since January, and he therefore considered what steps he might take to finally balance the Synthetic Credit Portfolio. He concluded that he did not want to sell more protection in IG-9 because the instrument had not behaved as he had expected all year and the position was already quite large and “dangerous”; he also understood that he could not reduce his high-yield position because of the expense associated with that projected liquidation. The remaining option, in his view, was to increase his long exposure in on-the-run investment-grade instruments, such as IG-17 and IG-18, with a goal of stemming the losses that he attributed to its imbalance, and ultimately “put[ting] [the Synthetic Credit Portfolio] to sleep.” Once the portfolio was balanced, he believed he could wait for CIO Management to decide how to proceed.

Consistent with this strategy, by March 15, the trader proposed to add a very large position in an on-the-run investment-grade index. He reasoned that this was the best way to balance the Synthetic Credit Portfolio because: using the on-the-run index would make the positions less transparent to other market participants, especially if the positions were acquired on or near the roll date (presumably because of increased liquidity); and if he could put on a large position very quickly near the roll date (March 20), Risk Management personnel would have sufficient time in advance of the quarter-end to calculate the attendant changes in RWA, VaR and other risk metrics.

The trader described his plan in a series of e-mails to another trader. On March 15, he sent an e-mail explaining that “[t]his [] may be the solution: let the book run off. So I prepare it for this outcome.” Similarly, on March 19, he wrote to some of the other traders that his proposed strategy was to “let the P&L fluctuate while not defending, just maintaining the upside on defaults over time.” Further, he wrote, “the solution proposed amounts to be longer risk and let the book expire carrying the upside on default: I think we own [] a very good position for a size that is also significant”

Beginning on March 19 and continuing through March 23, the trader added significant long positions to the Synthetic Credit Portfolio. These additions roughly coincided with the roll date and the issuance of the IG-18, and included additions to the 5-year IG-17 long position (a notional increase of approximately \$8 billion), the 5-year IG-18 long position (a notional increase of approximately \$14 billion), and several corresponding iTraxx series, most notably the 5-year-S16 (\$12 billion) and the 5-year-S17 (\$6 billion).

While this trading was being considered and implemented, on March 20, a review of CIO was presented to the DRPC (a summary of which was later presented to the full Board), in which Ms. Drew and Mr. Goldman provided a structural risk summary and addressed overall portfolio allocations within CIO, how interest rate movements would affect the company, and how CIO manages the attendant risk. CIO management did not disclose the increasing mark-to-market losses, the recent breaches in certain of CIO’s risk limits, the substantial increase in RWA, the significant growth in the Synthetic Credit Portfolio’s notionals, or the breaches in the VaR limit

earlier in the year.⁵³ Further, CIO management did not explain that CIO was embarking on a complicated strategy that differed from the unwind that had been previously described to senior Firm management.

On March 23, a trader explained to CIO Market Risk the trading he had done: “[I] switched the book to long risk[,] [I] am done[.]” He explained his view that “this is it for a neutral profile[, and] right now we have a market neutral ratio between HY and IG.” He further explained that “the reason why I did that is because [I] wanted to have the position set in order to prepare for month end and avoid defending the pnl [] because it would have resulted in larger positions[.] This one position I put [on] is different and liquid.” The relevant individual from CIO Market Risk noted that, “somehow I think the percep[tion] was that you would be add[ing] to the [on-the-run index] and reducing elsewhere[.] [I am n]ot sure how this was established[, but I] think what happened is that people seeing [that] the book is longer in 5y maturity[, and has] bigger risk[, and] bigger capital[, and] the issue is RWA.” The trader stated, “ok the RWA[,] this is what kills me.” He proceeded to explain that, because of pressure to reduce

⁵³ Under the Firm-wide Risk Appetite policy in effect at the time, either the CEO or the CRO was required to notify the Chairman of the DRPC of modifications to or breaches of the prescribed DRPC market risk stress or VaR “limits.” The Firm-wide Market Risk Management policy likewise required the CRO to “report all material excesses to the Chairman of the DRPC.” (These DRPC-approved limits were not identical to Firm-wide limits; as a result, not all breaches of Firm-wide limits necessarily required reporting to the DRPC.) As of January 2012, the DRPC-approved VaR limit was \$200 million (as opposed to the Firm-wide VaR limit of \$125 million). Although Firm-wide Market Risk provided the DRPC with an update on Market Risk Limits at the March 20, 2012 DRPC meeting, this update only covered (as intended) developments through year-end 2011. The breaches in the CIO and Firm-wide VaR limits that occurred in January 2012 were not discussed. (The highest the Firm-wide VaR reached in January 2012 was approximately \$160 million.)

RWA, the market could come to the conclusion that he did not like his position, and he therefore wanted to “[drop] out of the radar screen and earn carry.” He predicted that “eventually” the Synthetic Credit Portfolio would profit, and in the meantime, “the carry is 2-3m a day[, and] the protection I sold grossly added 1.1M a day of carry.”

On March 21 (*i.e.*, while the traders were adding large long positions), one of the traders met with Ms. Drew to discuss both the mark-to-market losses and the increase in RWA for the Synthetic Credit Portfolio. Before the meeting, he informed Ms. Drew that he believed the Synthetic Credit Portfolio’s positions had been leaked to the market (a concern he and another trader voiced previously), and explained that he was nervous that other market participants could use this information against CIO in their trading. He also e-mailed Ms. Drew that the traders had already reduced RWA by \$10 billion in the Synthetic Credit Portfolio, and recommended that they “sligh[t]ly” increase the investment-grade long position, and address RWA the following quarter. In fact, RWA for the Synthetic Credit Portfolio had increased from the beginning of the year.

The day after the meeting, Ms. Drew learned that the positions in the Synthetic Credit Portfolio were significantly larger than had been reflected in the figures discussed at the prior day’s meeting, as the figures used during the March 21 meeting were from March 7 and did not reflect trading activity during the intervening two weeks.⁵⁴ Ms. Drew reacted strongly to this

⁵⁴ The written materials prepared for the March 21 meeting noted that the figures were as of March 7, but did not indicate that there had been significant changes in the positions since then.

and a meeting was scheduled for March 23. A senior member of the Synthetic Credit Portfolio team informed her at that time that he believed the Synthetic Credit Portfolio had the “right position,” because the Synthetic Credit Portfolio was “long IG [and] the market [was] moving tighter and tighter.” Around this time, a trader informed Ms. Drew that he wanted to continue trading in order to defend the position; Ms. Drew reacted strongly to this as well and informed him that he was not permitted to do so. Either on Friday, March 23, or soon after, Ms. Drew directed the traders to suspend trading, and shortly thereafter, trading in the Synthetic Credit Portfolio largely stopped.⁵⁵ By this point, the Synthetic Credit Portfolio had assumed an overall net-long credit-risk orientation on a CSW 10% basis.⁵⁶

On March 30, the executive responsible for the Synthetic Credit Portfolio requested assistance from Firm-wide Market Risk in understanding the relationship between their trading and RWA. In an e-mail to Mr. Hogan on the subject, the executive stated that the Synthetic Credit Portfolio’s “prox[y]ing” of the IG-9 position as an offset of the high-yield short “did not work and resulted in almost total loss of hedging effectiveness.” He also stated that he was no longer confident in his team’s “ability to achieve the targeted RWA and their understanding of the synthetic levers to achieve the RWA objectives.” He therefore requested that an expert from

⁵⁵ There was a change in position on March 28, when the IG-9 5-year short position was reduced by \$4.2 billion notional, from \$36.9 billion to \$32.7 billion notional.

⁵⁶ Even after these trades, the traders did not view the Synthetic Credit Portfolio as net long despite the fact that the Synthetic Credit Portfolio’s CSW 10% profile showed a long risk bias.

the Investment Bank be assigned to CIO for the second quarter of 2012 to help the Synthetic Credit Portfolio traders understand and meet their RWA targets.

2. Valuation

As noted, the Synthetic Credit Portfolio was experiencing regular mark-to-market losses throughout much of the first quarter. We describe here the valuation process and how, from at least mid-March through early April, the Synthetic Credit Portfolio's losses appear to have been understated.

One of the junior traders in CIO had responsibility for estimating the fair value of each position in the Synthetic Credit Portfolio on a daily basis. Because the market for at least some of these instruments is small and relatively illiquid, he – like other market participants – generally could not simply look to a single definitive source to perform that task. Rather, he collected data from a number of different sources about the value of the positions and, after exercising judgment and often in consultation with another trader, assigned a value to each position.

In general, the trader looked to three different sources in order to value the positions in the Synthetic Credit Portfolio: (1) recently executed trades; (2) indicative, or non-binding, price quotes received from dealers and counterparties (including for both the specific instrument and, at times, similar instruments); and (3) his observations of and judgment regarding market conditions, including the relationships between and among different instruments. The information he received from other market participants was typically in the form of a bid-offer

quotation. However, in order to perform the daily valuation process, he was required to identify a specific price. For each instrument, he therefore selected one quote (often among several he received) and then assigned a price within the bid-offer spread for that quote. Once he had identified a price for each position, he would input this data into a series of programs that would generate an estimate of the daily profit or loss, known as the “P&L Predict.” He would also draft, often together with another trader, an explanation for the gains or losses, which would be included in the daily P&L Predict. The daily profit-and-loss numbers were circulated within CIO and to certain personnel within the Firm-wide Risk organization. Ms. Drew received the daily P&L information (although not the P&L Predicts themselves), and also received some or all of the commentary in her daily reports.

At certain points throughout early 2012, the information the trader was collecting from the market indicated losses in the Synthetic Credit Portfolio. But on a number of days beginning in at least mid-March, at the direction of his manager, he assigned values to certain of the positions in the Synthetic Credit Portfolio that were more beneficial to CIO than the values being indicated by the market. The result was that CIO underreported the losses, both on a daily basis and on a year-to-date basis. The traders variously referred to the aggregate differential between the prices being assigned and the unadjusted mid-market price (*i.e.*, the mathematical mid-point between the best bid and best offer in the market, often referred to as the “crude mid”) as the

“divergence,” “lag” or “distance.”⁵⁷ In the view of one trader, the divergence resulted from the fact that the price information supplied by this illiquid market was distorted. Along these lines, the traders believed that CIO’s counterparties had obtained information about the Synthetic Credit Portfolio’s positions, and that CIO’s counterparties were engaging in strategic pricing behavior and intentionally providing prices that did not accurately reflect market values, *i.e.*, they were not prices at which the counterparties would actually be willing to transact.⁵⁸ Furthermore, one trader expressed the belief that the market prices would ultimately correct, vindicating the CIO valuations.

Notwithstanding any genuinely held views on the validity of quoted prices or the integrity of counterparties’ trading activities, both U.S. GAAP and Firm policy required that CIO make a good-faith estimate of the exit price⁵⁹ for a reasonably sized lot of each position, and

⁵⁷ Certain traders also, at times, appeared to use the term “lag” to refer to the amount by which the Synthetic Credit Portfolio was underperforming a theoretical or fundamental valuation of the positions – *i.e.*, how far behind their expectations it was.

⁵⁸ The prices provided by market participants that were considered in valuing certain positions in the Synthetic Credit Portfolio were “indicative,” which meant that CIO could not expect counterparties to transact at those prices. On occasion, CIO would attempt to transact at an indicated price, and a market participant, who had posted the bid or offer, would decline. The Synthetic Credit Portfolio traders referred to this behavior as the market participants “framing” prices.

⁵⁹ Neither U.S. GAAP nor the Firm policy required CIO to mark to the “crude mids.” Accounting Standards Codification paragraph 820-10-35-36C notes that “if an asset or a liability measured at fair value has a bid price and an ask price (for example, an input from a dealer market), the price within the bid-ask spread that is most representative of fair value in the circumstances shall be used to measure fair value” While paragraph 820-10-35-36D notes that mid-market pricing is not precluded from being used “as a practical expedient,” such conventions are not required and good faith estimates of the appropriate exit price are necessary.

assign values reflecting those estimates.⁶⁰ At the direction of a more senior trader, however, the relevant trader may not have always done so.⁶¹ The Task Force has found no evidence that others beyond three of the Synthetic Credit Portfolio traders were aware of or part of this directive.

One instance of “divergence” occurred on or about March 12, when a trader informed another trader that the “crude mids” had moved away from where he and the third trader expected them to be. He told the trader that, as a result, the mark-to-market losses in the Synthetic Credit Portfolio based on “crude mids” had grown to approximately \$50 million, and that he viewed these losses as a warning sign. He recommended that they reflect this as a loss on the books, even though they could not explain the market movement. The trader in question disagreed with his recommendation, apparently because he did not believe that the market moves around this time were real. He then informed the first trader that they should discuss this issue the following week.

According to a trader-maintained spreadsheet reflecting prices from March 12 to March 16, the divergence from the crude mids for at least some of the positions had grown to approximately \$292 million⁶² year-to-date for the Synthetic Credit Portfolio.⁶³ On March 16, a

⁶⁰ See n. 59. By convention, the exit price is estimated for normal trading size, and CIO was not required to estimate the prices it would have received if it attempted to sell its entire (large) position at once.

⁶¹ As noted, the more senior trader may have believed that his view of the true value of these positions would ultimately be realized once the market returned to normal.

⁶² This figure may include amounts by which the traders believed that the positions were underperforming vis-à-vis their expectations, including as a result of market participants distorting the prices; it is not

trader informed another trader that he estimated that the divergence would likely reach \$400 million in the near future.

By March 19, the relevant trader had showed a small loss on the daily P&L Predicts every day for seven consecutive days. He told another trader that a more senior trader had pressured him throughout this period not to show large losses in the Synthetic Credit Portfolio. On March 20, that other trader apparently directed the relevant trader to show the full loss he had calculated for that day and said that he himself would accept responsibility for the loss with the more senior members of the team.

The relevant trader reflected a loss on his March 20 daily P&L Predict of approximately \$40 million. Shortly thereafter, a more senior trader called the other trader to discuss the loss. The senior trader expressed two related concerns. First, he stated that the report would cause problems for him during a meeting scheduled for the following day with Ms. Drew (the March 21 meeting described above), and stated that he wished that he could have raised the loss issue with Ms. Drew in person during that meeting.⁶⁴ Second, he expressed concern that Ms. Drew might prohibit his team from adding to their long positions.

necessarily a measure of the aggregate amount of any mis-mark since the crude mid is not necessarily reflective of the price at which market participants are transacting.

⁶³ The spreadsheet showing the divergence from March 12 to March 15 was circulated to a senior member of the Synthetic Credit Portfolio team on March 15. The Task Force also located an additional copy of the spreadsheet that included the divergence for March 16.

⁶⁴ Ms. Drew would historically follow up with the more senior trader in the evening if the Synthetic Credit Portfolio experienced losses greater than \$5 million for a particular day.

The estimated mark-to-market losses continued to grow throughout the end of March. On March 23, a trader sent another trader an informal loss estimate – likely year-to-date – of \$300 million using, for each position, the “best” bids or asks and \$600 million using the “mids.” The third trader also continued to report losses to him during this period, and continued to be directed by the other trader to show them. The year-to-date losses reported by the traders totaled about \$400 million through March 29.

These valuation issues received additional attention from the traders on March 30, which was the last trading day of the first quarter.⁶⁵ As shown by the following four sets of conversations, one of the traders was very focused on the impact of showing significant losses on that day.

First, throughout the day, that particular trader (who was more senior and to whom the other traders reported) repeatedly discussed with a second trader the size of the estimated losses. Early in the day, the second trader had informed the more senior trader that the daily loss would be approximately \$250 million. The senior trader asked him if he could reduce the loss to \$200 million and encouraged him to trade, even though, as discussed above, Ms. Drew had just ordered the team to stop trading. The second trader declined to continue trading. Nevertheless, throughout the day, a third trader reported to the second trader that the prices he was observing in the market were improving, and the second trader therefore reported improved numbers to the

⁶⁵ The marks on the final trading day of the quarter are subject to VCG price-testing procedures described below.

senior trader as the day progressed. Each time he or the third trader showed a smaller loss figure, the senior trader urged him to reduce the size of the loss further.

