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JPMorgan Chase London Whale A: Risky Business

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Abstract

In December 2011, the Chief Executive Officer and Chief Financial Officer of JPMorgan Chase (JPM) instructed the bank's Chief Investment Office to reduce the size of its Synthetic Credit Portfolio (SCP) during 2012, so that JPM could decrease its Risk-Weighted Assets as the bank prepared to adopt the impending Basel III bank capital regulations. However, the SCP traders were also told to minimize the trading costs incurred to reduce Risk-Weighted Assets, while still maintaining the opportunity to profit from unexpected corporate bankruptcies. In an attempt to balance these competing objectives, head SCP derivatives trader Bruno Iksil suggested in January 2012 that the SCP expand a strategy first implemented in 2011 of buying large volumes of certain credit derivatives, while simultaneously selling large volumes of other credit derivatives. The strategy quickly proved unsuccessful, and JPM's Chief Investment Officer ordered Iksil and the other SCP traders to halt this strategy on March 23. However, losses continued to mount as the credit derivative positions were unwound, ultimately reaching $6.2 billion by December 2012.

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[1] This case study is one of nine produced by the Yale Program on Financial Stability (YPFS) examining issues related to the JPMorgan Chase London Whale. The following are the other case studies in this case series.

- *JPMorgan Chase London Whale B: Derivatives Valuation*
- *JPMorgan Chase London Whale C: Risk Limits, Metrics, and Models*
- *JPMorgan Chase London Whale D: Risk-Management Practices*
- *JPMorgan Chase London Whale E: Supervisory Oversight*
- *JPMorgan Chase London Whale F: Required Securities Disclosures*
- *JPMorgan Chase London Whale G: Hedging Versus Proprietary Trading*
- *JPMorgan Chase London Whale H: Cross-Border Regulation*
- *JPMorgan Chase London Whale Z: Background and Overview*

Cases are available at the Journal of Financial Crises.

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1. Introduction

Amid a generally improving corporate credit market in late 2011 and early 2012, Bruno Iksil and a small team of derivatives traders in the London office of JPMorgan Chase & Company (JPM) were given a conflicting set of mandates by the bank's management. Among other things, the traders were told to rapidly reduce the risk of their derivatives portfolio while also minimizing the trading costs of doing so. Iksil and the team developed a complex strategy of buying and selling very large volumes of many different credit derivatives in an attempt to balance these competing objectives. Unfortunately, this strategy proved unsuccessful, ultimately costing the bank over $6 billion and the traders their jobs, while earning Iksil notoriety as the "London Whale."

After emerging from the financial crisis of 2007-09 in better condition than many of its rivals, JPM grew to become the largest United States (US) bank holding company, with almost $2.3 trillion in total assets as of December 31, 2011. Since JPM consistently had a higher balance of customer deposits than of loans, the bank needed a way to profitably and safely invest these excess deposits, and this task became the primary responsibility of the bank's Chief Investment Office (CIO). By year-end 2011, CIO was managing a $350 billion pool of assets that arose from uninsured corporate and (largely) insured consumer deposits.

One of CIO's secondary functions was to partially offset the default risk to which JPM was exposed as part of its core lending activities, the risk that someone who borrowed from JPM might not repay their loan. This default risk was to be mitigated by CIO's Synthetic Credit Portfolio (SCP), which was run by senior trader Iksil, junior trader Julien Grout, and their supervisor Javier Martin-Artajo. The SCP, which ultimately proved to be the source of the $6 billion loss, consisted of long and short positions in various credit default swaps and other credit derivatives. On balance, the SCP trading book was a net purchaser of credit protection, since it was intended to help hedge the credit risks facing the bank.

In December 2011, JPM Chief Executive Officer Jamie Dimon and Chief Financial Officer Douglas Braunstein instructed CIO to reduce the size of the SCP during 2012, so that JPM could minimize its Risk-Weighted Assets (RWA) and capital requirements as the bank prepared to adopt the Basel III bank capital regulations. Martin-Artajo, Iksil, and Grout faced a conflicting set of mandates from their superiors, starting with this directive to reduce RWA. The credit derivatives being used to help hedge the bank's credit risks had a limited maturity (up to 10 years) and simply could have been allowed to expire, but this would have taken longer than the deadline to decrease RWA. Another option available to the CIO traders was to cancel (i.e., unwind) the default protection owned by SCP, but this would have cost about $500 million, and Chief Investment Officer Ina Drew was not willing to incur this cost. Furthermore, Drew encouraged the CIO traders to repeat the windfall gain they earned after the bankruptcy of American Airlines in November 2011 and to avoid the unexpected loss they incurred after the Eastman Kodak bankruptcy in January 2012. Both of these latter objectives would require the purchase of additional default protection, in direct opposition to the directive to reduce the size of the SCP book.

In response to these competing objectives, Iksil suggested in late January 2012 the expansion of a strategy first implemented in 2011 to buy credit protection on (higher risk) high-yield companies, while funding some of the premium cost by selling protection on (lower risk) investment-grade companies. In other words, by selling credit protection on investment-grade entities, CIO would receive premium income, which it would in turn use to pay premiums on the credit insurance purchased on high-yield entities.

The resulting rapid increase in trading activity caused the net notional size of the SCP portfolio to triple from $51 billion at year-end 2011 to $157 billion by March 31, 2012. Unfortunately, the trading strategy was not successful, as changes in credit spreads caused the value of protection owned by SCP to decrease more rapidly than did the value of protection that the traders had sold. The SCP incurred losses of $100 million in January 2012 and $69 million in February, increasing to $550 million in March as the size of the trading positions grew. When SCP caused CIO to exceed a particular risk limit on March 23 that Drew considered to be the most important risk limit, she ordered Iksil and his team to stop trading. Soon thereafter, *Bloomberg* and the *Wall Street Journal* published the first accounts of the "London Whale" on April 6.

Even though active trading of the SCP book may have stopped in March 2012, the long and short credit derivative positions still existed, and losses continued to escalate even as the SCP book was being unwound. Most SCP derivatives were transferred to JPM's Investment Bank, which closed out these positions during the remainder of the year, but JPM's losses from the London Whale incident nevertheless ultimately totaled $6.2 billion by December 2012.

The remainder of the case is organized as follows: Section 2 explains the history and role of CIO, including its primary function of managing JPM's excess deposits and a secondary function of helping the bank offset some of the default risk it faces. Section 3 describes the evolution of the SCP from 2008 through 2011. Section 4 discusses in detail the conflicting and contradictory mandates imposed on the traders of the SCP book in November 2011 through January 2012. Sections 5 and 6 present in detail Iksil's trading strategy to balance the competing objectives placed upon his team and the poor outcome of that strategy, respectively. Section 7 concludes with a discussion of the aftermath of the London Whale trades, including media scrutiny of the CIO losses, effective liquidation of the SCP trading book, and regulatory action against JPM. See Appendix 1 for a timeline of key events pertinent to this case module.

