

**MIBL TERM 6**

*Financial Risk Regulation of Financial Institutions*

# **The JPMorgan Chase “London Whale”**

## **A Comprehensive Study Guide: Risk Management, Governance, and Regulatory Failure**

*Prepared as exam-preparation / study notes synthesizing course lecture material with primary case sources:*

- “JPMorgan Chase London Whale A: Risky Business” (Yale YPFS Case 2014-2a)
  - “JPMorgan and the London Whale” (INSEAD Case INS370)
- “JPMorgan Chase London Whale Z: Background and Overview” (Yale YPFS Case 2014-2z)
- U.S. Senate Permanent Subcommittee on Investigations, “JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses” (2013)

**Giselle Arellano**

August 2026

# Table of Contents

---

|                                                                      |           |
|----------------------------------------------------------------------|-----------|
| <b>1. Course Context and How to Use This Guide</b>                   | <b>3</b>  |
| <b>2. Executive Summary and Master Timeline</b>                      | <b>3</b>  |
| 2.1 Executive Summary                                                | 3         |
| 2.2 Master Timeline                                                  | 4         |
| <b>3. Key Individuals</b>                                            | <b>7</b>  |
| <b>4. Part I — Risk Management and VaR Model Failures</b>            | <b>9</b>  |
| 4.1 The Synthetic Credit Portfolio: from hedge to proprietary bet    | 9         |
| 4.2 The conflicting-mandate problem (Dec. 2011–Jan. 2012)            | 9         |
| 4.3 Escalating the strategy and the market-impact problem            | 10        |
| 4.4 Risk limit breaches: “flashing red and sounding alarms”          | 10        |
| 4.5 The January 2012 VaR model change                                | 11        |
| 4.6 Mismarking the book: hiding losses through valuation discretion  | 12        |
| 4.7 Summary: the risk-management failure chain                       | 12        |
| <b>5. Part II — Governance, Culture, and Oversight Failures</b>      | <b>14</b> |
| 5.1 CIO’s structural conflict of interest                            | 14        |
| 5.2 Applying the Three (and Four) Lines of Defense                   | 14        |
| 5.3 Senior management failure patterns — the lecture’s own checklist | 15        |
| 5.4 Risk culture and incentives inside CIO                           | 15        |
| 5.5 Board oversight                                                  | 16        |
| <b>6. Part III — Regulatory Response and the Volcker Rule</b>        | <b>17</b> |
| 6.1 Misleading investors, regulators, and the public                 | 17        |
| 6.2 OCC supervisory failure                                          | 17        |
| 6.3 The regulatory settlements                                       | 18        |
| 6.4 The Volcker Rule connection                                      | 19        |
| 6.5 The Senate Report’s formal findings and recommendations          | 19        |
| <b>7. Connecting Every Lecture Module to the Case</b>                | <b>21</b> |
| 7.1–7.4 Credit, liquidity, operational, compliance/conduct risk      | 21        |
| 7.5 Basel capital regulation and RWA                                 | 22        |
| 7.6 The synthesis: Basel’s “Three Pillars of Modern Risk Management” | 22        |
| <b>8. How the Four Source Documents Differ</b>                       | <b>23</b> |
| <b>9. Exam Preparation: Likely Questions and Answer Outlines</b>     | <b>24</b> |
| <b>10. Glossary of Key Terms</b>                                     | <b>26</b> |
| <b>Sources</b>                                                       | <b>28</b> |

# 1. Course Context and How to Use This Guide

---

This guide synthesizes the MIBL Term 6 course “Financial Risk Regulation of Financial Institutions” (Sessions 1–18, Asian Institute of Management) with the JPMorgan Chase “London Whale” case materials assigned for the Session 19–20 final written examination. The course explicitly designates the HBSP/Yale “JP Morgan and the London Whale” case as its capstone case, worth 30% of the final grade as a written analysis. This guide is organized so that each analytical theme pairs the course’s own frameworks (Value-at-Risk, market and credit risk, liquidity, operational risk, the Three/Four Lines of Defense, Basel capital regulation, and enterprise risk governance) directly against the facts of the Whale trades, drawing on four primary sources with different emphases:

- Case A — “Risky Business” (Zeissler, Ikeda & Metrick, Yale YPFS 2014-2a): the core narrative of how the trading strategy was conceived and executed, Nov. 2011–April 2012.
- INSEAD Case INS370: the same story with a sharper focus on risk-model mechanics (VaR, CS01, CSW10%), valuation/marketing discretion, and CIO’s internal governance structure — ending at the moment the story breaks in the press.
- Case Z — “Background and Overview” (Zeissler, Bennett & Metrick, Yale YPFS 2014-2z): the index case for the full nine-part Yale series, covering the aftermath — restatement, firings, indictments, and the five regulatory settlements totaling \$1.02 billion.
- U.S. Senate PSI Report, “JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses” (2013): the most detailed and most critical primary source, built on 90,000+ documents and direct testimony, organizing the failure into seven formal findings of fact and seven recommendations.