Second, the more senior trader and Mr. Goldman discussed the estimated losses for the day. During this conversation, Mr. Goldman pressed the trader for estimates, and he responded that he was expecting the losses to be significant because he would not be “defend[ing]” the position. He further stated that he did not want to “fight” and increase the position, and added that they should have “stopped doing this three months ago and just rebalanced the [Synthetic Credit Portfolio].”⁶⁶ He also asked Mr. Goldman (who had called him at Ms. Drew’s request) not to share these estimates with Ms. Drew because the market had not yet closed and, given the size of CIO’s positions, a small movement could result in a significant change in the profits and losses.

Third, at the end of the day, the same more senior trader directed another trader to stay late and monitor prices until the markets closed in New York, in the hopes that he would be able to use later – and more advantageous – prices in marking the Synthetic Credit Portfolio.

Fourth, the same more senior trader directed another (more junior) trader on March 30 to use the “best” prices, which appears to have prompted that more junior trader to take two steps. First, for at least one instrument, he selected the most beneficial dealer quote when marking his positions. Another trader encouraged him to use this more beneficial quote – which was more

⁶⁶ This statement is difficult to reconcile with another trader’s statement that, at the same time, the more senior trader was encouraging him to trade.

advantageous than the quotes he had received earlier in the day – telling him that it was not too aggressive and that it was “very good.” Second, the more junior trader priced many of the positions at or near the most advantageous boundary of the bid-offer spread. And for at least one position, he consulted with the other trader, who advised him to be slightly less aggressive. Later in the evening of March 30, he reported an estimated loss for the day of \$138 million. Unlike the January and February month-end prices, the marks for March 30 were not generally at or near the mid.

The quarter-end prices generated on March 30 were to be used as the basis of the Firm’s financial reporting. Accordingly, per standard practice in CIO, they were subjected to a separate review by CIO’s VCG, a price-testing group that is part of the Finance function and analyzes market data to test month-end front office marks. VCG is responsible for confirming the traders’ marks or making necessary adjustments to the front office marks to arrive at the fair value for purposes of the U.S. GAAP for the Firm’s books and records.

Under the applicable policy, CIO VCG’s price-testing procedures involved multiple steps, including the following: First, the relevant member of the VCG team received the March 30 front office marks. Second, that individual reviewed information about the value of each position derived from third-party sources – principally, quotes from dealers, recent transaction data, and consensus pricing data from third-party pricing services such as Markit and Totem – and generated a price (the “VCG mid price”) for each position. He then compared the trader’s prices to the VCG mid price.

As noted above, Firm policy called for the positions to be marked at fair value, which in accordance with accounting rules, it defines (consistent with U.S. GAAP) as the exit price for a reasonably sized lot. CIO VCG recognized that, given the nature of the market, market participants could arrive at different yet reasonable conclusions as to the fair value of a particular position. When comparing the VCG mid price to a trader-provided price, CIO VCG's policy was to consider a VCG-generated price-testing threshold designed to reflect the bid-offer spread to the VCG mid. For example, if the CIO VCG mid price was 35 and the threshold was 2, the acceptable valuation range for the trader-provided price would be 33 to 37. If the trader's price fell within that range, under the Firm's policy, CIO VCG could adopt that price as final. If the trader's price fell outside that threshold, under the Firm's policy, CIO VCG was to adjust the price to the closest outer boundary of the threshold. Thus, in the above example, if the trader had a price of 38, CIO would make a one-point adjustment to move the mark back to the closest outer boundary of 37.⁶⁷ PwC was aware of CIO VCG's use of thresholds prior to the first quarter of 2012.

CIO VCG conducted its price testing on the March 30 valuations for the Synthetic Credit Portfolio in April. In the course of this price testing, it observed that many of the positions were marked at or near the boundary of the bid-offer spread. However, because it concluded that they

⁶⁷ VCG did not, as a technical matter, actually adjust the trader's marks for individual instruments, rather it provided information to the CIO Middle Office, which simply made an aggregate dollar amount adjustment that resulted from the adjusted marks.

were within VCG thresholds (with exceptions for which an adjustment was made), it concluded that the trader marks were acceptable.⁶⁸

Although CIO VCG's independent price-testing process, including the use of thresholds, was appropriately designed to determine whether a trader's mark is a reasonable estimate of fair value, CIO VCG price testing had been identified as having some deficiencies and inconsistencies in its price-testing practices. Specifically, on March 30, 2012, the Firm's Internal Audit group issued a report on EMEA CIO Credit Market Risk and Valuation Practices in which it assigned a rating of "Needs Improvement."⁶⁹ This assessment of CIO VCG was due, in part,⁷⁰ to the lack of "a formally documented price sourcing hierarchy to govern the consistent use and appropriate application of independent prices for price testing purposes" and "the lack of formally documented/consistently applied price testing thresholds." With respect to the latter, Internal Audit concluded that thresholds were applied by CIO VCG "without sufficient transparency or evidence." The "root cause" of the deficiencies and inconsistencies in CIO

⁶⁸ VCG's calculation of the March month-end pre-adjustment difference between VCG prices and the traders' marks contained mathematical and methodological errors; as these errors were discovered, the figure was revised upwards to \$512 million on May 9. In July, the difference between the VCG mid and the front office marks was adjusted to \$677 million before the application of the thresholds, \$660 million after the application of thresholds, and \$472 million after the subsequent application of a liquidity reserve. See Section III.B.

⁶⁹ Internal Audit issues three ratings: Satisfactory, Needs Improvement, and Inadequate. The latter two are considered "adverse" ratings. CIO VCG received a "Satisfactory" rating in its prior audit of CIO EMEA Credit on February 26, 2010.

⁷⁰ As part of this same report, Internal Audit also identified weaknesses in CIO's risk management practices, such as the use of unapproved risk and valuation models, a lack of documented stress testing methodology, and a need to enhance controls around certain aspects of the VaR calculation.

VCG's price-testing practices was identified as "insufficient assessment/formalisation of certain price testing methodologies and poorly documented CIO VCG practices."⁷¹

The Internal Audit report included an action plan for VCG to, among other things: (1) define and implement a price sourcing hierarchy to ensure a consistent and appropriate price sourcing and testing approach; (2) ensure price testing is performed consistently with front office marking policy; (3) document the rationale for and clearly define certain price-testing thresholds; and (4) improve evidence of certain price-testing processes. The individual who was the "issue owner" for this action plan had a target date of July 31, 2012, to complete the action plan. As part of his response to Internal Audit's recommendation to more clearly demonstrate and document the use of thresholds, this individual immediately made certain adjustments to formulas in the spreadsheets he used. These changes, which were not subject to an appropriate vetting process, inadvertently introduced two calculation errors, the effects of which were to understate the difference between the VCG mid-price and the traders' marks.

3. *The "London Whale" Story and Senior Management's Response*

On April 5, Ms. Drew sent an e-mail to the JPMorgan Operating Committee (which included Messrs. Dimon and Braunstein) in advance of articles that the *Wall Street Journal* and Bloomberg would be publishing the following day about one of the Synthetic Credit Portfolio

⁷¹ Although the report was formally issued on March 30, consistent with Internal Audit's processes, Internal Audit personnel interacted with CIO VCG, market risk management and Finance personnel during the audit process. In mid-to-late March, members of the audit team shared findings, communicated about management's action plan, and obtained other input from Messrs. Goldman, Wilmot, Weiland and other members of CIO Market Risk, Finance and VCG, among others.

traders, whom the articles referred to as the “London Whale.” In her e-mail to the Operating Committee, Ms. Drew provided a brief overview of CIO’s investment strategies, explaining that the strategies had turned pro-risk and the Synthetic Credit Portfolio was moved into a long position, and that it had not performed as expected in 2012.⁷² She acknowledged that (1) the position was not sized or managed well; (2) mistakes were made, which she was in the process of addressing; (3) the losses to date were approximately \$500 million, which netted to negative \$350 million as a result of gains in other positions; and (4) Firm earnings for the first quarter had not been affected “since [CIO] realized gains out of the [\$]8.5 billion of value built up in the securities book.”

Mr. Braunstein and Ms. Drew met the following day, on April 6. Mr. Braunstein asked Ms. Drew to provide a detailed overview of the Synthetic Credit Portfolio’s position by the following Monday, April 9. Later on April 6, Mr. Braunstein sent Mr. Dimon a brief update on his discussions that day regarding the Synthetic Credit Portfolio. He informed Mr. Dimon that he “[s]poke with Ina. Would like to add a liquidity reserve⁷³ for [the] Series 9 Tranche Book (approx 150mm). Wilmot will be sending e-mail detailing analysis.” Mr. Braunstein also informed Mr. Dimon of the overview he had just asked Ms. Drew to prepare by April 9, and added that he was “working with [the Investment Bank] to make sure there are no similar

⁷² Although the Synthetic Credit Portfolio had shifted to a net long position by early April under CSW 10%, it also continued to hold short risk positions and substantial “jump-to-default” protection.

⁷³ A liquidity reserve is taken to mitigate uncertainty when a price is not available or where the exit cost may be uncertain due to illiquidity.

positions in the [Investment Bank's] book.... Separately think we need to look at coordinating between the CIO and [Investment Bank] approaches. Have talked to John Hogan about this as well.”⁷⁴

Meanwhile, Ms. Drew reached out to a senior member of the Synthetic Credit Portfolio team on the afternoon of April 6 and asked for a “full diagnostic,” explaining that the analysis should be “[m]ore focused on p [&] l than rwa at [the] moment[.]”⁷⁵ This individual said he would perform the work, and explained that any further losses would be the “result of further distortions and marks between the series where we are holding large exposures.” He added that he had “no doubt that both time and events are healing our position,” and stated that a trader with whom he had consulted was “convinced that our overall economic risk is limited.” He also noted that the traders were concerned that information about CIO’s Synthetic Credit Portfolio position had been leaked to the market – a concern they had expressed previously – suggesting that the losses may have been driven by their counterparties who, they believed, knew of CIO’s positions and were distorting the market. In a separate e-mail to Ms. Drew, a trader estimated

⁷⁴ Late on April 6, Mr. Braunstein also received an e-mail from Mr. Venkatakrishnan, via Mr. Hogan, stating that Mr. Venkatakrishnan had noticed that the notional exposures at CIO were very large, totaling about \$10 trillion in each direction. Mr. Venkatakrishnan – who had become involved in early March to assist with RWA calculations – was concerned about counterparty credit risk (*i.e.*, risk that a counterparty would fail), and pointed out that \$6.5 trillion of these positions came from just four trades. Mr. Venkatakrishnan subsequently determined that these numbers were incorrect, however (he had not recognized that many of these trades were internal and thus netted out), and the total notionals were much smaller than he had initially thought (although still large). Upon learning of this, on April 9, he informed Messrs. Hogan and Goldman that he was “more comfortable now.”

⁷⁵ This focus differed from the focus at the end of March, which at that time was principally on RWA.

that, although he would conduct a confirmatory analysis, the worst-case scenario for the second quarter (excluding “very adverse” outliers) would involve losses of no more than “-200 MM USD . . . with the current book as it is.”

Over the weekend of April 7 and 8, two of the traders prepared the requested analysis. One of them initially attempted to formulate a loss estimate by constructing numerous loss scenarios that were very harsh, and then evaluating how those scenarios would impact the Synthetic Credit Portfolio’s positions. For example, he assessed how the market might behave in a “bond market crash” or a “Middle East shock,” and then attempted to determine how that market behavior could affect the Synthetic Credit Portfolio. In this way, he generated a number of probability-weighted profit-and-loss estimates for the second quarter; the estimates ranged from losses of \$750 million to gains of \$1.925 billion, with six of the nine scenarios generating losses (the smallest of which was a loss of \$350 million).

This trader sent his loss estimates to the other on April 7. According to the trader who prepared the loss estimates, the other trader responded that he had just had a discussion with Ms. Drew and another senior team member, and that he (the latter trader) wanted to see a different analysis. Specifically, he informed the trader who had generated the estimates that he had too many negative scenarios in his initial work, and that he was going to scare Ms. Drew if he said they could lose more than \$200 or \$300 million. He therefore directed that trader to run a so-called “Monte Carlo” simulation to determine the potential losses for the second quarter. A Monte Carlo simulation involves running a portfolio through a series of scenarios and averaging

the results. The trader who had generated the estimates did not believe the Monte Carlo simulation was a meaningful stress analysis because it included some scenarios in which the Synthetic Credit Portfolio would make money which, when averaged together with the scenarios in which it lost money, would result in an estimate that was relatively close to zero. He performed the requested analysis, however, and sent the results to the other trader in a series of written presentations over the course of the weekend. This work was the basis for a second-quarter loss estimate of -\$150 million to +\$250 million provided to senior Firm management, described below.

On April 8, the same trader sent a draft presentation – prepared based on the Monte Carlo analysis – to the other trader, and advised him that “[w]e should stress that some standalone economic scenarios can cost up to 500M although, mixing all the stress scenarios we get to a more decent number of 150 to 250 depending on whether spreads widen in Q2. The book keeps a useful optionality [i]f things turn really bad again. This is what it is meant for. I am reviewing now the names in IG on the run that could be damaging to us.. they are very few given that we still have a short risk in IG14-IG15 and IG16”

On the afternoon of April 8, the trader who had generated the estimates was asked by a more senior team member for an estimate of potential profit-and-loss for the second quarter, with an 80% degree of confidence, assuming CIO held the positions and that they “maintain the book as balanced and ‘neutral’ as possible” The trader responded that he was “80pct confident the pnl for q2 is going to range between -150m and 250m.... This forecast includes the fact that I

am NOT optimistic for now about the impact of the recent press releases. I prefer to forecast q2 results in light of what happened in end of q1.” His senior responded “Got . . . it – let’[s] hope it[’s] true – we must prove the point today[.]”⁷⁶

That evening, Ms. Drew led a call with Mr. Goldman and the senior members of the Synthetic Credit Portfolio team – who, along with CIO Market Risk and others, had been involved with the profit-and-loss analysis and discussions over the weekend – to prepare for the following day’s meeting with Mr. Braunstein. After the call, one of the attendees from the Synthetic Credit Portfolio team e-mailed Ms. Drew, copying Messrs. Dimon, Braunstein and others, and provided an overview of the trading strategies. He explained that CIO had decided to neutralize the Synthetic Credit Portfolio at the end of 2011 because of large realized gains at the end of 2011 from a corporate default, among other things. He stated that the “attempt to neutralize the book ha[d] been unsuccessful,” and that they had lost \$575 million on the high-yield short positions, but the investment-grade trade meant to neutralize the high-yield short position had delivered only \$50 million in revenue, meaning that the Synthetic Credit Portfolio had lost \$525 million year-to-date. He offered two reasons that the price movements of long and short positions had acted in what he characterized as an “idiosyncratic” manner and had not correlated with each other as expected: (1) the off-the-run long positions (IG-9 and iTraxx 9) steepened by 24 basis points because of excess liquidity and a “pro-risk environment” in the

⁷⁶ The full text of the senior team member’s e-mail stated that they must “prove the point today with as much ambiguity as poss[ible].” It is the Task Force’s understanding that he meant to say “little” rather than “much.”

market; and (2) the series in which the Firm held key long positions (*i.e.*, the IG-9) underperformed other investment-grade indices. He also explained that “we [had] chosen these IG proxies” to offset the short high-yield positions because they contained “the very names that we are short in the HY instruments,” and that “although thus far unsuccessful, these IG proxies best neutralize and balance our synthetic books to event risk.”

He concluded that the Synthetic Credit Portfolio was “overall risk balanced,” and for the second quarter, he provided an estimate of “a P&L range of -150MM to +250MM,” with a “significantly positive” upside potential in the event of corporate defaults. His statement about default protection was consistent with a contemporaneous analysis that was being performed by Mr. Venkatakrishnan and a member of Model Risk and Development, and provided to Messrs. Dimon and Braunstein, which concluded that “[t]oday there is considerable default protection coming from IG9 tranches . . . ,” explaining that the IG-9 positions were currently positioned for a “gain of +146m on average per name to a loss of -572m per name post December 2012” for each of the 121 names in the IG-9 index.”