Questions

1. Why would a bank like JPM have an in-house investment arm that holds fixed income securities and actively buys and sells derivatives?
2. How did competing objectives and credit derivatives' inherent illiquidity influence the SCP traders' choice of strategy?
3. How did market events and trader actions cause the strategy to fail?

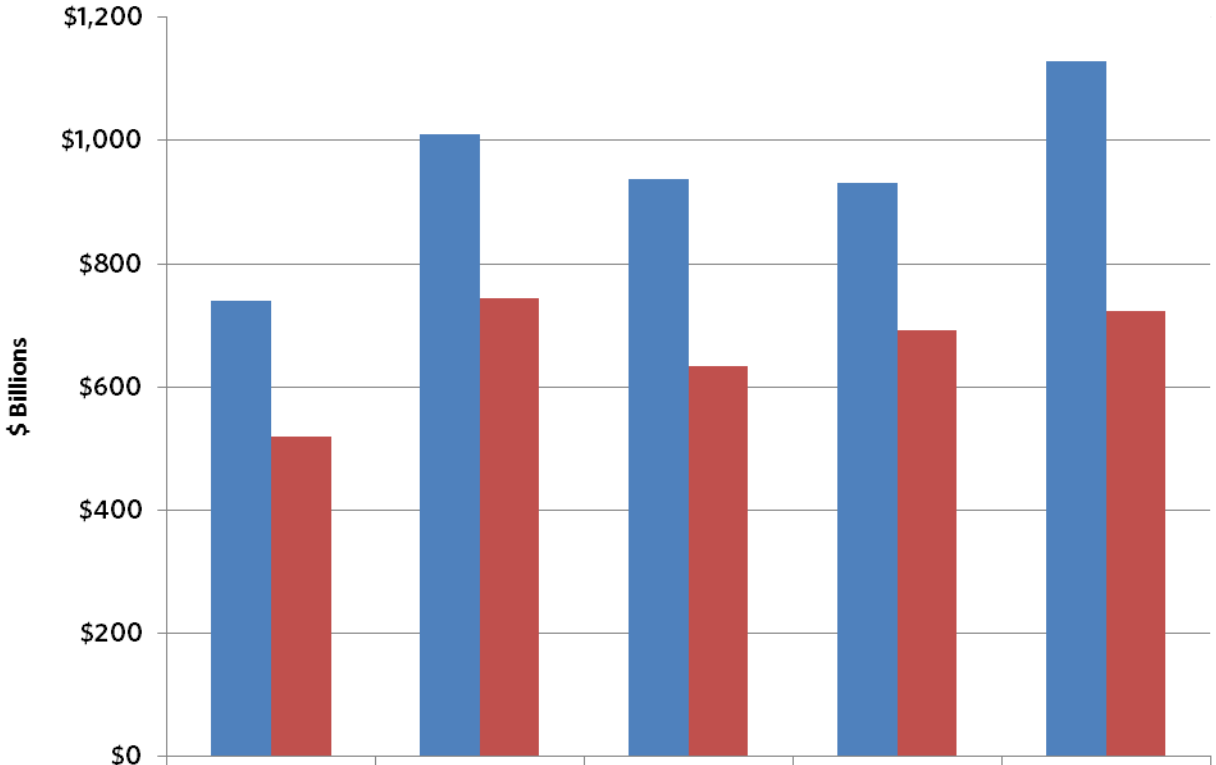
2. History and Role of the Chief Investment Office

Though JPM provides a wide variety of financial services, its commercial bank subsidiaries continue to engage in the basic banking functions of taking deposits and making loans. In recent years, the amount of money loaned by JPM was routinely less than the amount of deposits held by the bank on behalf of its customers. For example, as can be seen in Figure 1, JPM reported $1.128 trillion of deposits at December 31, 2011, but only $724 billion of loan balances receivable.

As a result, JPM needed a way to profitably and safely invest these excess deposits, and this task was assigned to and became the primary responsibility of the bank's CIO. The CIO unit was spun off from the internal treasury department in 2005 as a separate group within JPM. Ina Drew, who served as JPM's Chief Investment Officer, was appointed to lead the CIO.

CIO invested the bank's excess deposits in Treasury bonds and other investment-grade (high quality) fixed-income securities, including corporate, municipal, and asset-backed bonds. This conservative investment approach was consistent with how other banks managed excess deposits, and the average credit rating for CIO's investments was AA+. By year-end 2011, CIO was managing a $350 billion bond portfolio that arose from a mixture of uninsured corporate and (largely) insured consumer deposits (US Senate Report, 22).

Figure 1: JPMorgan Chase Deposit & Loan Balances as of December 31:



	2007	2008	2009	2010	2011
Deposits	$741	$1,009	$938	$930	$1,128
Loans	$519	$745	$633	$693	$724

Source: JPM 10-K 2011, 62.

CIO had various additional responsibilities, including funding JPM's retirement plans, as well as hedging risks associated with interest rates and mortgage servicing rights on behalf of other units within the bank. An important secondary function of CIO was to help JPM reduce its credit risk. As a bank, a major risk facing JPM is credit risk, also known as default risk, the possibility that someone who had borrowed from the bank (either directly in the form of a loan, or indirectly via the fixed income securities owned by CIO or other units of the bank) is unwilling and/or unable to repay the money when due.

Achilles Macris, the International Chief Investment Officer and Drew's subordinate, submitted a request to begin trading credit derivatives, such as credit default swaps, as a

business hedge to "effectively manage residual exposures created by [JPM's] operating businesses" (US Senate Exhibits, 36-37). CIO approved this proposal in May 2006. The approval document indicated that the proposal did not need to be approved by CIO's primary regulator, which is the Office of the Comptroller of the Currency (OCC).

A derivative is a financial instrument whose value is derived from the value of some other security. The value of a credit derivative is derived from the creditworthiness of an underlying fixed income security. One simple type of credit derivative is a credit default swap (CDS). A CDS contract is similar to an insurance contract in certain aspects. One party to the contract sells insurance or credit protection to the second party against the possibility that one or more borrower(s) named in the contract default(s) on a debt, such as by filing for bankruptcy. The protection buyer periodically pays premiums to the protection seller, similar to insurance premiums. The protection buyer is said to be "long protection" or "short credit risk," whereas the protection seller is said to be "short protection" or "long credit risk." However, unlike most insurance policies, a CDS contract does not require the protection buyer to have actual exposure to the underlying risk. In fact, a protection buyer and seller can use CDS to speculate on future changes in creditworthiness.

3. Evolution of the Synthetic Credit Portfolio (2008 through 2011)

As discussed in Section 2, a major risk facing commercial banks including JPM is credit risk/default risk. Thus, in addition to its high-quality bond holdings, CIO purchased default protection using credit derivatives to partially hedge JPM's exposure to default risk that arose as part of its core business activities. At what point in time this credit trading program acquired the name "Synthetic Credit Portfolio" remains unclear, but it certainly was the case by 2008, according to the OCC.

Three CIO employees were responsible for the SCP on a daily basis. Javier Martin-Artajo, the head of credit and equity trading, reported to Macris and directly oversaw the SCP. Bruno Iksil, who would come to be known as the "London Whale," reported to Martin-Artajo and was the head SCP trader. Julien Grout was a junior trader and reported to Iksil.