Where the four sources differ in emphasis, this guide flags the difference explicitly (see Section 8) — useful for anticipating which facts an exam question is really testing, since “Case A” alone does not cover the mismarking scandal, the VaR model change in depth, or the regulatory settlements in the way the Senate Report and Case Z do.

## How this guide is organized

Section 2 gives the one-paragraph executive summary and the master timeline. Section 3 profiles the key people. Sections 4–6 are the three analytical pillars requested for emphasis: (I) Risk Management & VaR Model Failures, (II) Governance, Culture & Oversight, and (III) Regulatory Response & the Volcker Rule. Section 7 shows exactly how each course lecture topic maps onto the case. Section 8 compares the four source documents. Section 9 offers likely exam questions with answer outlines. Section 10 is a glossary.

# 2. Executive Summary and Master Timeline

---

## 2.1 Executive Summary

In 2012, the Chief Investment Office (CIO) of JPMorgan Chase — the unit responsible for investing the bank’s roughly \$350 billion pool of “excess” deposits (deposits in excess of what the bank had lent out) — lost at least \$6.2 billion trading credit derivatives in a book known as the Synthetic Credit Portfolio (SCP). The losses

originated in a strategy proposed by lead trader Bruno Iksil in January 2012 to reconcile two conflicting instructions from senior management: shrink the portfolio's risk-weighted assets (RWA) ahead of incoming Basel III capital rules, while also minimizing trading costs and preserving the possibility of large gains from corporate bankruptcies (as SCP had earned from the 2011 American Airlines default). Rather than simply divesting risk, Iksil built an increasingly large and complex book that grew from \$51 billion in net notional exposure at year-end 2011 to \$157 billion by the end of Q1 2012 — a size so large that CIO's own trading in one credit index (CDX.NA.IG.9) came to dominate the entire market for that instrument, drawing the attention of hedge fund counterparties who nicknamed the trader "the London Whale" and began trading against JPMorgan's known position.

As losses mounted through Q1 2012 (\$100 million in January, \$69 million in February, \$550 million in March), CIO breached its risk limits more than 330 times between January and April 2012 — yet management responded not by reducing risk but by raising limits and, critically, by adopting a new Value-at-Risk (VaR) model in late January 2012 that cut CIO's reported VaR by roughly half overnight, ending an active limit breach on paper without reducing actual risk. Simultaneously, junior trader Julien Grout, under Iksil's direction, began marking the book's daily value at prices more favorable than the bid-ask midpoint, understating losses by as much as \$432–512 million at points in March 2012 alone. When the Wall Street Journal and Bloomberg exposed the "London Whale" trades on April 6, 2012, JPMorgan publicly defended them as a legitimate hedge; on the April 13, 2012 earnings call, CEO Jamie Dimon called the matter "a complete tempest in a teapot," and CFO Douglas Braunstein made a series of statements — that the trades were fully transparent to regulators, vetted by firm-wide risk management, held on a long-term basis, and would be permissible under the pending Volcker Rule — that a subsequent Senate investigation found to be false or seriously misleading.

The losses continued to escalate after the earnings call (past \$1 billion within days, \$2 billion by May 10, \$4.4 billion by end of June, and \$6.2 billion by year-end), forcing a rare restatement of first-quarter 2012 earnings on July 13, 2012 once an internal task force determined traders had not marked the book in good faith. Ina Drew, the CIO head, resigned in May 2012; Iksil, his direct supervisor Javier Martin-Artajo, and Martin-Artajo's supervisor Achilles Macris were terminated in July 2012; Martin-Artajo and Grout were later indicted for fraud (Iksil received a non-prosecution agreement). Five regulators — the Federal Reserve, the Office of the Comptroller of the Currency (OCC), the SEC, the CFTC, and the UK's Financial Conduct Authority — extracted a combined \$1.02 billion in penalties in 2013, with JPMorgan required, unusually, to admit wrongdoing. A 2013 Senate Permanent Subcommittee on Investigations report found that the OCC — despite having 65 examiners embedded at JPMorgan — had missed the SCP's existence for nearly six years and failed to act on repeated warning signs once it emerged. The episode became a central real-world argument for finalizing the Volcker Rule's ban on proprietary trading by insured banks, finalized in December 2013.

#### **The thesis this case is built to teach**

JPMorgan was solvent and liquid throughout the episode — its \$2.3 trillion balance sheet and "fortress" capital position were never genuinely at risk. What failed was governance: the bank's ability to know and understand the risks it was actually running. This maps directly onto the course's own closing framework — Basel's "Three Pillars of Modern Risk Management" (Capital, Liquidity, Governance) — where the London Whale is a Pillar III (governance) failure, not a Pillar I or II failure. See Section 7.6.