On April 9, Ms. Drew, Mr. Braunstein, Mr. Wilmot, and an executive from the Synthetic Credit Portfolio team met to discuss the Synthetic Credit Portfolio. Ms. Drew told Mr. Braunstein that the Synthetic Credit Portfolio was balanced, and Mr. Braunstein requested additional follow-up, including a “clear analysis of the positions – maturities, balances, spreads (current) and normalized.” Mr. Braunstein updated Mr. Dimon by e-mail on this meeting, as well as on a number of other press- and analyst-related topics. Shortly after the meeting, the

executive from the Synthetic Credit Portfolio also forwarded Mr. Braunstein a written presentation on the Synthetic Credit Portfolio and information on a proposed liquidity reserve for the IG-9 tranches in the Synthetic Credit Portfolio. The presentation summarized likely profit-and-loss impacts under a variety of scenarios, all of which were viewed by Mr. Braunstein as manageable.

That evening, Mr. Hogan e-mailed Mr. Dimon regarding CIO. Mr. Hogan had been independently discussing the Synthetic Credit Portfolio with Mr. Venkatakrisnan and an individual from Model Risk and Development, who were in London and had been assisting in assessing certain aspects of the Synthetic Credit Portfolio. Among other things, Mr. Hogan told Mr. Dimon that “the current issue [relating to losses incurred by the Synthetic Credit Portfolio] is fine and I understand the rationale for it,” but added that he thought the CIO needed “tighter governance/controls/escalation protocols” and that he believed Ms. Drew agreed. Messrs. Braunstein and Hogan also received an analysis from Mr. Goldman regarding the Synthetic Credit Portfolio’s counterparty risk (*i.e.*, risk based on the creditworthiness of particular counterparties and their ability to perform their contractual obligations).

The following day, one of the traders also e-mailed Ms. Drew, Mr. Wilmot, Mr. Goldman, Mr. Weiland and an executive from the Synthetic Credit Portfolio team an explanation of why his team had decided to increase their investment-grade position instead of reducing high-yield short positions. He stated that they had been unable to trade out of the high-yield short positions and viewed the addition of a long-risk position in IG-9 as the “next best hedge.”

Mr. Wilmot forwarded a slightly revised version of this explanation to Messrs. Dimon, Braunstein, and Hogan.

Mr. Wilmot also e-mailed Mr. Dimon, Mr. Braunstein, Mr. Hogan, Ms. Drew, and others, providing information on the size of the net positions in the Synthetic Credit Portfolio. The e-mail stated that CIO's IG-9 position represented the equivalent of 10-15 trading days of 100% of the average daily trading volume.⁷⁷ This e-mail (along with a subsequent April 12 e-mail showing longer exit periods for certain of the IG-9 instruments) indicated that the positions were large, but senior Firm management took comfort from the fact that CIO had no need to sell the positions and could therefore wait until the market normalized.

April 10 was the first trading day in London after the "London Whale" articles were published.⁷⁸ When the U.S. markets opened (*i.e.*, towards the middle of the London trading day), one of the traders informed another that he was estimating a loss of approximately \$700 million for the day. The latter reported this information to a more senior team member, who became angry and accused the third trader of undermining his credibility at JPMorgan. At 7:02 p.m. GMT on April 10, the trader with responsibility for the P&L Predict circulated a P&L Predict indicating a \$5 million loss for the day; according to one of the traders, the trader who circulated this P&L Predict did so at the direction of another trader. After a confrontation between the

⁷⁷ This estimate was prepared by CIO Market Risk, and initially circulated to Ms. Drew, Mr. Venkatakrisnan, Mr. Goldman, Mr. Weiland and senior members of the Synthetic Credit Portfolio team. The estimate does not account for the size of IG-9 tranche positions, and also does not reflect the potential time required to exit the position, generally.

⁷⁸ The markets were closed in London on Monday April 9 due to the Easter holiday.

other two traders, the same trader sent an updated P&L Predict at 8:30 p.m. GMT the same day, this time showing an estimated loss of approximately \$400 million. He explained to one of the other traders that the market had improved and that the \$400 million figure was an accurate reflection of mark-to-market losses for the day.

After the markets closed, Ms. Drew notified Messrs. Dimon and Braunstein about the day's mark-to-market loss of \$412 million. It was, she observed, an eight-standard-deviation event that she attributed to the market's belief that JPMorgan would have to liquidate the positions described in the articles.⁷⁹ Shortly thereafter, Ms. Drew circulated a second e-mail to Messrs. Dimon, Braunstein, Hogan, Zubrow, Staley, Goldman, Wilmot and an executive from the Synthetic Credit Portfolio, attaching the trader's updated second-quarter profit-and-loss summary and scenario analysis, which was to be discussed the following morning.⁸⁰ The analysis showed an 80% likelihood of a second-quarter result in the range of -\$250 million to +\$350 million for the Synthetic Credit Portfolio, with a 10% "extreme" result of -\$650 million and a 10% "optimistic" result of +\$1.725 billion.

On April 11, Messrs. Dimon and Braunstein received updates related to the Synthetic Credit Portfolio. Mr. Hogan also copied them on a description of the Investment Bank's risk limits for comparable products and expressed the view that these should be implemented in CIO

⁷⁹ A senior member of the Synthetic Credit Portfolio team stated at the time that the losses were attributable to the market's increased awareness of JPMorgan's position and were thus part of an aberrational pattern that would eventually "mean revert."

⁸⁰ The updated estimate noted that "these scenarios do not include 10 April P&L, which would accrete back into each scenario +\$400MM, if re-calibrated for today's market moves."

as soon as possible. Mr. Hogan separately informed Mr. Braunstein that Mr. Venkatakrishnan had informed him – and had included in an analysis being prepared – that in an extreme loss scenario (of a steepening movement of 20 basis points), the total loss for the second quarter could be up to \$1 billion if certain offsetting hedges did not work, and up to \$550 million if they did work.⁸¹

On April 11, Mr. Wilmot circulated to Messrs. Dimon, Braunstein and others a presentation on the Synthetic Credit Portfolio that addressed, among other things, notional exposure relative to various counterparties,⁸² maturities, certain positions and profit-and-loss scenarios, noting that it had been reviewed with Jes Staley,⁸³ Mr. Braunstein, Ms. Drew, Mr. Zubrow and Mr. Hogan. The presentation outlined second-quarter profit-and-loss estimates for a number of scenarios, including a -\$150 million “Status Quo” estimate and a +\$350 million “Central Scenario” estimate.”⁸⁴ The presentation also detailed the extent of the Synthetic Credit Portfolio’s considerable default protection coming from the IG-9 tranche positions. It further

⁸¹ The email circulating these materials reads: “Jamie, Attached please find a presentation on the synthetic credit book that was reviewed this afternoon with Doug, Jes, Ina, Barry and John. It covers the relevant data requests from the past several days.” This presentation was created by a member of CIO Market Risk, and initially circulated to Ms. Drew, Mr. Goldman, Mr. Wilmot, Mr. Weiland, Mr. Venkatakrishnan, and members of the Synthetic Credit Portfolio and Model Risk and Development teams, to use in an unspecified meeting.

⁸² The notional information appears to be directed at counterparty risk, and identifies (among other things) the net notionals outstanding with other parts of the Firm (\$13 billion), with an exchange through which certain third-party trades are cleared (\$96.7 billion) and with third parties for whom trades are not cleared through the exchange (\$47.5 billion).

⁸³ Mr. Staley was, at this time, the Chief Executive Officer of the Investment Bank.

⁸⁴ The presentation also outlined a 10% “extreme” result of a \$650 loss million and a 10% “optimistic” result of \$1.725 billion gain.

included a description of Mr. Venkatakrishnan's April 11 extreme loss scenario analysis, described above.⁸⁵

Finally, Messrs. Dimon and Braunstein were provided an update on press activity. This included a *Wall Street Journal* article entitled "Making Waves Against the Whale," which suggested that CIO's activity in the market had affected prices, first by driving down the price of buying protection when it was selling a large amount of protection, and then causing the price of protection to go back up when CIO completely stopped selling protection. Mr. Braunstein forwarded the article to Ms. Drew and others and asked, "[i]f the selling pressure impact described in the article was accurate[,] then [might] the change in value [that is causing CIO to lose money]...be in part a return to a more normalized range post our selling activity." One of the recipients responded by circulating an analysis from CIO Market Risk that, as he described it, demonstrated that CIO's activity was "not a big driver of the market moves."

That same day (April 11), Ms. Drew forwarded to Messrs. Dimon, Braunstein, Hogan, Zubrow and others an "Executive Summary" e-mail written by one of the traders. This trader characterized the Synthetic Credit Portfolio as "balanced in terms of directionality." He

⁸⁵ Mr. Venkatakrishnan's estimate was based on an underlying analysis performed by CIO. Although not evident on the face of the document, the Task Force has determined that the underlying analysis was based on an incomplete analysis by CIO London of the potential risks presented by the Synthetic Credit Portfolio. Specifically, the analysis is predicated on losses arising from a steepening of the credit curve, and assumes the existence in the Synthetic Credit Portfolio of a significant flattening position that would limit potential exposure. In fact, there was not a significant flattener in the Synthetic Credit Portfolio, and the analysis also did not consider the impact of an outright movement in the curve. As a result, the presentation's estimate of the worst-case profit-and-loss scenarios was understated. Mr. Venkatakrishnan was not aware of these issues when he assisted CIO.

acknowledged that the hedges in the Synthetic Credit Portfolio had not performed as expected and that the market “goes against all economic sense,” but stated that, although it “might take some time,” he remained “very confident” that the Synthetic Credit Portfolio would recover its losses for three reasons: (1) because of the increased carry the Synthetic Credit Portfolio gained as a result of market moves; (2) because of the possibility of future defaults that might generate revenue; and (3) because the market for the positions that should have (but had not yet) offset the losses would, in his view, “mean revert” and eventually begin to operate as expected. He also suggested that the press coverage may have played a role in distorting the market value of the positions. A chart attached to the e-mail shows that the Synthetic Credit Portfolio had almost doubled its net notional amount of certain synthetic credit positions since January 2012.

Messrs. Dimon and Braunstein also received additional data from Ms. Drew and Mr. Goldman regarding the Synthetic Credit Portfolio on April 12, including additional information about the Synthetic Credit Portfolio’s net notionals, background on the synthetic credit market, the historic purpose of the Synthetic Credit Portfolio, and information regarding the size of certain IG-9 and high-yield positions. On the evening of April 12, as is customary, the Firm’s Executive Committee met in advance of the first-quarter earnings call that was scheduled for the following day. Ms. Drew spoke about CIO-related issues that would likely be raised the next morning. She stated that the Synthetic Credit Portfolio had significant value and was well-balanced, and that the current issues were a media event that had pushed the market against CIO. After the meeting concluded, Mr. Dimon confirmed with Ms. Drew that CIO could hold its

positions for as long as it wanted, and that no third party had a contractual right to force it to sell. Mr. Dimon wanted to confirm that CIO could hold the positions until the market returned to normal levels, and that there was no contractual risk that CIO would be required to sell unless it wanted to do so.

The first-quarter earnings call was held on the morning of April 13. During the earnings call, Mr. Braunstein addressed the Synthetic Credit Portfolio issues. While he had prepared remarks regarding the Firm's financial results, he had not planned on addressing Synthetic Credit Portfolio positions, and thus did not have prepared remarks relating to CIO. However, shortly before the call, the Global Head of Corporate Communications suggested that Mr. Braunstein address the matter and he agreed to do so. Mr. Braunstein explained on the call that the Synthetic Credit Portfolio had historically taken positions designed to manage the potential losses that could result from a significant stress credit environment. Specifically, Mr. Braunstein explained that:

. . . [W]e also need to manage the stress loss associated with that portfolio, and so we have put on positions to manage for a significant stress event in Credit. We have had that position on for many years and the activities that have been reported in the paper are basically part of managing that stress loss position, which we moderate and change over time depending upon our views as to what the risks are for stress loss from credit.

Mr. Braunstein further stated his belief that the Firm was "very comfortable" with the positions. Mr. Dimon did not discuss the Synthetic Credit Portfolio in his opening remarks, but he

responded to analyst questions on the subject and agreed with an analyst's characterization of the issue as a "tempest in a teapot."

Mr. Dimon had been briefed on the issue and the work being performed, although he had not been involved firsthand in many of the discussions that had taken place during that period.⁸⁶ After the analyst call, Mr. Dimon sent an e-mail to Mr. Hogan asking why the Synthetic Credit Portfolio team had decided to increase their investment-grade position instead of reducing the high-yield position. Mr. Hogan responded that he and Mr. Braunstein had asked the same question and had been told that increasing the position "was [the] most 'efficient' way to do it," but that he (Mr. Hogan) thought that CIO had "wanted to improve the carry on the book by selling protection and taking in some premium."

4. Continued Declines and Internal Reviews

In the week after the April 13 earnings call, the Synthetic Credit Portfolio experienced additional losses totaling approximately \$117 million.⁸⁷ By the week of April 23, the losses began to accelerate rapidly. On April 23, the Synthetic Credit Portfolio experienced a single-day

⁸⁶ Mr. Dimon had not been in the office from April 2 until his return on April 12.

⁸⁷ Mr. Goldman provided the DRPC on April 17 with an update on CIO's activity, focusing on recent news reports regarding the so-called "London whale." According to the meeting minutes, Mr. Goldman "reviewed the history of CIO's synthetic credit book and how it fits within CIO's overall hedging strategy. He described the attributes of the IG-9 index and how purchasing of that index was used to offset other existing positions. Mr. Goldman noted that recent news reports were based on an inaccurate market perception that the portfolio was unhedged, based on a lack of knowledge of how CIO manages the structural risk of the company; he reported that in fact the risk was balanced. In response to questions from the Committee, Messrs. Braunstein and Hogan noted that the information they had received was consistent with this analysis. Messrs. Goldman and Hogan also described an ongoing post mortem on these trades that includes governance and market limits."

loss of approximately \$161 million. This was followed by losses of approximately \$82 million and \$188 million on April 24 and 25, respectively (with a total loss of almost \$800 million over the course of the six trading days ending on April 30). These losses were inconsistent with the earlier loss estimates and prediction from one of the traders that the market would “mean revert,” and they caused Messrs. Dimon, Braunstein and Hogan as well as Ms. Drew to question whether the Synthetic Credit Portfolio team adequately understood the Synthetic Credit Portfolio or had the ability to properly manage it.

Senior Firm management decided to commission a thorough review of the Synthetic Credit Portfolio, conducted by personnel outside of CIO, in order to better understand the losses it was experiencing and whether the Synthetic Credit Portfolio was being properly managed. On April 26, Mr. Hogan directed a senior member of Firm-wide Market Risk to commence a position-by-position review of the Synthetic Credit Portfolio. This individual, who was in New York on business, returned to London on April 27 and began working with an experienced trader from the Investment Bank and others to analyze the Synthetic Credit Portfolio. As requested by Mr. Hogan, this team examined every position in the Synthetic Credit Portfolio, and attempted to understand how each position was performing and how it was (or was not) correlated to the other positions in the Synthetic Credit Portfolio. The team worked long hours on this review, reporting back to senior Firm management on daily update calls. By Sunday, April 29, after hearing its initial reports, Messrs. Dimon and Hogan asked the team to take over responsibility for the Synthetic Credit Portfolio.

The team continued their intensive review (and the twice-daily update calls) throughout the following week. The team, purposefully not taking into account CIO's views as to what they had intended and how the Synthetic Credit Portfolio was supposed to work, independently analyzed the correlations among the various positions under a range of market scenarios. Based on this review, they concluded that the Synthetic Credit Portfolio was not as well protected against various market scenarios as had been previously thought. In addition, they found that the market's knowledge of the positions and a continued decrease in liquidity made risk reduction even more challenging.

5. Disclosure of the Losses

The JPMorgan Audit Committee met on May 2 to review a draft of the first-quarter Form 10-Q. At that meeting, Ms. Drew made a presentation on the Synthetic Credit Portfolio and explained the rationale for the trades that had been put on in the first quarter. Ms. Drew provided the explanation given to her previously by one of the traders as to the increase in the notional size of certain positions in the Synthetic Credit Portfolio, explaining (among other things) the RWA reduction required by the upcoming Basel rules, the anticipated improvement of the economy at the end of 2011, the purported difficulties encountered by the traders in unwinding the positions, and the ensuing use of the IG-9 long position as an offset to the high-yield short positions. She also explained that the Synthetic Credit Portfolio had, by the date of the meeting, moved to a net long credit position.