The SCP expanded over time, both as CIO traders gained more experience trading credit derivatives and as the market for such products grew. JPM's acquisitions of Bear Stearns and Washington Mutual Bank in 2008 during the financial crisis brought in more funds to CIO, and the SCP grew as a result. Nevertheless, SCP's revenues varied considerably from one year to the next, as can be seen in Figure 2. As explained by JPM risk personnel, the overall strategy at this time was simple: to buy more default protection when market participants were worried about the outlook for the economy, and to purchase less protection as worries lessened.

Figure 2: CIO Synthetic Credit Portfolio Revenue, 2008-2011

Year	SCP Revenue (millions)
2008	$170
2009	$1,050
2010	$149
2011	$453
Total	$1,772

Source: US Senate Report, 56.

The SCP generated more than $1 billion in revenue in 2009, largely from having purchased protection against the bankruptcy filing of General Motors. As volatility and default rates decreased in 2010, the SCP was reduced in size, ending the year with a "net notional" size of $4 billion and generating only $149 million of revenue for the year. The "notional" amount of a CDS contract is akin to the amount of insurance coverage purchased, not the much smaller annual premium paid (Markit, 6). CIO held both long-risk and short-risk positions, and the "net" of the various notional positions was $4 billion. CIO's previously positive outlook for the credit markets did an about-face in 2011, as concerns over the European sovereign debt crisis and general bearishness in the financial markets caused the traders to increase the amount of credit protection held by the SCP.

Of future consequence, in 2011, Iksil and his fellow traders embarked on a strategy of buying credit protection on (higher risk) high-yield companies, while funding some of the premium cost by simultaneously selling protection on (lower risk) investment-grade companies. CIO would receive premium income by selling insurance on less risky investment-grade entities, which it would in turn use to pay the premiums on the credit insurance purchased on more risky high-yield entities. Thus, CIO was exposed to default by lower risk companies, but protected against default of higher risk companies. In the aggregate, SCP remained in a long protection (short-risk) position at this time, consistent with its risk management purpose. Although the large trades that ultimately caught the attention of the media took place during the first quarter of 2012, the net notional size of the SCP book had already grown greatly throughout 2011, from $4 billion at year-end 2010 to $51 billion by year-end 2011. See Appendix 2.

4. Conflicting Mandates (November 2011 through January 2012)

Several events in late 2011 and early 2012 illustrate the conflicting mandates faced by the CIO traders and set the stage for the disastrous expansion of the SCP book in the first quarter of 2012.

First, beginning in summer 2011 and continuing through the fall, Iksil bought credit protection on a specific tranche of the CDX North American High Yield (CDX.NA.HY) index that had been created by Markit (described further in Section 6). Iksil's position had the possibility to profit enormously, but only if two or more of the 100 high-yield companies in the index declared bankruptcy or otherwise defaulted before the expiration of the contract

on December 20, 2011. Following the bankruptcy filings by Dynegy on November 7 and American Airlines on November 29, JPM received a payout on the CDS contract, resulting in profits on this trade variously estimated at between $400 million and $550 million. Iksil's persistence in sticking with this high-risk strategy that could easily have resulted in a large loss caused rival derivatives traders at hedge funds and other banks to call him the "Caveman" (WSJ 2012c).

Though ultimately resulting in a profit, this trade should have sounded a note of caution within CIO and JPM. Had American Airlines filed for bankruptcy just three weeks later (i.e., after December 20), the large profit instead would have been replaced by a sizeable loss because the default protection would have expired worthless. Furthermore, without the profit from this trade, the SCP would have only broken even for 2011. Lastly, JPM has been unable to explain how this trade acted as a hedge or other form of credit protection for the bank (for example, if a different part of JPM had loaned money to American Airlines, an issue that is explored further in Zeissler, et al 2014G).

Second, in December 2011, JPM Chief Executive Officer Jamie Dimon and JPM Chief Financial Officer Douglas Braunstein ordered CIO to reduce its Risk Weighted Assets (RWA) as part of a bank-wide effort to prepare for the new Basel III capital requirements. As a federally chartered bank, JPM is required to maintain a minimum amount of capital. To determine the amount of capital needed, US bank regulators follow the recommendation of the Basel Accords and require the calculation of RWA, which is a dollar measure of a bank's total assets, adjusted according to the riskiness of the assets. The amount of capital that a bank must hold is then calculated as a percent of its RWA. Since synthetic assets such as credit derivatives would require far more capital under the upcoming Basel III regime than under its Basel II predecessor, the main source of RWA reduction within CIO was to come from the SCP.

Furthermore, the economic environment was strengthening, and credit markets were also expected to improve, so CIO had less need to hedge its $350 billion portfolio of available-for-sale debt securities. As a result, firm management and CIO management recommended that the SCP book be moved to a more neutral risk posture (neither long nor short credit risk).

The most direct way of quickly reducing the size of the SCP, as measured by RWA, would be to "unwind" the existing transactions in the book. For example, if CIO had bought (or sold) protection in the past on a certain index for a certain period of time, then traders could unwind this position by selling (or buying) protection on the same index for the same maturity. However, the initial purchase and later sale (or initial sale and later purchase) would remain in the trading book, unless both transactions were with the same counterparty.

In contrast to unwinding a position in an exchange-traded and widely owned security (such as common stock in a company that is part of the Dow Jones Industrial Average), even the most actively traded CDS contracts are illiquid and thus incur relatively large trading costs to buy or sell. In response to a request from Drew in late December 2011, the CIO traders determined that reducing the SCP proportionally by approximately 1/3 would decrease RWA by $10 billion but would cost about $500 million if traders were to unwind positions quickly at whatever prices were offered (JPM Task Force 2013, 28). Drew was not pleased by this analysis and asked the traders to further study how they could reduce RWA at a lower cost.

This illustrates a fundamental conflict faced by all trading desks: faster risk reduction may lead to higher costs and thus lower profits, while reducing risk at a slower pace can result in higher profits. Risk can be reduced rapidly by offering to buy above the current market price

and offering to sell below the current market price, but such actions are costly and negatively impact profitability.

The CIO traders had another incentive not to unwind the SCP portfolio. Drew told the traders that she wanted them to achieve another gain in 2012 like the large profit they recorded as the result of the American Airlines default in November 2011. However, reducing the amount of credit protection held in the SCP would mean reducing the opportunities to profit from future defaults.

The bankruptcy filing of Eastman Kodak on January 19, 2012, caused the SCP book to suffer a sizeable loss, resulting in yet another conflict for the traders. The traders had sold protection on Kodak during 2011 and hence were exposed to a default by Kodak, but they had also bought some offsetting protection to partially hedge this exposure. Unfortunately, part of the purchased protection expired in December 2011 and was not renewed due to the effort to reduce RWA (the fair value of purchased credit protection is recorded as an asset on the balance sheet). Thus, having sold protection, CIO was required to make a large payment when Kodak defaulted, causing the SCP to lose $50 million. Iksil stated that CIO management voiced concern that the SCP was no longer providing sufficient credit loss protection and that the traders were instructed not to allow such a loss to happen again (US Senate Report, 65).