The deadline for filing the Form 10-Q was May 10, and management noted at the May 2 meeting that it would continue its efforts to understand the Synthetic Credit Portfolio's positions – and the likely losses – as it prepared the Form 10-Q for filing. On May 10, JPMorgan filed its first-quarter 2012 Form 10-Q, and on an analysts' call disclosed that the Synthetic Credit Portfolio had incurred approximately \$2 billion in mark-to-market losses in the second quarter to date, with the possibility of additional future losses and volatility as the positions were unwound. As a result of the operational issues relating to the VaR model described in Appendix A, the Firm also stated on May 10 that it had reverted back to its prior VaR model for CIO.

In addition to the review led by the senior individuals from Firm-wide Market Risk and the Investment Bank, the Firm also performed substantial additional work from late April up until the May 10 filing relating to the valuation of the positions in the Synthetic Credit Portfolio to confirm that they had been priced consistently with Firm policy and U.S. GAAP. The review had two primary components. First, a combination of individuals from CIO Finance, the Firm's internal accounting department, valuation experts from the Investment Bank, and others examined the prices assigned by CIO to the positions in the Synthetic Credit Portfolio, including at March 30.⁸⁸ This work included collecting market information about the positions in the Synthetic Credit Portfolio; performing an analysis of the positions using the Investment Bank's valuation methodology and personnel; and obtaining explanations from the traders about the

⁸⁸ Price validation analyses were conducted by (among others) the Head of JPMorgan's Accounting Policy Group for CIO EMEA.

bases for the prices assigned to the positions in question. The review of the pricing data confirmed that the valuations of the positions in the Synthetic Credit Portfolio were within the range of reasonable fair values for such instruments. Individuals working on the review understood that, although the March 30 trader marks for the Synthetic Credit Portfolio were aggressive, they were predominantly within the VCG thresholds.⁸⁹ And, when questioned about the March 30 marks, the traders all confirmed that the marks at March 30 reflected their good-faith estimation of the positions' value, and one of them explicitly denied any bias.

Second, in addition to the review of the front office marks, the Firm also conducted a review of the VCG process related to the valuation of the Synthetic Credit Portfolio. As a result of its work, the Firm confirmed that PwC was aware of the CIO VCG process and the Firm concluded that the process – including the identification of a mid-market price and application of a threshold around that price – was designed to result in marks that were compliant with U.S. GAAP. The Firm therefore concluded, after consultation with PwC (which was conducting its quarterly review procedures), that the marks were determined in accordance with U.S. GAAP and Firm policy.

During its subsequent efforts to obtain and understand all the facts relating to the CIO losses, the Task Force became aware of facts that caused it (and the Firm and PwC) to revisit

⁸⁹ There were some marks that had been outside the thresholds, but those had been adjusted by VCG in early April to the threshold, for a total adjustment of approximately \$17 million.

these conclusions.⁹⁰ With respect to the front office marks, the Task Force learned that not all of the marks appeared to reflect an unbiased assessment by the front office of exit prices and instead that some of the marks reflected, at least in part, pressure exerted by one of the traders to minimize the losses shown. This new information, which was uncovered in electronic communications and recorded conversations subsequent to the May 10 filing, was shared with PwC, and the Firm decided – following analysis and consultation with PwC – to restate its financial statements for the first quarter to reflect the valuations that would have been employed if the positions had been marked to an objectively determined “mid” valuation.⁹¹ The announcement of the restatement was made on July 13.

D. Risk Limits and Excessions

The three primary categories of risk metrics applicable to CIO were VaR, stress, and non-statistical credit-spread widening metrics (Credit Spread Basis Point Value (“CSBPV”)⁹² and CSW 10%⁹³). Pursuant to Firm policy, each of these metrics was subject to certain limits. Limits are classified by type, as Level 1, Level 2, or “threshold.” A limit’s type determines who is responsible for approving the limit, who receives notice of any excessions, and who within the Firm is responsible for approving any increases. The CIO Global 10-Q VaR and CIO stress

⁹⁰ Much of this subsequently discovered information is described in Section II.C.2 of this Report (among other places) and includes the discovery of the “divergence,” as well as the March 30 and April 10 valuation-related events.

⁹¹ The Firm re-marked the positions to objectively determined “mid” valuations, which the Firm believes was reasonable under the circumstances.

⁹² See Section II.D.2.

⁹³ See Section II.D.3.

limits were Level 1 limits, while the CIO CSBPV and CIO CSW 10% limits were Level 2 limits. Any excessions of Level 1 or Level 2 limits had to be reported to the signatories to the limit, the Risk Committee for the line of business, and the Market Risk Committee or Business Control Committee for the line of business.⁹⁴ Under Firm policy, all excession notifications should include (1) a description of the limit excess, (2) the amount of the limit, (3) the exposure value (*i.e.*, the amount by which the limit has been exceeded) and the percentage by which the limit has been exceeded, and (4) the number of consecutive days the limit has been exceeded. Excessions are addressed differently depending on type, but in the event of an “active limit excess,” which occurs when a business unit exceeds its own limit, the business unit “must take immediate steps to reduce its exposure so as to be within the limit,” unless a “one-off approval” is granted. A “one-off approval” refers to a temporary increase for a limited period of time; it must be provided by the persons who were responsible for setting the original limit.

Limits are not rigid restrictions, and some excessions are expected. The excession process, however, serves an important function: triggering discussion and analysis of the reasons for an excession and of the limit that has been exceeded.⁹⁵

⁹⁴ There was no specific number of days by which the notifications were required to be distributed at the time, although Market Risk Management typically sent such notifications within a matter of days of a limit having been exceeded. As described in Section IV.B.2, as part of its remedial measures, the Firm has instituted a policy specifying procedures, including time limits, for escalation of limit excessions.

⁹⁵ An earlier limit breach within CIO appears to have been part of the impetus for a review of CIO’s limit structure begun by CIO’s Head of Market Risk in the summer of 2011, described below. Beginning in March 2011, CIO’s aggregate stress loss limit was in breach for some time. The breach, which was discussed among the Chief Investment Officer, the Firm-wide Chief Risk Officer, and the CIO Head of

At various points and for different reasons, discussed in further detail below, the limits for each of these metrics were exceeded in the first quarter of 2012. The CIO Global 10-Q VaR limit was exceeded in the second half of January. These excessions were addressed by position changes and by implementation of a new VaR model, which had been in process for almost six months when the CIO VaR began to be exceeded. The other excessions of CIO limits in the first quarter of 2012, namely, the CSBPV limit, the CSW 10% limits, and the stress loss limits, were the subject of discussion within CIO, and, in the case of the stress loss limit, among senior Firm management. However, the trading had largely ceased by the time the aggregate CSW 10% limit and the stress loss limits, in particular, were exceeded in late March and April 2012.⁹⁶

1. *Value at Risk*

VaR is a statistical estimate of the risk of loss on a portfolio of assets. A portfolio's VaR represents an estimate of the maximum expected mark-to-market loss over a specified time period, generally one day, at a stated confidence level, assuming historical market conditions.

Beginning in mid-January 2012, CIO breached its VaR limit on multiple days, which also contributed to breaches of the Firm's VaR limit. CIO explained to Mr. Hogan and Firm-wide Market Risk that the breaches were being addressed in two ways: (1) continued management of CIO's positions, and (2) implementation of a new, "improved" VaR model for CIO. In response

Market Risk, appears to have been caused principally by activity unrelated to the Synthetic Credit Portfolio, in CIO's international rates sector.

⁹⁶ CIO's mark-to-market CSW 10% limit was first exceeded on March 22, 2012, the day before Ms. Drew gave the instruction to stop trading. The aggregate CSW 10% limit was not exceeded until April 10, 2012.

to the notification of a second consecutive breach in the Firm-wide VaR limit on January 18 (which was primarily driven by “position changes in CIO”), Mr. Hogan requested that Mr. Weiland and a senior member of Firm-wide Market Risk look into the factors driving the increase in the CIO VaR and report back with a recommendation. Mr. Weiland advised Firm-wide Market Risk that it was CIO’s intention to “bring the VaR down, even under the current VaR model,” and another member of CIO Market Risk further advised that they expected the breach of the VaR limit to be resolved through “active risk management,” meaning by trading in a manner expected to reduce the risk profile of the portfolio. In an e-mail to Mr. Hogan on January 20, Mr. Goldman explained that “position offsets to reduce [the CIO] VaR” were happening daily. With respect to the implementation of a new VaR model, Mr. Weiland informed Firm-wide Market Risk that CIO was in the final phase of a model review for a “new VaR model for the tranche book” (meaning the Synthetic Credit Portfolio) and that the new model was expected to result in a lower VaR for CIO.

Mr. Weiland recommended a temporary, one-off increase in the Firm-wide VaR limit, with an expiration set to coincide with the expected timing of the VaR model approval. A subsequent e-mail from Market Risk Reporting on January 23 requested Messrs. Dimon and Hogan’s approval for a temporary increase in the Firm’s 10-Q VaR limit⁹⁷ from \$125 million to \$140 million, expiring on January 31, 2012. The request noted that there was an approval

⁹⁷ The Firm’s “10-Q VaR” is the VaR for all the Firm’s mark-to-market positions; it includes CIO’s Global 10-Q VaR.

pending for a new model for the CIO Synthetic Credit Portfolio and that the new model was expected to reduce Firm-wide VaR back below the \$125 million limit.⁹⁸ Messrs. Dimon and Hogan approved the temporary increase in the Firm-wide VaR limit, and Ms. Drew approved a temporary increase in CIO's 10-Q VaR limit. In an e-mail to Mr. Hogan on January 25, Mr. Goldman reported that the new model would be implemented by January 31 "at the latest" and that it would result in a "significant reduction" in the VaR. On January 28, in response to an inquiry from Mr. Hogan about the change in methodology, Mr. Goldman advised him that the new model had been approved by the Model Review Group and that the Model Review Group considered it to be "superior" to the model used by the Investment Bank. There was no corresponding change made to the CIO Global 10-Q VaR limit at the time of the new model's implementation – *i.e.*, it remained at \$95 million.⁹⁹ Following implementation of the new model, the CIO VaR fell below the limit, as expected.

⁹⁸ As explained in further detail in Appendix A, a significant reduction in the CIO VaR was expected upon implementation of the new model, which had been in development throughout the Fall of 2011. 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.

⁹⁹ A reduction in the CIO VaR limit was being considered at this time as part of a broader ongoing discussion about a revised limit structure for CIO. For example, in a January 25, 2012 e-mail exchange, Mr. Hogan asked Mr. Goldman whether CIO had any intention of further increasing its temporary VaR limit or recommending an increase in the Firm-wide VaR limit in response to the ongoing breaches in the CIO and Firm-wide VaR limits. Mr. Goldman replied, "The new VaR model was approved today and we will get a significant reduction under the limit when implemented – January 31st at the latest. I do not think it's worth changing limits till [the new] model is implemented." Although a proposal to reduce the VaR limit and to change the limit structure of CIO was under active discussion at this time (Messrs. Goldman and Weiland presented a version of it to Ms. Drew in February 2012 and Mr. Weiland made a presentation to the CIO Risk Committee in March), a new CIO limit structure was not implemented until

2. Credit Spread Basis Point Value

CSBPV is one measure of the sensitivity of a portfolio to a one basis point move. With respect to the Synthetic Credit Portfolio, it reflected an aggregation of the CSBPV sensitivities of all the credit products (*e.g.*, investment-grade and high-yield), unadjusted for correlations. Although Ms. Drew did not regularly receive reports with CIO's CSBPV figures or receive notifications from Market Risk Reporting when the limit was exceeded (because it was a Level 2 limit and she was not a signatory to it), there was discussion among other personnel within the CIO Risk Management function when the CSBPV limit began to be exceeded in the first quarter. For example, when the CSBPV limit was first breached on January 6, 2012, an individual from CIO Market Risk, in an e-mail to Mr. Goldman, Mr. Weiland and two senior members of the Synthetic Credit Portfolio team noted that CIO was actively taking steps to reduce risk in order to move within the CSBPV threshold. This individual continued to monitor the CSBPV limit status and to update his manager. Ms. Drew was aware, by virtue of an e-mail she received from Mr. Goldman on February 13, 2012, that the CIO Global Credit Spread CSBPV limit had been in breach for most of the year. She responded that she had no memory of this limit and that, in any case, it needed to be "recast with other limits" because it was "old and outdated." It was one of

May 2012, and those limits were substantially different from and more detailed than the limits that had been included in Mr. Weiland's proposal.

the limits that was to be adjusted or replaced altogether as part of a proposal by Mr. Weiland to revise the CIO limit structure, which was pending at that time.¹⁰⁰

At various times, beginning in February, CIO Market Risk suggested a temporary increase in the mark-to-market (“MTM”) CSBPV limit, from \$5 million to \$20 million, \$25 million or \$30 million. On March 1, Firm-wide Market Risk Management e-mailed Mr. Weiland and a senior member of the Synthetic Credit Portfolio team (the signatories to the limit) requesting their approval to temporarily increase the aggregate and MTM CSBPV limits until March 31.¹⁰¹ Although Mr. Weiland agreed with the suggestion to increase the limit, neither he nor his co-signatory from the Synthetic Credit Portfolio approved the request for a temporary increase and no such increases were implemented. An e-mail from Market Risk Management to the same signatories on March 26 advised that CIO had been breaching its aggregate and MTM CSBPV limits from February 21 through March 21 and that the breaches were “the result of portfolio and hedge rebalancing since start of 2012.” The notification went on to point out that the CSBPV had certain flaws that made it less reliable than the CSW 10% (*i.e.*, that it was not normalized for the level of spreads and did not capture convexity) and that a full limit review was underway for the CIO business, which would result in a proposal that was expected to address those issues.

¹⁰⁰ See n. 99.

¹⁰¹ The CSBPV for both the mark-to-market portfolio and part of the asset-backed securities portfolio are included in the calculation of the aggregate CSBPV metric. The MTM CSBPV limit takes into account only the CSBPV for the mark-to-market portfolio.

3. Credit Spread Widening 10% and Stress Loss

The CIO CSW 10%¹⁰² aggregate and mark-to-market limits and the aggregate and mark-to-market stress loss limits began to be exceeded in late March. CSW 10% stresses all credit spreads in a book wider by 10% – for example, a CDS currently marked at 100 basis points will be revalued at 110 basis points – and then calculates the profit-and-loss effect.

The CSW 10% mark-to-market limit began to be exceeded on March 22, 2012, and the CSW 10% aggregate limit began to be exceeded on April 10, 2012. The MTM limit breach was first reported in the CIO Daily Limit Report on March 26, 2012, and the aggregate limit breach was reported on April 11, 2012. The Daily Limit Report was distributed within CIO to, among others, Mr. Goldman and Mr. Weiland, although it was not distributed to Ms. Drew. It included a Position Limit and Loss Advisory Summary Report that provided detail on each of CIO's limits, including the amount of each limit, the limit's current level of utilization, the percentage by which a limit was in excess, if any, the amount of each limit in the previous four trading days, and the monthly trend for each limit. Both CIO CSW 10% limits continued to be exceeded throughout April. The excessions were attributed to "portfolio and hedge rebalancing since [the] start of 2012."

On March 29, 2012, the aggregate and mark-to-market stress limits for CIO, which were tested weekly, also began to be exceeded. Stress testing is used to measure the Firm's vulnerability to losses under adverse and abnormal market environments. Its purpose is to assess

¹⁰² For an explanation of CSW 10%, see n. 6.

the magnitude of potential losses resulting from a series of plausible events in these hypothetical abnormal markets. Stress testing is performed by applying a defined set of shocks, which vary in magnitude and by asset class, to a portfolio. For example, weekly testing stresses the Firm's positions under a number of hypothetical scenarios such as a credit crisis, an oil crisis, and an equity collapse. On March 29, CIO exceeded its aggregate stress loss limit threshold, with the "oil crisis" stress test resulting in the "worst case scenario." This excession and those that followed reflected the potential loss that was calculated by stressing the underlying positions. As described above, the notional value of the Synthetic Credit Portfolio grew over time during the months preceding March 29. The increase in notional value in turn resulted in a higher hypothetical stress loss when the Firm ran the Synthetic Credit Portfolio through its various stress scenarios. The stress loss excessions were reported in the first weekly stress report that followed, on April 6, 2012.¹⁰³ CIO's mark-to-market stress limit continued to be exceeded throughout April. By then, however, the trading that precipitated the losses in the Synthetic Credit Portfolio had ceased.

III. Key Observations

The Task Force agrees with Mr. Dimon's public acknowledgement that CIO's trading strategies for the Synthetic Credit Portfolio in the first quarter of 2012 were "poorly conceived and vetted," CIO "did not have the requisite understanding of the risks [it] took," and "risk

¹⁰³ The report was circulated to Mr. Dimon, Mr. Staley, Mr. Hogan, Mr. Zubrow, Ms. Drew, Mr. Goldman and Mr. Weiland, among others.

control functions were generally ineffective in challenging the judgment of CIO's trading personnel."

A. CIO Judgment, Execution and Escalation in the First Quarter of 2012 Were Poor

The Task Force has identified six areas in which CIO failed in its judgment, execution and escalation of issues in the first quarter of 2012: (1) CIO management established competing and inconsistent priorities for the Synthetic Credit Portfolio without adequately exploring or understanding how the priorities would be simultaneously addressed; (2) the trading strategies that were designed in an effort to achieve the various priorities were poorly conceived and not fully understood by CIO management and other CIO personnel who might have been in a position to manage the risks of the Synthetic Credit Portfolio effectively; (3) CIO management (including CIO's Finance function) failed to obtain robust, detailed reporting on the activity in the Synthetic Credit Portfolio, and/or to otherwise appropriately monitor the traders' activity as closely as they should have; (4) CIO personnel at all levels failed to adequately respond to and escalate (including to senior Firm management and the Board) concerns that were raised at various points during the trading; (5) certain of the traders did not show the full extent of the Synthetic Credit Portfolio's losses; and (6) CIO provided to Firm management excessively optimistic and inadequately analyzed estimates of the Synthetic Credit Portfolio's future performance in the days leading up to the April 13 earnings call. In addition, the Task Force has considered the impact of the Firm's compensation structure on the events in question.

1. *The Priorities*

By early 2012, CIO management, including Ms. Drew, had imposed multiple priorities on the Synthetic Credit Portfolio. These priorities included (1) balancing the risk in the Synthetic Credit Portfolio, (2) reducing RWA, (3) managing profits and losses, (4) managing or reducing VaR, and (5) providing “jump-to-default” protection. These priorities were potentially in conflict, and the requirement that the traders satisfy all of these goals appears to have prompted at least some of the complicated trading strategies that led to the losses. Rather than imposing a multitude of potentially competing priorities on the traders, CIO management should have determined (or engaged senior Firm management on the question of) which of these priorities should take precedence, how they could be reconciled, and how CIO intended to execute on the priorities. That did not occur and instead, CIO management imposed inconsistent and potentially competing priorities on its traders.

2. *The Trades*

The trading strategies that were put in place in early 2012 were poorly conceived and vetted, and neither the trading nor its impact on RWA were fully understood by CIO management or the traders. The Firm expected them to subject CIO trading strategies to rigorous analysis and questioning prior to implementation, and to understand the risks inherent in the trading strategies. Here, they did not, and instead put in place the trading strategy without fully understanding what risks were being taken on, particularly in light of the size of the positions being built over the course of the first quarter of 2012.

3. The Reporting

The Firm's Chief Investment Officer did not receive (or ask for) regular reports on the positions in the Synthetic Credit Portfolio or on any other portfolio under her management, and instead focused on VaR, Stress VaR, and mark-to-market losses. As a result, she does not appear to have had any direct visibility into the trading activity, and thus did not understand in real time what the traders were doing or how the portfolio was changing. And for his part, given the magnitude of the positions and risks in the Synthetic Credit Portfolio, CIO's CFO should have taken steps to ensure that CIO management had reports providing information sufficient to fully understand the trading activity, and that he understood the magnitude of the positions and what was driving the performance (including profits and losses) of the Synthetic Credit Portfolio.

4. The Concerns

A number of CIO employees, including Ms. Drew, Mr. Goldman, Mr. Wilmot, Mr. Weiland and members of the Synthetic Credit Portfolio team became aware of concerns about aspects of the trading strategies at various points throughout the first quarter.¹⁰⁴ However, those concerns failed to be properly considered or escalated, and as a result, opportunities to more closely examine the flawed trading strategies and risks in the Synthetic Credit Portfolio were missed. Examples include (but are not limited to):

¹⁰⁴ See Section II.C.1.

December 2011

- One of the traders raised concerns with senior members of the Synthetic Credit Portfolio team about P&L volatility that could accompany an effort to reduce RWA by selling protection.

January 2012

- In late January, Mr. Wilmot expressed concern to Mr. Goldman about the VaR levels.
- On January 30, one of the traders wrote to another trader expressing concerns about the lack of liquidity in the market and the fact that any additions to the positions, notwithstanding any near-term benefits, would ultimately increase the risks and size of the Synthetic Credit Portfolio, as well as its sensitivity to price moves and trading costs.
- On January 31, a senior member of the Synthetic Credit Portfolio team forwarded to Ms. Drew an e-mail exchange between himself and one of the traders, which included an e-mail from another of the traders. That senior member expressed the view that the Synthetic Credit Portfolio was not behaving as intended and that financial performance was “worrisome”; the trader’s underlying e-mail noted that the losses were large because the notional size of the positions was large, and that the Synthetic Credit Portfolio was losing money on a number of positions.

February 2012

- On February 2, according to one of the traders, he advised Ms. Drew and another trader that the Synthetic Credit Portfolio could experience additional losses of \$100 million, and explained that it was possible that they did not have the right long position in light of the characteristics of the IG-9 position and the relevant market dynamics.
- On February 2, Mr. Weiland sent an e-mail to one of the traders regarding VaR and RWA measurements for the Synthetic Credit Portfolio, expressing concern that that trader had provided an “overly optimistic” view of the likelihood that the Firm’s RWA model would be changed and the forward projection for RWA reduction.

- On February 13, Mr. Goldman e-mailed Ms. Drew and noted that the CIO Global Credit Spread CSBPV limit had been in breach for most of the year.
- On February 15, Mr. Weiland noted for a member of CIO Market Risk (among others) that CIO had, since mid-January, been in breach of its CSBPV limits, primarily as a result of position changes in the Synthetic Credit Portfolio.

March 2012

- On March 1, one senior member of the Synthetic Credit Portfolio team expressed concern to another such member that the traders would be unable to defend their positions if they were forced to effect an unwind in order to meet RWA targets.
- On March 7, Mr. Venkatakrisnan wrote to Ms. Drew, Mr. Hogan, Mr. Goldman, Mr. Weiland and Firm-wide Market Risk that the Synthetic Credit Portfolio's RWA had increased by approximately \$3 billion between January and February as a result of a \$33 billion increase in notionals in long index risk.
- On March 20, Ms. Drew and Mr. Goldman presented an overview of CIO to the DRPC. Neither of them raised the increasing mark-to-market losses, the substantial change in the trading strategy, the recent and ongoing breaches in certain of CIO's risk limits, the significant growth in the Synthetic Credit Portfolio's notionals, or the delay in the trading-based RWA reduction effort. The change in the VaR model and breaches of the CIO and Firm-wide VaR limits that had occurred in January 2012 were also not discussed.
- By late March, one of the traders informed Ms. Drew that he was considering adding to the size of the Synthetic Credit Portfolio in order to "defend" their position.

April 2012

- In early April, Mr. Wilmot raised questions with Ms. Drew about whether the traders could effect the RWA reduction without an unwind of positions.

These concerns were not fully explored. At best, insufficient inquiry was made into them and, at worst, certain of them were deliberately obscured from or not disclosed to CIO management or senior Firm management. Although in some instances, limited steps were taken

to raise these issues, as noted above, no one pressed to ensure that the concerns were fully considered and satisfactorily resolved.

5. *The Marks*

From at least mid-March through at least March 30, the traders did not provide good-faith estimates of the exit prices for all the positions in the Synthetic Credit Portfolio.¹⁰⁵ That practice concealed from Ms. Drew and others their good-faith view of the market price of these positions, and it deprived management of a possible opportunity to curtail the trading before late March and potentially avoid some of the ensuing losses. When questioned about the marks in late April and early May prior to the Firm's filing of its first-quarter Form 10-Q, they maintained that the marks had represented their good-faith judgments regarding fair value of the positions. The Task Force's subsequent discovery that these statements were likely untrue caused the Firm to restate its earnings and re-file financial reports.

6. *The Estimates*

CIO provided in early April what in hindsight were overly optimistic and inaccurate analyses regarding the potential losses to which the Synthetic Credit Portfolio was exposed. These estimates all predicted that any losses would be in a range that was manageable for the Firm, and they were accompanied by assurances from CIO that the market was temporarily dislocated. The estimates generally predicted that the market would recover or "mean revert,"

¹⁰⁵ The Task Force has noted that some of the marks on the Synthetic Credit Portfolio's positions at March 30 were within the bid/offer spread, but were to the benefit of the portfolio's positions.

meaning that the market prices were distorted and that the prices would return to their historic average relationships to other instruments. CIO advised senior Firm management that the Synthetic Credit Portfolio was “overall risk balanced,” and for the second quarter, showed “a P&L range of -150MM to +250MM,” with a “significantly positive” upside potential in the event of defaults. In fact, this profit-and-loss range turned out to be significantly off-the-mark, and the record uncovered during the Task Force’s subsequent investigation revealed that this profit-and-loss estimate was largely based on a Monte Carlo analysis in which the person performing the analysis did not have confidence, and which appears to have been selected by his supervisor specifically because it generated more positive profit-and-loss estimates. Against the backdrop of the concerns that had been expressed internally at various points during the first quarter of 2012 by (or to) Ms. Drew, Mr. Wilmot, and members of the Synthetic Credit Portfolio team, the optimistic estimates failed to provide Messrs. Dimon, Braunstein and Hogan with a complete picture of how the team managing the Synthetic Credit Portfolio viewed it and the concerns they had previously raised within CIO. This failure was especially critical in early April when senior Firm management was focused on preparations for the April 13 earnings call and was relying on Ms. Drew to provide and explain information regarding the Synthetic Credit Portfolio.

It bears mention that, although these faulty estimates were largely initially generated by a trader (working with another more senior trader), there were other employees in CIO, including in its Risk, Finance and management functions, who were positioned to consider and question the validity of these estimates. They failed to do so adequately, and instead, accepted these

estimates – together with the assertions that the Synthetic Credit Portfolio was “balanced” – and passed them along to senior Firm management. On this score, senior members of the Synthetic Credit Portfolio team, including Ms. Drew, as well as CIO Finance and CIO Risk Management, should have more thoroughly questioned, tested and/or caused others to test the estimates and conclusions being presented.

7. Compensation Issues

Incentive-based compensation systems are premised on the basic assumption that one of the factors that influence individuals’ performance and conduct is financial reward. When employees take steps such as those that led to the losses in the Synthetic Credit Portfolio, the question naturally arises whether something in the compensation framework incentivized them to do so and whether the Task Force should be recommending adjustments to that framework. Based on the Task Force’s review, however, there does not appear to be any fundamental flaw in the way compensation was and is structured for CIO personnel.¹⁰⁶ What the incident does highlight is the particular importance of clear communication to front office personnel engaged in activities not expected to generate profits (such as the winding down of a trading portfolio) that they will nonetheless be compensated fairly for the achievement of the Firm’s objectives, including effective risk management.

¹⁰⁶ To this end, the Task Force believes that even if the traders and others had received only a fixed salary and no incentive compensation, they nevertheless might have harbored concerns about the consequences of losses on their future salary and professional prospects in light of the Synthetic Credit Portfolio unwind.

CIO does not have its own incentive compensation system; instead, it participates in the Firm-wide annual incentive plan that is reviewed and overseen by the Compensation and Management Development Committee of JPMorgan’s Board of Directors. Awards under the plan are discretionary and non-formulaic, and compensation is dependent on multiple factors that can be adjusted and modified depending on the particular circumstances. These factors include financial performance – for the Firm, for the business unit and for the individual in question – but they also consider “how” profits are generated, and compensation decisions are made with input from Risk Management and other control functions (as was the case for CIO).¹⁰⁷

The Task Force has found little in the form of direct evidence to reveal what Ms. Drew and the other Synthetic Credit Portfolio managers and traders were thinking about their own specific compensation as they made decisions with respect to the Synthetic Credit Portfolio. Throughout the relevant period, however, at least two of the traders clearly maintained a strong focus on daily, monthly and quarterly profit-and-loss numbers, and were acutely concerned about mounting losses in the Synthetic Credit Portfolio. At the beginning of 2012, a priority for CIO was to reduce RWA, and the Synthetic Credit Portfolio was a significant user of RWA. There was also a belief that CIO should neutralize the credit exposure of the Synthetic Credit Portfolio. And there was recognition, reflected in the February 2012 CIO Business Review, that “[d]espite the effectiveness of the Tail Risk Book hedging credit portfolio, the change in regulatory capital

¹⁰⁷ Risk management personnel were asked to provide input on the traders during their 2011 annual performance reviews. None of the input raised risk-oriented concerns.

regime is likely to force a re-size / run-off of synthetic portfolio in order to maintain RWA targets for the Firm.” Ms. Drew and other senior members of the Synthetic Credit Portfolio team knew that winding down the portfolio brought with it the likely prospect of significant trading costs (that is to say, from a profit-and-loss perspective) in implementing this priority.

As a result, the Task Force believes that the CIO management, including Ms. Drew, should have emphasized to the employees in question that, consistent with the Firm’s compensation framework, they would be properly compensated for achieving the RWA and neutralization priorities – even if, as expected, the Firm were to lose money doing so. There is no evidence that such a discussion took place. In the future, when the Firm is engaged in an exercise that will predictably have a negative impact (either in absolute terms or relative to past performance) on a front office employee’s or business unit’s contribution to the Firm’s profits and losses, the Firm should ensure those personnel are reminded that the Firm’s compensation framework recognizes that losses (as well as profits) are not necessarily the measure of success. This approach is fully consistent with the current incentive compensation structure, but should be reinforced through clear communication.

B. The Firm Did Not Ensure that the Controls and Oversight of CIO Evolved Commensurately with the Increased Complexity and Risks of Certain CIO Activities

The Task Force believes that the Firm did not ensure that the controls and oversight of CIO evolved commensurately with the increased complexity and risks of CIO’s activities. As a

result, there existed significant risk management weaknesses within CIO that played a key role in allowing the flawed, risky trading strategies to be pursued.

For a significant period of time prior to the first quarter of 2012, CIO was subjected to less rigorous scrutiny than client-facing lines of business. The lower level of oversight engendered weak risk management and infrastructure within CIO, which performed ineffectively at a time when robust, effective controls were most needed. Granular limits were lacking, and risk managers did not feel adequately empowered. These matters became even more critical once the Synthetic Credit Portfolio grew in size, complexity and risk profile during the first quarter of 2012. Further, by the time the Firm's new Chief Risk Officer was appointed in January 2012 and launched an effort to compare and improve practices throughout the Firm, it was too late to build the risk controls and develop the structure that may have helped to prevent the losses in CIO.

The Task Force has identified six factors that it believes may have led to less rigorous scrutiny for CIO. *First*, CIO and the Synthetic Credit Portfolio had largely performed very well in the past. Neither had a history of significant losses and, as Mr. Dimon has explained, there “was a little bit of complacency about what was taking place [in CIO] and maybe overconfidence.” Moreover, CIO EMEA Credit – the unit in which the Synthetic Credit Portfolio was located – had not previously experienced major control issues. In particular, CIO EMEA Credit received “Satisfactory” ratings in prior audits. Nevertheless, senior Firm management did not take sufficient steps to confirm the belief that CIO was subject to

appropriate oversight and risk limits, nor did they confirm how the Firm-wide Risk organization was monitoring and overseeing CIO's activities.