Thus, by late January 2012, the CIO traders found themselves being instructed to reduce RWA rapidly (while minimizing the cost of doing so), *and* to maintain the possibility of profiting from defaults such as American Airlines, *and* to avoid losses similar to the Eastman Kodak bankruptcy.

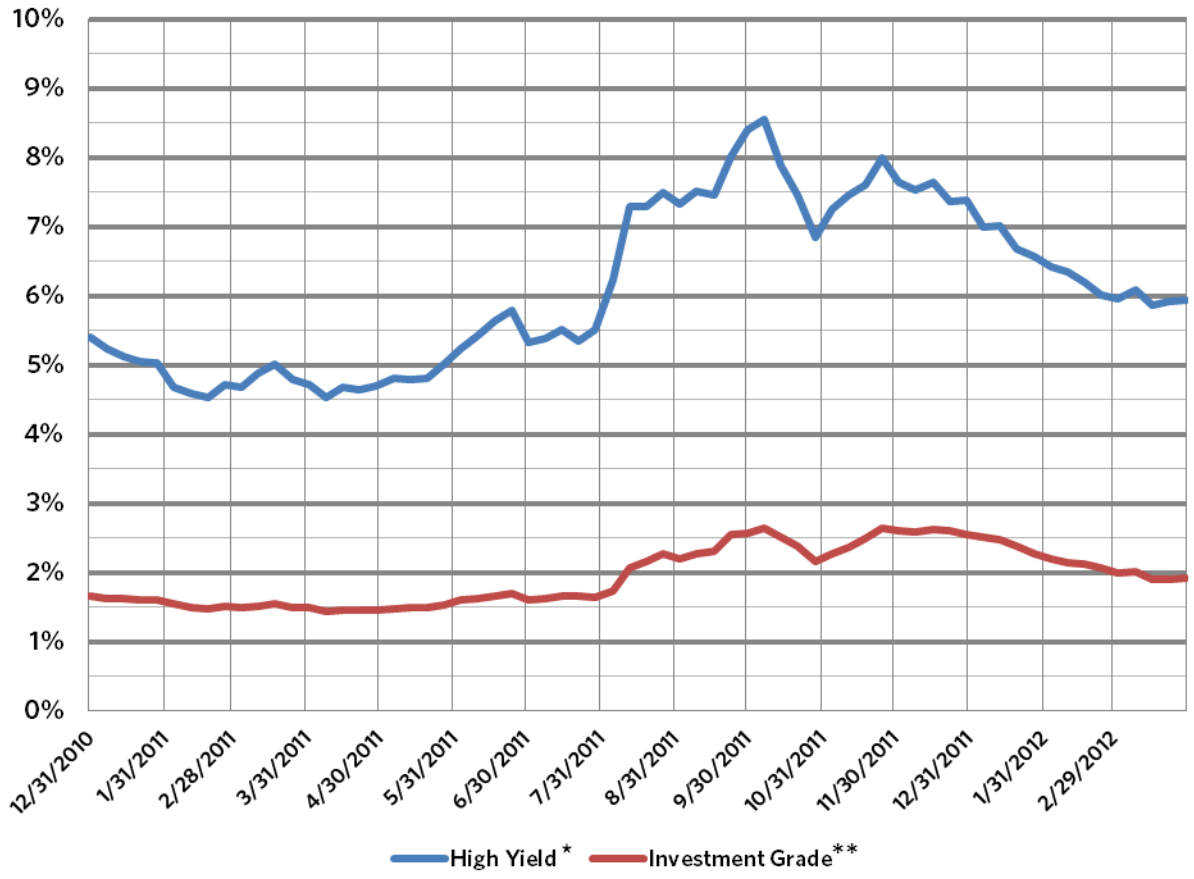
After the JPMorgan Chase Management Task Force (JPM Task Force) conducted an internal investigation into the CIO losses, the first key observation in its report issued January 2013 was the following:

> 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. (JPM Task Force 2013, 85)

5. The Decision Is Made (Late January 2012)

The Kodak bankruptcy on January 19 started a nine-day period in which the SCP lost money every day. (See Appendix 3.) Global credit markets rallied in January on a more favorable outlook for the US economy and reduced concern about sovereign default in Europe. (See Figure 3 and Figure 4.) As a result, the going rate for default protection decreased in January, so protection buyers saw their existing positions decrease in value, while protection sellers profited on their existing exposures.

Figure 3: US Corporate Bond Option-Adjusted Spreads, First-Quarter 2011 through First-Quarter 2012:



* High Yield = BofA Merrill Lynch US High Yield Master II Option-Adjusted Spread
** Investment Grade = BofA Merrill Lynch US Corporate Master Option-Adjusted Spread
Source: Federal Reserve Bank of St. Louis.

Though Iksil bought protection on certain credit indices and tranches while selling protection on other credit indices and tranches (as described more fully below and in Section 6), SCP's net economic position at this time remained that of a protection buyer. Thus, the aggregate fair value of the SCP book decreased in January, with losses (including the Kodak-related loss) reaching $100 million by January 31.

Moreover, because US generally accepted accounting principles require that credit and other derivatives be recorded at fair market value at the end of every trading day, the ongoing drop in SCP value was reflected every day in CIO's accounting records, and hence impacted JPM's bank-wide profit and loss.

Figure 4: US Corporate Bond Option-Adjusted Spreads, First-Quarter 2011 through First-Quarter 2012

Month-End Spread	High Yield*	Investment Grade**	Difference (HY–IG)	Difference in the Differences
2010-Dec	5.41%	1.66%	3.75%	
2011-Jan	5.03%	1.60%	3.43%	–0.32%
2011-Feb	4.72%	1.51%	3.21%	–0.22%
2011-Mar	4.79%	1.50%	3.29%	0.08%
2011-Apr	4.71%	1.46%	3.25%	–0.04%
2011-May	5.01%	1.54%	3.47%	0.22%
2011-Jun	5.80%	1.70%	4.10%	0.63%
2011-Jul	5.51%	1.65%	3.86%	–0.24%
2011-Aug	7.50%	2.27%	5.23%	1.37%
2011-Sep	8.41%	2.57%	5.84%	0.61%
2011-Oct	6.85%	2.17%	4.68%	–1.16%
2011-Nov	8.00%	2.65%	5.35%	0.67%
2011-Dec	7.38%	2.56%	4.82%	–0.53%
2012-Jan	6.57%	2.28%	4.29%	–0.53%
2012-Feb	6.01%	2.08%	3.93%	–0.36%
2012-Mar	5.95%	1.92%	4.03%	0.10%

* High Yield = BofA Merrill Lynch US High Yield Master II Option-Adjusted Spread
** Investment Grade = BofA Merrill Lynch US Corporate Master Option-Adjusted Spread
Source: Federal Reserve Bank of St. Louis.

(The topic of derivative valuation under US generally accepted accounting principles and at JPM specifically is discussed in greater detail in Zeissler, et al. 2014B.)