Second, CIO is not a client-facing business and does not involve the host of regulatory, risk and other limits applicable to dealings between the lines of business and their clients, which require more attention from various control functions, including compliance, audit, legal and finance. There was no meaningful effort to ensure that, notwithstanding this fact, CIO was subject to appropriately rigorous risk and other limits and was updating those limits on a regular basis.

Third, the more conservative nature of the majority of CIO's portfolio, as well as its overall mandate to invest the Firm's investment portfolio in "top of the capital structure" instruments, may have suggested to senior Firm management that CIO did not present significant risks.

Fourth, the large size of CIO's overall portfolio may explain the lack of an aggressive reaction of numerous people, including senior Firm management, to the relative size of the Synthetic Credit Portfolio. When coupled with representations of CIO traders and management that the Synthetic Credit Portfolio was "balanced" (as well as the fact that CIO could hold the positions for a long period), the notional numbers that were being discussed at the time were large but not alarming. But, the growth in the notional size of the Synthetic Credit Portfolio during the first quarter of 2012 should have prompted additional scrutiny by the Risk

organization (at both the Firm and CIO level) into both the trading strategies that had caused this growth and the proposed exit strategy.

Fifth, the implementation of a new model that significantly reduced CIO's VaR likely distracted focus from the increase in VaR that occurred in January 2012. Absent the new model, or if VaR limits had been promptly adjusted downward following the implementation of the new model, breaches of the CIO Global 10-Q VaR limit would have continued, and could have triggered a more rigorous analysis by Risk Management personnel both inside and outside CIO – potentially leading to earlier discovery of the risks in the Synthetic Credit Portfolio and modification or termination of the trading strategies that persisted through late March.

Sixth, the CIO Risk organization did not mature into the type of robust and independent function that is needed for trading activities that involve significant risk. The CIO Risk function was not staffed with as many experienced or strong personnel as it should have been. The Firm-wide Risk organization bears responsibility for not having built, over time, a strong, independent Risk function within CIO. This failure meant that notwithstanding the new Chief Risk Officer's efforts beginning in early 2012 to improve controls and oversight, the necessary infrastructure was not in place when the need arose and the CIO Risk function was tested. CIO management also bears responsibility for this weakness in the CIO Risk function.

In addition to these risk-related controls, the Task Force has also concluded that the Firm and, in particular, the CIO Finance function, failed to ensure that the CIO VCG price-testing procedures – an important financial control – were operating effectively. As a result, in the first

quarter of 2012, the CIO VCG price-testing procedures suffered from a number of operational deficiencies. For example, CIO VCG did not have documentation of price-testing thresholds. In addition, the price-testing process relied on the use of spreadsheets that were not vetted by CIO VCG (or Finance) management, and required time-consuming manual inputs to entries and formulas, which increased the potential for errors.

C. CIO Risk Management Was Ineffective in Dealing with Synthetic Credit Portfolio

CIO Risk Management lacked the personnel and structure necessary to properly risk-manage the Synthetic Credit Portfolio, and as a result, it failed to serve as a meaningful check on the activities of the CIO management and traders. This occurred through failures of risk managers (and others) both within and outside of CIO.

CIO's Risk Management group faced key organizational challenges during the relevant period – from the end of 2011 through the first quarter of 2012 – and in particular was faced with transitions in key roles. The position of Chief Risk Officer within CIO was filled by Mr. Goldman in January 2012. Previously, Mr. Weiland, the head of CIO Market Risk, had overseen Risk Management within CIO since the principal risks taken by CIO were market risks. In his capacity as *de facto* Chief Risk Officer for CIO, Mr. Weiland had reported to Mr. Zubrow, who served as the Firm's Chief Risk Officer until January 13, 2012.¹⁰⁸ Mr. Weiland participated in

¹⁰⁸ After Mr. Goldman took over as CRO for CIO, Mr. Weiland maintained his responsibilities for CIO Market Risk but reported to Mr. Goldman rather than Mr. Zubrow, with “dotted line” reporting to Firm-wide Market Risk in February 2012.

Mr. Zubrow's management team meetings and sat on the Firm-wide Risk Working Group, chaired by Mr. Zubrow.

Prior to Mr. Goldman's appointment as CIO Chief Risk Officer, his previous experience had been as a trader and as a manager and executive responsible for corporate strategy. His only previous direct experience with risk management was as chair of the Fixed Income Trading Risk Management Committee at another large firm, a position he had held more than 10 years earlier.¹⁰⁹ As a result, although he had been working in another role within CIO before being

¹⁰⁹ Mr. Goldman was previously Head of Strategy for CIO. Before joining JPMorgan, Mr. Goldman held several roles at Cantor Fitzgerald. He served first as Chief Executive Officer and President of debt capital markets and asset management, and then as Chief Executive Officer and President of Cantor's broker dealer, where he oversaw that firm's strategy and global expansion. After leaving Cantor Fitzgerald in 2007, Mr. Goldman was hired by Ms. Drew as a portfolio manager in CIO in January 2008. He subsequently took a leave of absence in June 2008, and later resigned, in order to respond to a New York Stock Exchange investigation involving allegations that Cantor Fitzgerald had failed to supervise Mr. Goldman because he had traded stocks in his personal accounts while simultaneously trading in those same stocks in Cantor Fitzgerald's proprietary accounts. After the New York Stock Exchange inquiry concluded with no action against Mr. Goldman, Ms. Drew hired him to work directly for her on strategic projects, primarily related to asset allocation. In late 2010/early 2011, Ms. Drew and Mr. Zubrow, whose wife's sister is married to Mr. Goldman, began a search to fill the newly created position of Chief Risk Officer of CIO. Ms. Drew and Mr. Zubrow created the position because CIO had been growing and their view was that they needed to enhance CIO's Risk staffing. They engaged an executive search firm, which met with nearly a dozen individuals. However, none of the candidates who advanced to interviews with CIO management was deemed to be right for the position, and in late 2011, the search was put on hold. Shortly after learning of Mr. Hogan's impending appointment as Chief Risk Officer for the Firm, Mr. Zubrow and Ms. Drew discussed Mr. Goldman for the role of Chief Risk Officer of CIO. Ms. Drew believed that Mr. Goldman was a good choice for the job, based on, among other things, his understanding of markets. She secured Mr. Hogan's assent to the appointment. While others at the Firm were aware of Mr. Goldman's background and relationship with Mr. Zubrow and Ms. Drew and Mr. Zubrow may have assumed Mr. Hogan's awareness, Mr. Hogan did not in fact know of the relationship between Messrs. Zubrow and Goldman, or of the earlier New York Stock Exchange investigation. Mr. Hogan considered the hiring of Mr. Goldman as CIO Chief Risk Officer as effectively Mr. Zubrow's last personnel appointment rather than as his first. Nevertheless, in reliance on the recommendations of Mr. Zubrow and Ms. Drew, Mr. Hogan believed that Mr. Goldman was a good fit for the CIO CRO position,

appointed CIO Chief Risk Officer, he was still climbing the learning curve when much of the trading at issue was conducted.¹¹⁰

Meanwhile, other senior risk management positions were in transition during this time, including the Firm's Chief Risk Officer (Mr. Hogan) and the Firm's Head of Market Risk. (Mr. Hogan was appointed Chief Risk Officer in January 2012.) Having both previously served in the Investment Bank, these individuals were still in the process of becoming acquainted with CIO's activities and Risk Management function, as well as that of other parts of the Firm, at the time the relevant trading strategies were being executed.

The CIO Risk function had also been understaffed for some time, and CIO management, rather than the Risk function, had been the driving force behind the hiring of at least some of the risk personnel. Although CIO had long-tenured Risk personnel in less senior positions (such as Mr. Weiland), they appear not to have been expected, encouraged or supported sufficiently by CIO management or by the Firm-wide Risk organization to stand up forcefully to the CIO front office and to vigorously question and challenge investment strategies within CIO. Rather, at

and was comfortable that Mr. Goldman's broad managerial and trading experience had provided him with the necessary skill set for the position. The Task Force notes that the Firm should have a more formal process in place, with the participation of the Firm's Human Resources personnel, to assure that, in connection with the hiring of Operating Committee members and their direct reports, the Firm and all appropriate personnel are aware of all relevant background information. If, with that additional information, Mr. Hogan had any concerns or reservations about Mr. Goldman, he could have taken any steps he deemed necessary to satisfy himself.

¹¹⁰ The Task Force has considered whether former traders are qualified to serve as risk managers, and believes that they can be, as trading experience is highly relevant. Indeed, some of the Firm's best risk managers have backgrounds as traders.

least with respect to some Risk managers, such as Messrs. Goldman and Weiland, there was a sense that they were accountable first and foremost to CIO managers rather than to the Firm's global Risk organization. They generally did not feel empowered to take the kinds of actions that risk managers elsewhere within the Firm believed that they could and should take.

Responsibility for this failure lies not only with CIO Risk managers, but with Ms. Drew as well.

Further, the CIO Risk Committee met only three times in 2011. There was no official membership or charter for the CIO Risk Committee and attendees typically included only personnel from CIO, such as the regional Chief Financial Officers and Chief Investment Officers, the Chief Risk Officer, the Chief Operating Officer, the Global Chief Financial Officer, and Ms. Drew. Although Mr. Zubrow regularly was invited to attend CIO Risk Committee meetings, he typically did not do so, in contrast with his frequent participation in Investment Bank Risk Committee meetings. Had there been senior traders or risk managers from outside CIO or had the CIO Risk Committee met more often, the process might have been used to more pointedly vet the traders' strategies in the first quarter of 2012. As it was, the Committee was too slow to recognize the need to put in place risk limits specific to the Synthetic Credit Portfolio or an updated limit structure for CIO as a whole.¹¹¹

¹¹¹ Internal Audit's report dated March 30, 2012, which examined CIO EMEA Credit's control structure as of year-end 2011, stated that "CIO is currently undertaking a comprehensive review of the risk measurement limits framework across all asset classes to assess potentially required enhancements including whether additional risk factors are required for inclusion." As a result, although Internal Audit noted that CIO did not "explicitly measure the portfolio sensitivity to certain potentially applicable risk measures such as bond/CDS basis, index basis and prepayment risk," a detailed assessment was not

CIO Risk Management personnel fell well short of the Firm's expectations. *First*, contrary to Firm policy, they did not conduct any review of the adequacy of CIO's risk limits between 2009 and 2011.¹¹² *Second*, they failed to appreciate and to escalate the significance of the changes in the nature and size of positions that were occurring in the Synthetic Credit Portfolio, despite having been presented with information and metrics that could have alerted them to a problem earlier, and dismissed too easily breaches of existing limits. *Third*, as discussed in Appendix A, they were not sufficiently engaged in the development and subsequent implementation and operation of the VaR model. They took passive roles in the model's development and review and took no steps to ensure that the action plans required by the model approval were completed or that the model was implemented as intended. Similarly, although a proposal was under consideration to lower the VaR limit contemporaneously with the VaR model change in January, it was not acted upon until May 2012. *Fourth*, CIO Risk managers

performed of the market risk limits as part of this audit and the existing limits were not identified as significantly outdated.

¹¹² Under the Market Risk Limits Policy applicable to CIO before May 2011, the review of limits and limit utilizations was required only annually, as opposed to semi-annually. Notwithstanding this requirement, prior to May 2011, the last review of all CIO limits was conducted by CIO in 2009. A new Market Limits Policy became effective in May 2011. Under the more recent policy, limits are required to be established by Market Risk and business heads, and certain of these are required to be reviewed at least annually by the Board and semi-annually within each line of business. In the first quarter of 2012, Mr. Weiland was in the process of developing a proposal to revise the CIO limit structure. He began that process in July 2011, recognizing that a semi-annual review of the limits had not yet been conducted and that certain of CIO's limits need to be revised and/or updated. He discussed an early version of his proposal at one of his weekly meetings with Ms. Drew in the summer of 2011. When Mr. Goldman became CIO's Chief Risk Officer in January 2012, he became involved in the process as well. Although the proposal was the subject of active discussion in the first quarter of 2012 and a version of it was presented to the CIO Risk Committee in late March, new limits were not implemented until May 2012.

themselves fell short of expectations in implementing a strong Risk function. In particular, they did not establish a relationship with CIO management that enabled Risk personnel to feel comfortable voicing opposition to management.

The Task Force notes that, although it believes that primary control failures were risk management failures, it has also considered whether the CIO Finance organization – and in particular its former CFO – could or should have done more. The primary responsibility of the CFO of CIO, like the CFO of the lines of business, is to oversee the Finance organization within that unit and ensure that effective financial controls are in place. As described above, the Task Force notes that the CIO Finance organization’s VCG process, while appropriately designed, suffered from operational shortcomings that became more pronounced in the first quarter of 2012 as the size and characteristics of the Synthetic Credit Portfolio changed. In addition, the failure to have robust reporting protocols, including sufficient circulation of daily trading activity reports, made early detection of problems less likely.

In addition to the core responsibility of overseeing the line of business Finance function, the Task Force believes that a line of business CFO – like all members of senior management of a unit – bears additional responsibility for identifying and reacting to significant financial risks. To this end, the Task Force believes that, although primary responsibility for managing risk lies with the business head and Risk organization, the CFO of CIO (like the other members of CIO senior management) missed a number of opportunities during the first quarter to meaningfully challenge the trading strategy.

D. Risk Limits for CIO Were Not Sufficiently Granular

The risk limits in place before May 2012 applied to CIO as a whole (and not to the Synthetic Credit Portfolio in particular) and were insufficiently granular. There were no limits by size, asset type or risk factor for the Synthetic Credit Portfolio; indeed, there were no limits of any kind specific to the Synthetic Credit Portfolio. When contrasted against the granular and tailored risk limits that are applied elsewhere in the Firm, it is evident that the Firm-wide Risk organization failed to ensure that CIO was subject to appropriately rigorous risk controls.¹¹³

The risk limits for the Synthetic Credit Portfolio should have been specific to that portfolio and should have applied to the specific risks being taken. For example, these more granular limits should have included specific controls on notional size (particularly for less liquid

¹¹³ Prior to 2009, Single Name Position Risk (“SNPR”) limits applied to the Investment Bank, but CIO did not trade in any single names and hence did not have any single name limits. The Firm’s SNPR policy thus exempted the following assets, among others, from its scope: (1) investments managed by CIO as part of the Firm’s Strategic Asset Allocation investment portfolio; and (2) CIO index and index tranche activity. Messrs. Zubrow and Weiland agreed that these assets should be exempt from the policy because they were longer-term, strategic investments and because calculating single name default exposure for a portfolio of indices and tranches is extremely complex. As CIO began to add positions with exposures to single names, Messrs. Zubrow and Weiland approved sets of name-specific limits for the particular names to which CIO’s indices and tranches had single name exposure. These limits were separate from the SNPR limits applicable to the Investment Bank, and trading in these instruments by CIO did not result in SNPR limits usage. By late 2011 and early 2012, CIO’s exposure to single names grew to the point that Mr. Weiland and Firm-wide Market Risk agreed that it made sense to include the calculation of that exposure within the SNPR policy, because the amount and aggregation of those exposures were becoming more significant. In early 2012, they began to discuss how to include CIO’s index and index tranche activity within the SNPR. The exact means by which that would be done were the subject of ongoing discussion throughout the first quarter of 2012, due to the complexity of the calculations and the fact that including the short positions in the Synthetic Credit Portfolio in the SNPR would have had the effect of creating more availability for the limit (in part, because CIO owned equity protection, meaning that it earned money on individual defaults).

positions) as well as specific limits on credit risk and on counterparty risk. More numerous and specific limits may have increased focus on the risks in the Synthetic Credit Portfolio earlier.

E. Approval and Implementation of CIO Synthetic Credit VaR Model Were Inadequate

In a number of respects, the process surrounding the approval and implementation of the new VaR model was inadequate. *First*, inadequate resources were dedicated to the development of the model. The individual who was responsible for the model's development had not previously developed or implemented a VaR model, and was also not provided sufficient support – which he had requested – in developing the model.

Second, the Firm model review policy and process for reviewing the new VaR model inappropriately presumed the existence of a robust operational and risk infrastructure similar to that generally found in the Firm's client-facing businesses. It thus did not require the Model Review Group or any other Firm unit to test and monitor the approved model's implementation. Back-testing was left to the discretion of the Model Review Group before approval and was not required by Firm policy. In this case, the Model Review Group required only limited back-testing of the new model, and it insufficiently analyzed the results that were submitted.

Third, and relatedly, the Model Review Group's review of the new model was not as rigorous as it should have been and focused primarily on methodology and CIO-submitted test results. The Model Review Group did not compare the results under the existing Basel I model to the results being generated under the new model. Rather, it theorized that any comparison of

the numbers being produced under the two models was unnecessary because the new model was more sophisticated and hence was expected to produce a more accurate VaR.

Fourth, the model was approved despite observed operational problems. The Model Review Group noted that the VaR computation was being done on spreadsheets using a manual process and it was therefore “error prone” and “not easily scalable.” Although the Model Review Group included an action plan requiring CIO to upgrade its infrastructure to enable the VaR calculation to be automated contemporaneously with the model’s approval, the Model Review Group had no basis for concluding that the contemplated automation would be possible on such a timetable. Moreover, neither the Model Review Group nor CIO Risk followed up to determine whether the automation had in fact taken place.

Fifth, CIO Risk Management played too passive a role in the model’s development, approval, implementation and monitoring. CIO Risk Management personnel viewed themselves more as consumers of the model than as responsible in part for its development and operation.

Sixth, CIO’s implementation of the model was flawed. CIO relied on the model creator, who reported to the front office, to operate the model. Data were uploaded manually without sufficient quality control. Spreadsheet-based calculations were conducted with insufficient controls and frequent formula and code changes were made. Inadequate information technology resources were devoted to the process. Contrary to the action plan contained in the model approval, the process was never automated.

IV. Remedial Measures

JPMorgan has taken a broad range of remedial measures to respond to and act on the lessons it has learned from the events described in this Report.

A. CIO Leadership, Governance, Mandate and Processes Revamped.

1. Team

Once it discovered the source and scope of the Synthetic Credit Portfolio's losses, the Firm responded by accepting the retirement of Ms. Drew and terminating the employment of some members of the Synthetic Credit Portfolio team, and accepting resignations from others, including Messrs. Goldman, Wilmot,¹¹⁴ and Weiland.¹¹⁵ In addition, the Firm announced on July 13 that it would pursue the maximum clawback of compensation from three individuals, each of whom subsequently acceded to the Firm's demands regarding the cancellation and recovery of the relevant awards. This equates to approximately two years' worth of each individual's total compensation. In the Task Force's view, these steps were appropriate given each individual's role in the losses at issue. Ms. Drew agreed voluntarily to the cancellation and recovery of her awards that were subject to clawbacks. Senior Firm management, in consultation with the Board, has also reduced compensation for other employees, and the incentive compensation pool for all of CIO was reduced as well.

¹¹⁴ Mr. Wilmot has announced his resignation and is expected to leave the Firm in 2013.

¹¹⁵ Mr. Zubrow has also announced his retirement.

The Firm has put in place a new CIO leadership team. Matthew Zames, who had served as co-Head of Fixed Income in the Investment Bank, replaced Ms. Drew as the Firm's Chief Investment Officer. He occupied that role from May 14, 2012 through September 6, 2012. Mr. Zames is now the co-Chief Operating Officer of the Firm and oversees, among other things, both the CIO and Treasury functions. Craig Delany replaced Mr. Zames as Chief Investment Officer and currently reports to him. Other key appointments include Marie Nourie (CFO for CIO); Chetan Bhargiri (Chief Risk Officer for CIO, Treasury and Corporate); Brendan McGovern (CIO Global Controller, a position that had been open since January 2012); Diane Genova (General Counsel for CIO and General Counsel for Markets in the Corporate and Investment Bank); Pat Hurst (Chief Auditor); and Ellen Yormack (Senior Audit Manager). These are experienced, tested professionals, with knowledge of best practices that they are able to bring to bear in their new roles in CIO. Resources were also increased in key support functions; within the Risk function alone, Mr. Bhargiri has added 20 new employees since May 2012. With these new appointments, the Firm has reconfigured the entire CIO management team with strong and knowledgeable individuals who are expected to bring more rigor to the management of CIO. At the same time, this new team has established stronger linkages within CIO by introducing formal lines of communication across the various regions, and the practical result has already been increased dialogue and consistency in each of the three regions reporting to Mr. Delany.

2. Governance

The Firm has enhanced governance within CIO and the Corporate sector more generally. New and more robust committee structures have been instituted, including weekly CIO Investment Committee meetings run by Mr. Delany, with a set schedule and set attendees. There are also now monthly Business Control Committee meetings and a monthly Valuation Governance Forum (“VGF”), both of which are new structures.

The CIO Valuation Governance Forum, whose membership includes Ms. Nourie, Mr. Bhargiri and Mr. McGovern, is responsible for understanding and managing the risks arising from valuation activities within CIO and for escalating key issues to a Firm-wide VGF, which was established in 2012 as part of a Firm-wide initiative to strengthen the governance of valuation activities. The CIO VGF has recently overseen the integration of CIO VCG staff into the Investment Bank VCG reporting structure, the review of CIO VCG processes (including a review of all manual spreadsheets and the implementation of enhanced controls for key spreadsheets), and the enhancement of other CIO VCG procedures based on the Investment Bank VCG’s guidelines and best practices. The Firm has also increased the CIO VCG headcount and hired a new head of EMEA VCG for CIO.

Beyond new structures within CIO, the Firm has implemented additional linkages among CIO, Corporate Treasury and other Corporate activities. In particular, Mr. Zames is now in charge of CIO, Treasury and Corporate, so that overall management of these related functions has been brought together. Similarly, Mr. Bhargiri is now the Chief Risk Officer for CIO,

Treasury and Corporate. Furthermore, Corporate Business Reviews of CIO are to be conducted with increasing frequency and with the same structure as they are performed in the Firm's client-facing businesses. The Firm will also expand the CIO VGF in 2013 into a Corporate VGF, which will cover Treasury and other Corporate functions in addition to CIO.

Finally, the Firm has modified and expanded the criteria that will allow it to claw back certain equity awards in the event of poor performance by CIO. Under the Firm's protection-based vesting provisions, the Firm is entitled to conduct a discretionary review of certain senior personnel and, in the event of certain types of poor financial performance, cancel certain equity awards to which those personnel might otherwise have been entitled. Historically, senior CIO personnel were only subject to such a review upon poor performance by the entire Firm, whereas senior personnel from the lines of business were subject to these reviews upon poor performance by their line of business (and not just the entire Firm).¹¹⁶ The Firm has determined to modify the protection-based vesting trigger for 2013 equity awards for senior-level CIO personnel, and it now includes a CIO-specific trigger. The Firm's intent is to ensure that, based upon significantly poor performance in CIO, the Firm has the ability to recover certain previously granted equity awards from those responsible.

¹¹⁶ The protection-based vesting program is distinct from the Firm's other compensation recovery programs, which have been employed against CIO personnel in this matter and allow the Firm to claw back prior equity awards for other reasons such as termination for cause and improper or grossly negligent risk assessments.

3. Mandate

Under the leadership of Mr. Zames and now Mr. Delany, CIO has refocused on its core mandate of traditional asset-liability management. As part of this refocusing, the Firm moved a substantial portion of the Synthetic Credit Portfolio from CIO to the Investment Bank, and effectively exited the remainder of the Synthetic Credit Portfolio's positions in the third quarter of 2012. As a result of these changes and others, CIO no longer engages in the type of trading that generated the losses, and any CIO synthetic credit positions in the future will be simple and expressly linked to a particular risk or set of risks.

4. Reporting and Controls

Since the appointment of the new management team in May, CIO has also enhanced its key business processes and reporting. For example, the CIO Executive Management Report and Global Daily Risk Report now contain trading and position reports and are more appropriately distributed so that this content reaches the appropriate managers. The Global Daily Risk Report provides management with a consolidated and transparent view of all risk positions; its distribution includes the Firm-wide CEO, CRO, Deputy CRO and co-COO in addition to senior managers within CIO (including CIO Finance). In addition, Ms. Nourie and her team have spent substantial time since May reviewing and revising basic policies and procedures with respect to valuation and price verification. That initiative has improved the quality control of the VCG by enhancing CIO senior finance management supervision of the valuation control process,

implementing more formal reviews of price-testing calculations, and instituting more formal procedures around the establishment and monitoring of price-testing thresholds.

Beyond these specific steps, the new CIO leadership team – as well as senior Firm management – recognizes the importance of an open and transparent culture, including in its communications with the Firm’s regulators. The Firm has been working to improve CIO’s culture and its communications – both internally and with regulators – to ensure regulators consistently have full and timely visibility into CIO’s activities. More broadly, senior Firm management continues to be committed to enhancing a culture of prompt and complete disclosure to its regulators in accordance with regulators’ expectations.

In addition, the Firm has recently established a new Oversight and Control Group that is especially dedicated to solidifying an effective control framework, and looking within and across the lines of business (and CIO) to identify and remediate control issues. Oversight and Control will work closely with all control disciplines – partnering with Compliance, Risk, Audit and other functions – in order to provide a cohesive and centralized view of and from all control functions. Among other things, Oversight and Control will allow the Firm to detect problems and escalate issues quickly, get the right people involved to understand the common threads and interdependencies among various businesses, and then remediate these issues across all affected areas of the Firm.¹¹⁷

¹¹⁷ While the Oversight and Control function will facilitate a Firm-wide view of the control framework and operational risk across the Firm, serving as both a partner and a check and balance to line of business

B. Risk Self-Assessment and Risk Management Changes

In the wake of the Synthetic Credit Portfolio's losses, in May 2012 the Firm – under the guidance of its Chief Risk Officer – mandated a self-assessment of the Risk function within each line of business and CIO. As part of the self-assessment process, the Firm identified three general categories for review and improvement: Model Governance and Implementation, Market Risk and Governance, and Risk Independence. Within each category, the Firm identified specific areas of focus. In Model Governance and Implementation, the Firm focused on conducting a spot check of significant drivers of the Firm's VaR and broadening the model approval process to encompass implementation and ongoing monitoring. Within the category of Market Risk and Governance, the areas of focus were: (1) the appropriateness of the limit structure relative to risks undertaken; (2) the appropriateness of the risks undertaken; (3) policy, response, and escalation process concerning limit breaches; and (4) consideration within line of business risk committees of liquidity and concentration in positioning. Within the category of Risk Independence, the Firm reviewed its risk committee structure.

Mr. Hogan directed each of the Firm's lines of business to review these areas of focus to assess whether any of the issues identified in CIO existed elsewhere across the Firm and, if so, to remediate those issues immediately. The Chief Risk Officer for each line of business was required to attest to the completion of the necessary actions identified in that business's review,

management and Corporate functions, it will not remove ultimate responsibility for the effectiveness of the control environment from the line of business CEOs and Corporate Functional Heads.

and to provide documentation supporting completion of remediation. Each line of business CEO also was required to sign off on completion of the action plan, along with the line of business Risk Committee, and Mr. Hogan and Firm-wide Market Risk.

The Firm has now undertaken, or is in the process of undertaking, substantial remedial measures, described in further detail below, to address the concerns arising from this self-assessment in each of these areas.

1. *Model Governance and Implementation*

In the area of Firm-wide Model Governance and Implementation, the Firm has substantially reformed its model risk policy, which governs model development, review, approval, and monitoring. It is working to minimize model differences for like products; capture all of its models in a central database; improve functionality and support for that central database; review its old or rarely used models; and identify its most significant models. It also will emphasize model implementation testing and comparisons to benchmark models, and institute a formal escalation process for model reviews, as necessary. The Model Review Group is now required to sign off on closure of all action plan items.¹¹⁸ In addition, the Firm is enhancing staffing of the Model Review Group, and is working to implement and staff a model governance function.

With respect to VaR in particular, the Firm has conducted a spot review of significant drivers of VaR throughout the Firm, including in CIO, to ensure accuracy of the Firm's 10-Q

¹¹⁸ For more information on action plans, see Appendix A below.

VaR. In CIO, that spot review involved confirming that all of the positions comprising the CIO 10-Q VaR were being captured accurately, and included a comprehensive one-day check to ensure accurate data feeds into the CIO VaR model; a horizontal review to identify data quality issues among key data streams and a comparison with third-party data sources, where possible; a comparison of calculators identified in approved model reviews with those actually employed; a review of the process used to identify and separate 10-Q VaR vectors; and resolution of then-outstanding model issues identified as “high” importance.

2. Market Risk and Governance

The Firm has now substantially reconstituted the Risk function within CIO. First, as noted above, it has appointed Mr. Bhargiri to replace Mr. Goldman as Chief Risk Officer for CIO, Treasury and Corporate. Mr. Bhargiri came to this role with substantial experience as a managing director of Market Risk at the Investment Bank, and the Firm has ensured that Mr. Bhargiri’s functional reporting practices conform to his official reporting lines. Second, it has authorized Mr. Bhargiri to hire additional risk management officers, including senior level officers, to extend the capacity of the Risk function within CIO, Treasury and Corporate, and he has made 20 such hires since May 2012. The CIO Risk team has added product expertise in emerging markets, securitized products, credit (single name), municipal bonds, and interest rates and currency trading.

The Firm has reviewed and, where appropriate, revised market risk limits across all of its lines of business and introduced additional granular and portfolio-level limits. As part of its

ongoing risk management governance, it continues to conduct periodic reviews of the effectiveness of existing limit structures. CIO now has in place a total of 260 limits. Enhancements to the limits structure (as of December 6) include 67 redesigned VaR, stress and non-statistical limits, including both global and regional Level 1 and Level 2 limits; 80 new asset class concentration limits for the AFS securities portfolio, applicable to both CIO and Treasury; 60 new single name limits for the CIO Municipal AFS portfolio; and 53 new country exposure limits, also applicable to both CIO and Treasury, as a subset to the Firm-wide Country Exposure Limits. New limits related to geographic concentration, curve risk, single name risk, and compression risk were made specifically applicable to the Synthetic Credit Portfolio during the second and third quarters of 2012 (while it continued to be held by CIO, before it was transferred to the Investment Bank and effectively closed out).

In addition, the Firm has strengthened its processes across all businesses to deal with limit excessions. Aged or significant excessions must be further escalated to senior management and to risk committees. All valid¹¹⁹ or “under investigation” limit excessions, whether at the lines of business or Firm-wide level, that are in excess for three business days or longer, or over limit by 30% will be escalated to the line of business CEO, Chief Risk Officer, and Market Risk Head, as well as to the Firm’s CEO, CRO, co-COO and Deputy CRO/Head of Firm-wide Market Risk, and to the Firm-wide Risk Committee.

¹¹⁹ In contrast to “valid” excesses, “invalid” excesses are caused by data quality issues and do not require remedial steps.

3. Risk Independence

The Firm has reviewed its Risk Operating Committee structure and governance and restructured the Risk Operating Committee to increase focus on identifying and implementing best practices where appropriate across lines of business. The Firm's Risk Governance structure was enhanced to include the creation of the Firm-wide Risk Committee and Risk Governance Committee.

Within CIO, the Firm has overhauled the CIO Risk Committee which, as noted, previously had met only infrequently, without any official membership, and was composed entirely of personnel from within CIO. There is, in its place, a CIO, Treasury and Corporate Risk Committee, which conducts weekly meetings chaired by Messrs. Zames and Bhargiri. It includes representatives from CIO, Treasury, and Corporate as well as other key senior management from within and outside of CIO, including the Firm's CRO, Deputy CRO, and CFO, in order to ensure greater consistency across the Firm's various lines of business.

C. Firm-wide Risk Governance and Organization

In addition to the specific improvements described above in the areas of focus addressed by the Firm-wide risk self-assessment, the Firm has conducted a review of its entire Risk organization in response to the events in CIO and has made or is making changes to that Risk organization's governance, organizational structure and interaction with the Board.