Given the run of losses in the SCP book in late January and predictions of further losses, the traders began to review their options for managing the SCP, most of which involved taking on additional credit risk because of the improving economy. Since credit default swaps have a fixed maturity, typically 10 years from inception or less, one option would have been to allow some or all of the previously purchased credit protection to expire. A quicker means to the same end would have been to unwind (i.e., sell) some of the same credit protection that had been bought previously. Another possible means to add credit risk would have been to sell default protection on other credit indices and/or tranches.

CIO management quickly dismissed the option of allowing the SCP to passively wind down over time, since the SCP book was expected to drop further in value if the credit outlook continued to improve, and because SCP would have to pay premiums until the credit protection expired.

The traders also decided against quickly unwinding the SCP book by disposing of its positions. Trading costs from unwinding the portfolio were now estimated at almost $600 million, and Drew and Macris were reluctant to lose this much money. Furthermore, removing some of the long protection would have made it more difficult to obtain American Airlines-style gains and to prevent Eastman Kodak-style losses.

Instead, Iksil decided on a complex trading strategy, involving long and short positions on numerous credit derivatives. The primary strategy involved buying credit protection against the possible default of (higher risk) high-yield bonds, while simultaneously selling credit protection against (lower risk) investment-grade bonds. This strategy is summarized in Figure 5.

Figure 5: Summary of the Primary Trading Strategy

Credit Rating	Protection	Risk Exposure	Premiums
High Yield	Buy	Short Risk	Pay
Investment Grade	Sell	Long Risk	Receive

Iksil presented the proposed trading strategy at a meeting of the CIO International Senior Management Group on January 26, explaining that he devised the complicated trading strategy instead of just reducing existing positions because he "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'" (JPM Task Force 2013, 63). Even though Drew told the US Senate that the presentation was unclear to her, and Iksil warned that the strategy could result in losses as large as $500 million, the proposal was apparently approved, since traders began implementation right away.

6. The London Whale Trades Take Place (January 26 through March 23)

After the CIO meeting on January 26, Iksil and the traders began rapidly increasing both the long and short sides of the SCP book. The main derivatives that they traded were based on the CDX.NA.HY and CDX.NA.IG credit indices and tranches administered by Markit. A credit index tracks a specific basket of credit instruments, while a credit tranche tracks a specific portion of a credit index.

Iksil bought protection on the CDX.NA.HY, which is a credit index of 100 North American companies that are classified as High Yield based on their credit rating. He simultaneously sold protection on the CDX.NA.IG, which is a credit index of 125 North American companies that are classified as Investment Grade. Iksil also carried out similar trades on European credit indices.

Markit creates two new series of each index every year, as new bonds are issued and existing bonds mature or default. When selling credit protection, Iksil primarily used the CDX.NA.IG9

series of the index. IG9 was created in 2007 before the worst of the financial crisis, and it included five companies rated as investment grade in 2007 but downgraded to high-yield status later, thus providing a closer offset to the CDX.NA.HY high-yield credit protection held in the SCP book.

Although it was Iksil who presented the proposed trading strategy on January 26, he had an almost immediate change of opinion about the efficacy of the new strategy, and sent a series of e-mails to his superior Martin-Artajo on January 30 stating that "the current strategy doesn't seem to work out" and that notional amounts under the new trading strategy had already "become scary," so that the "only" course of action was "to stay as we are and let the book simply die." Martin-Artajo's response, if any, is unknown (US Senate Report, 77-78).

During February, the credit market continued to rally, and the market value of the SCP continued to fall. As can be seen in Figure 3 and Figure 4, option-adjusted spreads (over equal maturity Treasury bonds) on US corporate bonds decreased during the fourth quarter of 2011 and the first quarter of 2012, but spreads on high-yield bonds decreased by more than spreads on investment-grade bonds. As a result, SCP's high-yield short risk positions lost more money than the traders expected, while the investment-grade long risk positions gained less value than expected.

February 13 provided an extreme example of the fact that SCP's high-yield short risk and investment-grade long risk positions were not offsetting as expected. Ally Financial announced that its ResCap mortgage subsidiary was planning to file a pre-packaged bankruptcy later in 2012. This company-specific event on a day when credit markets otherwise rallied caused SCP to experience losses on both long and short positions.

As February turned to March, the credit market remained "unusually bullish" and the SCP book continued to "underperform" according to Macris (US Senate Report, 81). Since gains on investment-grade positions (sell protection, long risk) were less than losses on high-yield positions (buy protection, short risk), the SCP continued to lose money in the aggregate. The traders responded by selling even more protection in an effort to stop the losses, to "defend" their existing positions, and to balance their long and short risk exposures.

For example, on February 29, Iksil sold protection on over $7 billion notional exposure to the CDX.NA.IG9 index with 10-year maturity. This amount was equal to more than 90% of the dollar value of all trades of that product on that day by the entire market and approximately triple the average daily volume traded by all participants. This volume of sales by CIO was large enough to single-handedly push down the market price of default protection on CDX.NA.IG9 compared to what it would otherwise have been, helping to "limit the damage" of adverse month-end price moves (CFTC Settlement Agreement, 8).

Even so, SCP lost $69 million in February, and the notional size of just the IG9 position increased from $75 billion to $94 billion. During a regularly scheduled business review meeting on February 29 with senior bank officials including Dimon and John Hogan (JPM Chief Risk Officer), CIO management indicated that the effort to reduce RWA was under way, but not that this effort in fact involved actually increasing the size of the SCP portfolio.

By now, Iksil had sold so much protection on the IG9 index that he grew concerned that traders at other firms were aware that JPM was behind the heavy selling and were taking advantage of this fact. Though some financial instruments trade in what economists would refer to as "perfectly competitive" markets with many buyers and sellers, none of whom is large enough to affect the price, most credit derivative trades take place among a limited number of traders at large banks and hedge funds. Within this small community, traders

have some familiarity with one another and may exchange rumors about who bought or sold which derivatives, even if they do not know the exact position of each participant.

CIO's aggregate position in IG9 was equal to 10-15 times the average daily trading volume of the index, making the position difficult to dispose of quickly if the need arose (JPM Task Force 2013, 64). Thereafter, Iksil largely switched from the IG9 index to newer IG indices with higher trading volume to be less visible to other market participants.

Drew met with Macris and Martin-Artajo on March 21 to discuss the continued underperformance by the SCP book and how best to reduce RWA. The next day, March 22, the CIO traders sold protection on more than $10 billion notional exposure, causing SCP to breach a particular risk limit known as the CSW10% limit, which is the expected profit or loss to a portfolio if the spread on each credit position simultaneously widened by 10% of its current amount (e.g., from 2.00% to 2.20%). In addition to exceeding the CSW10% limit, the SCP book caused CIO to breach a number of other market-risk limits during the first quarter of 2012 that JPM had put in place to prevent large trading losses. (This topic discussed in greater detail in Zeissler, et al. 2014D.)

While often questioning the calculation and usefulness of other risk limits, Drew considered CSW10% to be the most important limit. On March 23, Drew ordered Macris, Martin-Artajo, and Iksil to "put phones down" and to stop trading the SCP book (US Senate Report, 85). Year-to-date SCP losses were $222 million at this point. (See Appendix 3.)

Interestingly, the SCP book was in fact long credit risk by March 23 according to the CSW10% risk metric, which meant that SCP credit risk was in the same direction as JPM bank-wide risk (JPM Task Force 2013, 45). Thus, a worsening credit environment would hurt both SCP and JPM, and improving credit would help both SCP and JPM, in contrast to SCP's stated purpose of offsetting some of JPM's risk.

Since the CDX.NA.HY and CDX.NA.IG indices had significantly different exposure to changes in credit risk, the net dollars invested in long or short positions might not necessarily correspond to long or short credit risk, as shown in Figure 6.

Figure 6: Possible Difference between Dollar Exposure and Beta-Adjusted Exposure to Credit Risk

Hypothetical Dollar Exposure	Hypothetical Beta	Beta-Adjusted Exposure
+1	5	+5
–2	2	–4
Sum= –1		Sum= +1

7. Aftermath

One week after Drew gave the order to stop trading, Macris e-mailed the bank's Chief Risk Officer that he had "lost confidence" in his team and asked for "help with the synthetic credit book" (US Senate Report 2013, 86). The net notional value of the SCP book had more than tripled during the first quarter, from $51 billion at the end of December 2011 to $157 billion by the end of March 2012. (See Appendix 2.)

As the trading book grew, losses also mounted. Whereas Iksil's presentation on January 26 mentioned the possibility of losses from the new trading strategy totaling $500 million in a worst-case scenario, SCP losses were $550 million for the month of March alone, with year-to-date losses reported at $719 million. (See Appendix 3.)

Peter Weiland, the head of market risk at CIO, received a call on April 4 from a reporter at the *Wall Street Journal*, informing him that the newspaper was working on a story about Iksil and the CIO. Drew in turn informed the JPM Operating Committee on April 5 of the impending news. On April 6, both Bloomberg and the *Wall Street Journal* published the first articles about Iksil's trading strategy.

The Bloomberg reporters obtained their information from five counterparties at hedge funds and rival banks with whom Iksil traded. Some of these counterparties referred to Iksil as the "London Whale", since his trades were large enough to distort market prices in certain cases (Bloomberg 2012).

Iksil had sold such large amounts of protection on the CDX.NA.IG index that other traders could in fact buy protection on the index for a much lower price than buying protection on the individual companies that made up the index. In early April 2012, "10-year protection on $10 million of the corporate bonds underlying the index cost $111,000 annually" whereas "[b]uying the components individually would have cost $131,000" presenting rival traders with an arbitrage opportunity of $20,000 per year (WSJ 2012b).

Iksil was warranted in his concern that counterparties would trade against him if they became aware of the size and composition of JPM's derivative holdings, as the SCP recorded a single-day loss of $415 million on April 10, the first trading day after the news story broke. This was SCP's largest daily loss thus far in 2012, and it was many times larger than the average daily loss of $11 million during the prior 67 trading days of 2012. The massive April 10 loss pushed year-to-date SCP losses over the $1 billion mark.

On April 27, JPM ordered a team of derivatives experts from the Investment Bank to analyze every single position within the SCP book. After its review, the team informed JPM management that the SCP portfolio could lose significantly more money than estimated by the CIO traders and that the market's knowledge of CIO's positions would hamper the unwinding of the book. Most SCP credit derivatives were transferred during the second quarter to the Investment Bank, which closed out these positions in the remainder of 2012. The JPM Task Force noted in January 2013 that "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" (JPM Task Force 2013, 110).

Unfortunately, though active trading of the SCP book may have stopped on March 23, at which point year-to-date losses were reported at $222 million, the long and short positions still existed and losses escalated even as the trading book was being terminated. By the time JPM filed its first quarter Form 10-Q on May 10, the SCP book had already suffered $2 billion of mark-to-market losses during the second quarter. (IJPM Task Force 2013, 73) CIO trading losses ultimately reached $6.2 billion by December 31, 2012 (US Senate Report, 94).

With respect to the conflicting mandates imposed by CIO management on the SCP traders, the JPM Task Force concluded that "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" (JPM Task Force 2013, 85).

On September 19, 2013, banking regulators in the US and the United Kingdom (UK) announced a global settlement with JPM. The Federal Reserve Board, the Office of the Comptroller of the Currency, the Securities and Exchange Commission, and the UK Financial Conduct Authority penalized JPM a total of $920 million. JPM was also required to admit wrongdoing in certain instances, a rare occurrence in such settlements. One month later, the Commodity Futures Trading Commission also settled with JPM for a penalty of $100 million.

While the various regulatory agencies focused on different aspects of the 2012 CIO losses in their respective settlements with JPM (discussed in other case modules), the Commodity Futures Trading Commission considered CIO's abnormally large sales on February 29 of over $7 billion notional value of protection on the CDX.NA.IG9 index to be a violation of the Commodity Exchange Act, and accordingly filed charges against JPM for market manipulation. JPM admitted the findings of fact listed in the order, including that the CIO traders "acted recklessly," and agreed to pay a $100 million civil penalty (CFTC Press Release 6737-13).

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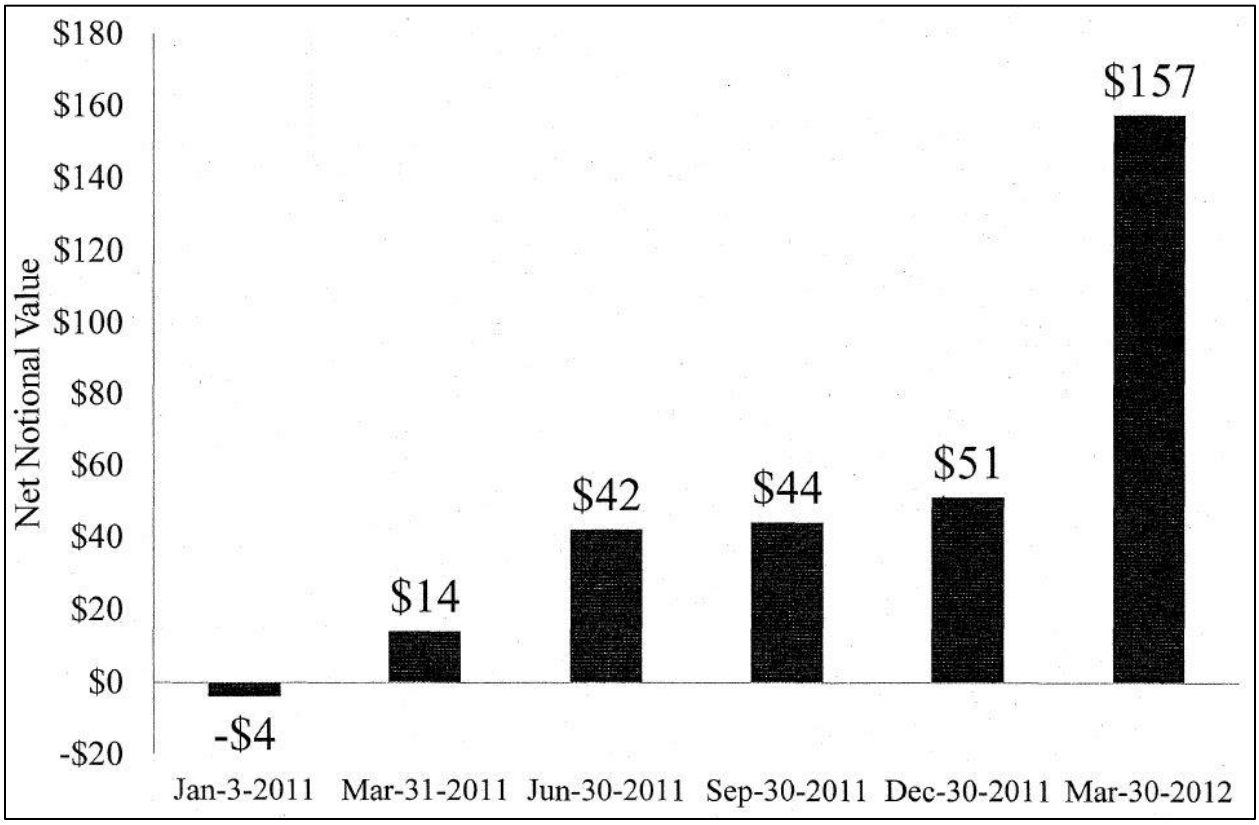
Appendix 1: Timeline of Key Events