1. Risk Governance

In the area of risk governance, the Firm created the new roles of Deputy CRO/Head of Firm-wide Market Risk and Wholesale Chief Credit Officer (“WCCO”). The role of Deputy CRO/Head of Market Risk involves review and assessment of Firm-wide market risk. The incumbent’s responsibilities include managing the Firm’s risk appetite and risk limits, risk mitigation strategies, and working with Mr. Hogan to lead and develop the Firm’s Risk organization. He is also responsible for directing the Firm’s market risk coverage resources. Stephen Eichenberger, who also currently serves as Chief Credit Risk Officer for the Investment Bank, assumed the newly created role of WCCO in July 2012. The WCCO reports to Mr. Hogan and is responsible for credit risk across all wholesale businesses. In this capacity, the WCCO will chair a Wholesale Credit Risk forum to ensure better communication between each business and across all Risk functions; work with line of business Chief Risk Officers to identify and effectively manage key credit risks and concentrations across the wholesale businesses; and partner with the line of business Chief Risk Officers to engage in initiatives across wholesale lines of business, including defining credit risk appetite and setting appropriate limits, supporting key growth initiatives while maintaining strong credit risk management controls, coordinating regulatory responses, building a credit risk stress framework, and enhancing credit risk reporting and credit risk systems.

2. Risk Organization

Four Firm-wide risk committees have been added and will focus on risk themes.

The Risk Governance Committee will meet monthly and will focus on risk governance and other policy matters, risk analytics, model governance, Basel/Regulatory issues, risk appetite, and updates to Firm-wide risk programs in the areas of compliance, liquidity, and operational risks. Required attendees at these meetings include the Firm's CRO, CFO, Controller, line of business CROs, Chief Investment Officer, and personnel from Legal, Compliance, Audit, and Regulatory Policy.

The Firm-wide Risk Committee will focus on business activity, including by conducting periodic reviews of Firm-wide risk appetite and certain aggregate risk measures, serving as an escalation point for matters arising in the line of business Risk Committees and for certain limit breaches pursuant to the limits policy, and considering relevant business activity issues escalated to it by line of business Chief Risk Officers and CEOs. It will meet monthly and required attendees include the Firm's CEO, CFO, CRO, Deputy CRO/Head of Market Risk, line of business CEOs, CIO Head, General Counsel, Chief Auditor, Compliance Head, Regulatory Policy Head, Consumer Risk CRO, Wholesale Credit Risk CRO, Model Risk and Development Reputation Risk Officer, Country Risk Head, Corporate Risk CFO and Chief Administrative Officer and line of business risk officers.

The Risk Management Business Control Committee will meet quarterly and will focus on the control environment, including outstanding action plans, audit status, operation risk statistics (such as losses, risk indicators, etc.), compliance with critical control programs, and risk technology. Required attendees at these meetings include the CRO, the Deputy CRO, the line of

business CROs, the Risk CFO and Risk Chief Administrative Officer, the Operational Risk Head, and personnel from Model Review and Development, Audit, and Compliance.

Finally, the Risk Operating Committee will focus on risk management, including setting risk management priorities, escalation of risk issues, and other issues brought to its attention by line of business Chief Risk Officers and the Risk Team. Mr. Hogan will direct these bi-weekly meetings, which will also include Risk Human Resources and Risk Chief Technology Officers.

In addition to these Risk committees, the Firm established a Valuation Governance Forum in June 2012 to oversee the management of risks arising from valuation activities conducted across the Firm. The Firm-wide VGF is chaired by the Firm-wide head of VCG, and its membership includes the Corporate Controller; the Deputy CRO; the CROs and Controllers of the Investment Bank, Mortgage Bank, and CIO; the CFOs of the Investment Bank, CIO, and Asset Management; and the Firm-wide Head of Model Risk and Development. The Firm-wide VGF will meet twice per quarter to review issues and matters relating to valuation, the VCG function, and related issues, and to address issues elevated to it by line of business VGFs.

Finally, the Firm is continuing its efforts to improve the process for highlighting key issues to the DRPC, with an emphasis on conveying information in a manner that is more timely, useful and focused.

V. Conclusion

The Task Force does not believe that the CIO losses stemmed from any one specific act or omission. Rather, as described in this Report, the Task Force has concluded that the losses

were the result of a number of acts and omissions, some large and some seemingly small, some involving personnel and some involving structure, and a change in any one of which might have led to a different result. This experience, as we hope is clear from this Report, has caused substantial and healthy introspection at the Firm and recognition of the need for continued improvement in multiple areas. Ultimately, the Task Force believes that this incident teaches a number of important lessons that the Firm is taking very seriously.

Appendix A: VaR Modeling

VaR is a metric that attempts to estimate the risk of loss on a portfolio of assets. A portfolio's VaR represents an estimate of the maximum expected mark-to-market loss over a specified time period, generally one day, at a stated confidence level, assuming historical market conditions. Through January 2012, the VaR for the Synthetic Credit Portfolio was calculated using a "linear sensitivity model," also known within the Firm as the "Basel I model," because it was used for purposes of Basel I capital calculations and for external reporting purposes.

The Basel I model captured the major risk facing the Synthetic Credit Portfolio at the time, which was the potential for loss attributable to movements in credit spreads. However, the model was limited in the manner in which it estimated correlation risk: that is, the risk that defaults of the components within the index would correlate. As the tranche positions in the Synthetic Credit Portfolio increased, this limitation became more significant, as the value of the tranche positions was driven in large part by the extent to which the positions in the index were correlated to each other. The main risk with the tranche positions was that regardless of credit risk in general, defaults might be more or less correlated.

This limitation meant that the Basel I model likely would not comply with the requirements of Basel II.5, which originally had been expected to be formally adopted in the United States at the end of 2011. One of the traders responsible for the Synthetic Credit Portfolio therefore instructed an expert in quantitative finance within the Quantitative Research

team for CIO International to develop a new VaR model for the Synthetic Credit Portfolio that would comply with the requirements of Basel II.5. That individual (henceforth referred to in this Report as “the modeler”) began work on developing that model in or around August 2011.

The trader who had instructed the modeler to develop the new VaR model (and to whom the modeler reported at the time), CIO Market Risk, and the modeler himself also believed that the Basel I model was too conservative – that is, that it was producing a higher VaR than was appropriate.¹²⁰ The modeler believed that an improved model should both (1) adequately capture correlation risk in the Synthetic Credit Portfolio, and (2) produce a lower and more accurate VaR.

A. Development of the New VaR Model

The modeler is a London-based quantitative expert, mathematician and model developer. In addition to the considerable responsibility of developing a new VaR model, he continued to perform his existing responsibilities in providing analytical support to the Synthetic Credit Portfolio traders. On a number of occasions, he asked the trader to whom he reported for additional resources to support his work on the VaR model, but he did not receive any.

Early in the development process, CIO considered and rejected a proposal to adopt the VaR model used by the Investment Bank’s credit hybrids business for the Synthetic Credit

¹²⁰ As noted above, VaR is a metric that attempts to estimate the risk of loss on a portfolio of assets. Both the modeler and a member of the CIO Market Risk team who was also involved in the new model’s development were of the view that the Basel I model might be overstating the VaR for the Synthetic Credit Portfolio, in part because the amount of losses had exceeded the stated VaR limit less frequently than would be expected based on the stated confidence level.

Portfolio. Because the Investment Bank traded many bespoke (*i.e.*, customized), illiquid CDS, its VaR model mapped individual instruments to a combination of indices and single name proxies, which CIO Market Risk viewed as less accurate for CIO's purposes than mapping to the index as a whole. He believed that, because the Synthetic Credit Portfolio, unlike the Investment Bank, traded indices and index tranches, the Investment Bank's approach was not appropriate for CIO. The Model Review Group agreed and, in an early draft of its approval of the model, described CIO's model as "superior" to that used by the Investment Bank "in that it [was] a full revaluation approach."

From September to November 2011, the modeler corresponded regularly with the relevant individuals from the Model Review Group, and on November 25, 2011, he submitted his new methodology (known internally as the "full revaluation" or "Basel II.5 model") for formal approval. The Model Review Group performed only limited back-testing of the model, comparing the VaR under the new model computed using historical data to the daily profit-and-loss over a subset of trading days during a two-month period. The modeler informed the Model Review Group that CIO lacked the data necessary for more extensive back-testing of the model (running the comparison required position data for the 264 previous trading days, meaning that a back-test for September 2011 would require position data from September 2010). Neither the Model Review Group nor CIO Market Risk expressed concerns about the lack of more extensive historical position data.

During the review process, additional operational issues became apparent. For example, the model operated through a series of Excel spreadsheets, which had to be completed manually, by a process of copying and pasting data from one spreadsheet to another. In addition, many of the tranches were less liquid, and therefore, the same price was given for those tranches on multiple consecutive days, leading the model to convey a lack of volatility. While there was some effort to map less liquid instruments to more liquid ones (*i.e.*, calculate price changes in the less liquid instruments derived from price changes in more liquid ones), this effort was not organized or consistent.

By the end of 2011, some of the pressure to complete the review of the new model appears to have abated because it became clear that Basel II.5 would not be implemented on the previously anticipated timetable. However, as described in Section II.D.1, CIO exceeded its Global 10-Q VaR limit at several points between January 16 and January 26, 2012, which in turn caused a breach in the overall Firm 10-Q VaR limit. The Synthetic Credit Portfolio was the primary driver of each of those excessions. A temporary limit increase was requested¹²¹ and required approval of senior Firm management. CIO recommended a temporary limit increase on the grounds that it was taking steps to reduce the VaR and that, in any event, the newly developed model was about to come online that would show a substantially reduced VaR.

¹²¹ Firm-wide Market Risk raised the possibility of a temporary limit increase to Mr. Hogan on January 20, 2012. On January 21, 2012, the then-head of the Risk Reporting and Finance function – told Mr. Hogan “We are working towards a temporary one-off for CIO and the Firm proposed as follows: JPMC \$140mm (vs. \$125mm permanent limit) CIO \$105mm (vs. \$95mm permanent limit.” Mr. Weiland also e-mailed Mr. Hogan on January 22, 2012 regarding a proposed temporary VaR limit increase.

Mr. Weiland and another member of CIO Market Risk contacted the Model Review Group regularly in the last two weeks of January to inquire into the progress of the model approval and, in a January 23, 2012 e-mail to the modeler, the trader to whom the modeler reported wrote that he should “keep the pressure on our friends in Model Validation and [Quantitative Research].” There is some evidence the Model Review Group accelerated its review as a result of this pressure, and in so doing it may have been more willing to overlook the operational flaws apparent during the approval process.

On January 26, the Model Review Group discovered that, for purposes of a pricing step used in the VaR calculation, CIO was using something called the “West End” analytic suite rather than Numerix, an approved vendor model that the Model Review Group had thought was being used. The Model Review Group had never reviewed or approved West End, which (like Numerix) had been developed by the modeler.¹²² CIO provided the Model Review Group with a reconciliation test, based on a limited number of days, showing that the valuations from West End and Numerix were in “good agreement,” and the Model Review Group committed to conduct a full review of West End separately, but not before approving the VaR model. The Model Review Group did not examine West End until early May 2012 (the results of which are discussed below).

¹²² The modeler had previously worked at Numerix. While there, the Numerix repricing model was developed under his supervision.

On January 30, the Model Review Group authorized CIO Market Risk to use the new model for purposes of calculating the VaR for the Synthetic Credit Portfolio beginning the previous trading day (January 27). Once the new model was implemented, the Firm-wide 10-Q VaR limit was no longer exceeded. Formal approval of the model followed on February 1. The formal approval states that the VaR calculation would utilize West End and that West End in turn would utilize the Gaussian Copula model¹²³ to calculate hazard rates¹²⁴ and correlations. It is unclear what, if anything, either the Model Review Group or CIO Market Risk did at the time to validate the assertion that West End would utilize the Gaussian Copula model as opposed to some other model, but that assertion later proved to be inaccurate.¹²⁵

As part of its approval of the new model, the Model Review Group included an action plan with respect to two of the risk areas that were identified. First, it mandated automation of the VaR model by January 31, 2012 (*i.e.*, contemporaneously with the model's approval).

¹²³ The Gaussian Copula is a commonly accepted model used to map the approximate correlation between two variables.

¹²⁴ A hazard rate is the probability of failure per unit of time of items in operation, sometimes estimated as a ratio of the number of failures to the accumulated operating time for the items. For purposes of the model, the hazard rate estimated the probability of default for a unit of time for each of the underlying names in the portfolio.

¹²⁵ A March 30, 2012 Internal Audit report on the Market Risk and Valuation Practices in CIO's credit portfolios (including the Synthetic Credit Portfolio) assigned a rating of 'Needs Improvement' due in part to CIO's use of "unapproved models in the calculation of risk (including VaR)." The reference to the use of "unapproved models" in the calculation of the VaR is to West End, which, as the Internal Audit report noted, had not been submitted to the Model Review Group for Review. The Internal Audit report included an action plan for CIO to document the West End analytics engine and submit to the Model Review Group with a target completion date of June 30, 2012. While the Internal Audit report also noted problems with the control processes surrounding the VaR calculation, Internal Audit found no specific examples of incomplete or inaccurate data.

Second, it required monitoring of illiquid tranches to assess whether mapping to more liquid tranches would be necessary, and ultimately development and submission to the Model Review Group of a risk mapping methodology. Neither of these action plans was completed. The Model Review Group and CIO Market Risk apparently believed that work was already underway to complete automation but took no steps to determine that automation had in fact been completed. The modeler likewise did not submit, nor was he ever required to submit, a complete risk mapping methodology.

B. Operation of the VaR Model

From February to April, the new VaR model was in operation. A CIO employee who reported to the modeler was responsible for daily data entry and operation of the new model. In April, an employee from the IT Department (who had previous experience as a senior quantitative developer) also began to provide assistance with these tasks. Notwithstanding this additional assistance, a spreadsheet error caused the VaR for April 10 to fail to reflect the day's \$400 million loss in the Synthetic Credit Portfolio. This error was noticed, first by personnel in the Investment Bank,¹²⁶ and by the modeler and CIO Market Risk, and was corrected promptly. Because it was viewed as a one-off error, it did not trigger further inquiry.

¹²⁶ On April 18, a member of the market risk team for the Investment Bank obtained information on the Firm-wide and CIO VaR calculations to determine the impact of the April 10 loss on the Firm-wide VaR. Upon discovering that the loss was not reflected in the CIO VaR, he reported his findings to Firm-wide Market Risk, who in turn reported to Mr. Hogan that CIO's VaR appeared to have an error.

C. Discovery of Problems with the New VaR Model and Discontinuance

In early May 2012, in response to the recent losses in the Synthetic Credit Portfolio, Mr. Venkatakrishnan asked an employee in the Model Review Group to perform a review of the West End analytic suite, which, as noted, the VaR model used for the initial steps of its calculations. The West End analytic had two options for calculating hazard rates and correlations: a traditional Gaussian Copula model and a so-called Uniform Rate model, an alternative created by the modeler. The spreadsheet that ran West End included a cell that allowed the user to switch between the Gaussian Copula and Uniform Rate models.

The Model Review Group employee discovered that West End defaulted to running Uniform Rate rather than Gaussian Copula in this cell, including for purposes of calculating the VaR, contrary to the language in the Model Review Group approval. Although this error did not have a significant effect on the VaR, the incident focused the reviewer's attention on the VaR model and ultimately led to the discovery of additional problems with it.

After this re-review, a decision was made to stop using the Basel II.5 model and not to rely on it for purposes of reporting CIO VaR in the Firm's first-quarter Form 10-Q. Following that decision, further errors were discovered in the Basel II.5 model, including, most significantly, an operational error in the calculation of the relative changes in hazard rates and correlation estimates. Specifically, after subtracting the old rate from the new rate, the spreadsheet divided by their sum instead of their average, as the modeler had intended. This error likely had the effect of muting volatility by a factor of two and of lowering the VaR,

although it is unclear by exactly what amount, particularly given that it is unclear whether this error was present in the VaR calculation for every instrument, and that it would have been offset to some extent by correlation changes. It also remains unclear when this error was introduced in the calculation.