2005		JPMorgan Chase & Company (JPM) spun off the Chief Investment Office (CIO) as a separate unit to invest the bank's excess deposits. Ina Drew, JPM's Chief Investment Officer, was appointed head of CIO.
2006		CIO approved a proposal by Achilles Macris to trade credit derivatives.
2008		According to the Office of the Comptroller of the Currency (OCC), CIO began calling this activity the Synthetic Credit Portfolio (SCP). SCP annual revenues = $170 million.
2009		SCP annual revenues = $1.050 billion.
2010		SCP annual revenues = $149 million. Year-end net notional = $4 billion.
2011	Mid-Year	Bruno Iksil and his fellow SCP traders began buying credit protection on (higher risk) high-yield companies, while funding some of the cost by selling protection on (lower risk) investment-grade companies.
	November 7	Dynegy filed for bankruptcy.
	November 29	American Airlines filed for bankruptcy, resulting in a $400 million to $550 million profit for SCP.
	December	Jamie Dimon and Douglas Braunstein instructed CIO to reduce Risk Weighted Assets so that JPM could reduce its regulatory capital requirements.
	December 31	SCP annual revenues = $453 million. Year-end net notional = $51 billion.
2012	January 19	Eastman Kodak filed for bankruptcy, resulting in a $50 million loss for SCP. First trading day of a nine-day run of losses.
	January 26	CIO meeting at which Iksil proposed expanding purchases of credit protection on high-yield corporate bonds, while selling even larger amounts of default protection on investment-grade corporate bonds. The proposal was approved and implemented immediately.
	January 30	Iksil expressed concern about the new strategy to his superior Javier Martin-Artajo and suggested letting the SCP positions expire.
	February 13	Ally Financial announced that its ResCap mortgage subsidiary was planning to file a pre-packaged bankruptcy later in 2012. The resulting turmoil in the credit market caused losses on both long and short SCP credit derivative positions in the same day.

	March 21	Drew met with Macris and Martin-Artajo to discuss SCP's continued underperformance and how best to reduce RWA.
	March 22	SCP breached the CSW10% limit, which was considered by Drew to be the most important risk limit.
	March 23	Drew ordered the CIO traders to stop trading the SCP.
	March 30	Macris e-mailed the bank's Chief Risk Officer that he had "lost confidence" in his team and requested help.
	First Quarter	SCP losses = $100 million January, $69 million February, $550 million March, $719 million quarterly total. Net notional increased from $51 billion to $157 billion.
	April 4-5	*Wall Street Journal* notified CIO that it planned to publish an article about Iksil. Drew informed the JPM Operating Committee.
	April 6	Bloomberg and the *Wall Street Journal* published the first news stories about the "London Whale."
	April 10	SCP recorded a single-day loss of $415 million on the first trading day after the news story broke, the largest daily loss to date.
	December 31	Year-to-date SCP losses = $6.2 billion.
2013	September-October	Four regulators in the US and one in the UK reached settlement agreements with JPM, totaling $1.020 billion in penalties.

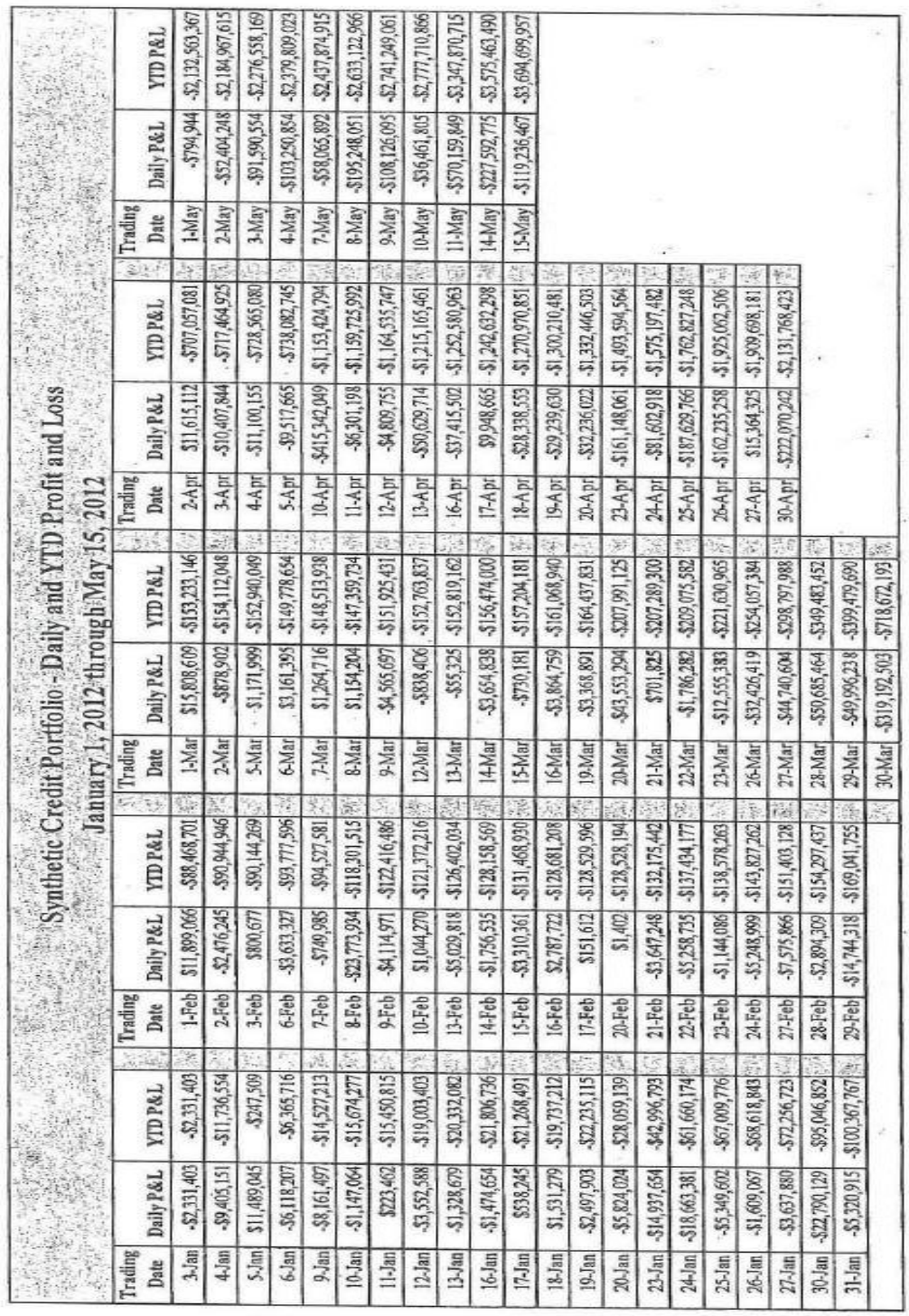
Appendix 2: Growth of Synthetic Credit Portfolio (in $ billions)



Source: US Senate Exhibits, 15

Appendix 3: Synthetic Credit Portfolio: Profit & Loss Reports

Source: US Senate Exhibits, 21



Synthetic Credit Portfolio - Daily and YTD Profit and Loss
January 1, 2012 through May 15, 2012

Trading Date	Daily P&L	YTD P&L	Trading Date	Daily P&L	YTD P&L	Trading Date	Daily P&L	YTD P&L	Trading Date	Daily P&L	YTD P&L	Trading Date	Daily P&L	YTD P&L
3-Jan	-$2,331,403	-$2,331,403	1-Feb	$11,899,066	-$88,468,701	1-Mar	$15,808,609	-$153,233,146	2-Apr	$11,615,112	-$707,057,081	1-May	-$794,944	-$2,132,563,367
4-Jan	-$9,405,151	-$11,736,554	2-Feb	-$2,476,245	-$90,944,946	2-Mar	-$878,902	-$154,112,048	3-Apr	-$10,407,844	-$717,464,925	2-May	-$52,404,248	-$2,184,967,615
5-Jan	$11,489,045	-$247,509	3-Feb	$800,677	-$90,144,269	5-Mar	-$1,171,999	-$152,940,049	4-Apr	-$11,100,155	-$728,565,080	3-May	-$91,590,554	-$2,276,558,169
6-Jan	-$6,118,207	-$6,365,716	6-Feb	-$3,633,327	-$93,777,596	6-Mar	$3,161,395	-$149,778,654	5-Apr	-$9,517,665	-$738,082,745	4-May	-$103,250,854	-$2,379,809,023
9-Jan	-$8,161,497	-$14,527,213	7-Feb	-$749,985	-$94,527,581	7-Mar	$1,264,716	-$148,513,938	10-Apr	-$415,342,049	-$1,153,424,794	7-May	-$58,065,892	-$2,437,874,915
10-Jan	-$1,147,064	-$15,674,277	8-Feb	-$23,773,934	-$118,301,515	8-Mar	$1,154,204	-$147,359,734	11-Apr	-$6,301,198	-$1,159,725,992	8-May	-$195,248,051	-$2,633,122,966
11-Jan	$223,402	-$15,450,815	9-Feb	-$4,114,971	-$122,416,486	9-Mar	-$4,565,697	-$151,925,431	12-Apr	-$4,809,755	-$1,164,535,747	9-May	-$108,126,095	-$2,741,249,061
12-Jan	-$3,552,588	-$19,003,403	10-Feb	$1,044,270	-$121,372,216	12-Mar	-$838,406	-$152,763,837	13-Apr	-$50,629,714	-$1,215,165,461	10-May	-$36,461,805	-$2,777,710,866
13-Jan	-$1,328,679	-$20,332,082	13-Feb	-$5,029,818	-$126,402,034	13-Mar	-$55,225	-$152,819,162	16-Apr	-$37,415,502	-$1,252,580,963	11-May	-$570,159,849	-$3,347,870,715
16-Jan	-$1,474,654	-$21,806,736	14-Feb	-$1,756,535	-$128,158,569	14-Mar	-$3,654,838	-$156,474,000	17-Apr	$9,948,665	-$1,242,632,298	14-May	-$227,592,775	-$3,575,463,490
17-Jan	$538,245	-$21,268,491	15-Feb	-$3,310,361	-$131,468,930	15-Mar	-$730,181	-$157,204,181	18-Apr	-$28,338,553	-$1,270,970,851	15-May	-$119,236,467	-$3,694,699,957
18-Jan	$1,531,279	-$19,737,212	16-Feb	$2,787,722	-$128,681,208	16-Mar	-$3,864,759	-$161,068,940	19-Apr	-$29,239,630	-$1,300,210,481			
19-Jan	-$2,497,903	-$22,235,115	17-Feb	$151,612	-$128,529,596	19-Mar	-$3,368,891	-$164,437,831	20-Apr	-$32,236,022	-$1,332,446,503			
20-Jan	-$5,824,024	-$28,059,139	20-Feb	$1,402	-$128,528,194	20-Mar	-$43,553,294	-$207,991,125	23-Apr	-$161,148,061	-$1,493,594,564			
23-Jan	-$14,937,694	-$42,996,793	21-Feb	-$3,647,248	-$132,175,442	21-Mar	$701,825	-$207,289,300	24-Apr	-$81,602,918	-$1,575,197,482			
24-Jan	-$18,663,381	-$61,660,174	22-Feb	-$5,258,735	-$137,434,177	22-Mar	-$1,786,282	-$209,075,582	25-Apr	-$187,629,766	-$1,762,827,248			
25-Jan	-$5,349,602	-$67,009,776	23-Feb	-$1,144,086	-$138,578,263	23-Mar	-$12,555,383	-$221,630,965	26-Apr	-$162,235,258	-$1,925,062,506			
26-Jan	-$1,609,067	-$68,618,843	24-Feb	-$5,248,999	-$143,827,262	26-Mar	-$32,426,419	-$254,057,384	27-Apr	$15,364,325	-$1,909,698,181			
27-Jan	-$3,637,880	-$72,256,723	27-Feb	-$7,575,866	-$151,403,128	27-Mar	-$44,740,604	-$298,797,988	30-Apr	-$222,070,242	-$2,131,768,423			
30-Jan	-$22,790,129	-$95,046,852	28-Feb	-$2,894,309	-$154,297,437	28-Mar	-$50,685,464	-$349,483,452						
31-Jan	-$5,320,915	-$100,367,767	29-Feb	-$14,744,318	-$169,041,755	29-Mar	-$49,996,238	-$399,479,690						
						30-Mar	-$319,192,503	-$718,672,193						