## 2.2 Master Timeline

| Date              | Event                                                                                                                                                                                                                                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2005              | CIO spun off from JPMorgan Treasury as a standalone unit; Ina Drew named Chief Investment Officer, reporting to CEO Jamie Dimon.                                                                                                                                               |
| 2006              | CIO management (Achilles Macris) proposes trading credit derivatives as a portfolio/“business” hedge; approved internally without OCC sign-off.                                                                                                                                |
| 2008              | CIO’s credit-derivatives book formally named the Synthetic Credit Portfolio (SCP); SCP earns \$170M.                                                                                                                                                                           |
| 2009              | SCP earns \$1.05B, largely from CDS protection bought ahead of GM’s bankruptcy.                                                                                                                                                                                                |
| 2010              | SCP net notional at year-end: ~\$4 billion; SCP revenue \$149M.                                                                                                                                                                                                                |
| Summer 2011       | Iksil begins buying CDX.NA.HY (high-yield) protection funded by selling CDX.NA.IG (investment-grade) protection.                                                                                                                                                               |
| Nov. 7, 2011      | Dynegy bankruptcy.                                                                                                                                                                                                                                                             |
| Nov. 29, 2011     | American Airlines bankruptcy; nets SCP an estimated \$400–550 million gain on protection held since summer.                                                                                                                                                                    |
| Dec. 2011         | Dimon and CFO Braunstein instruct CIO to reduce Risk-Weighted Assets (RWA) ahead of Basel III; SCP net notional reaches \$51 billion, up from \$4B a year earlier.                                                                                                             |
| Jan. 19, 2012     | Eastman Kodak bankruptcy; SCP had let offsetting protection lapse to help cut RWA — costs SCP a \$50 million loss.                                                                                                                                                             |
| Jan. 26, 2012     | Iksil presents his revised strategy (buy more HY protection, sell more IG protection) to CIO International Senior Management; approved and implemented immediately.                                                                                                            |
| Jan. 30, 2012     | New CIO VaR model implemented — without completing the standard concurrent-comparison validation process — cutting reported VaR by roughly 44–50% overnight; Iksil privately emails that the strategy “doesn’t seem to work out” and notional amounts have become “scary.”     |
| Jan. 2012 (month) | CIO and firmwide VaR limits breached for four days; SCP loses \$100 million for the month.                                                                                                                                                                                     |
| Feb. 13, 2012     | Ally Financial’s ResCap unit files pre-packaged bankruptcy; SCP loses money on both its long and short legs simultaneously.                                                                                                                                                    |
| Feb. 22, 2012     | CIO’s Comprehensive Risk Measure projects a worst-case 2012 loss of \$6.3 billion; a CIO risk manager dismisses the figure as “garbage.”                                                                                                                                       |
| Feb. 29, 2012     | Iksil sells protection on over \$7 billion notional of CDX.NA.IG.9 in a single day — more than 90% of that day’s market volume; CIO reports RWA-reduction progress to senior management (incl. Dimon) without disclosing SCP is actually growing. February loss: \$69 million. |
| Mar. 12–16, 2012  | Julien Grout’s “shadow spreadsheet” tracks a growing gap between reported (favorable) marks and true bid-ask midpoint values: \$203M (Mar 12) rising to \$498–512M (mid-to-late March).                                                                                        |
| Mar. 20, 2012     | SCP’s worst single trading-day loss to date (\$43M–\$319M cited across sources); same day Drew/Goldman present to the bank’s Risk Policy Committee without disclosing it.                                                                                                      |
| Mar. 22, 2012     | CIO sells protection on over \$10 billion notional in a single day, breaching the CSW10% limit — by now the book’s largest single risk-limit breach.                                                                                                                           |

| Date               | Event                                                                                                                                                                                                                                   |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mar. 23, 2012      | Ina Drew orders traders to “put phones down,” halting SCP trading; by now all five of CIO’s risk limits/advisories are in breach. YTD loss: \$222 million.                                                                              |
| Mar. 30, 2012      | Internal audit issues a critical report on CIO risk management; Macris tells the bank’s CRO he has “lost confidence” in his team and is in “crisis mode.”                                                                               |
| Mar. 31, 2012      | Quarter-end: SCP net notional has tripled to \$157 billion; the book has flipped from net short to net long credit risk. Q1 loss: ~\$719 million (bank’s later-validated figure; \$1.2B at true midpoint marks).                        |
| Apr. 5, 2012       | JPMorgan’s communications team drafts talking points calling SCP a “hedge,” with regulators “fully” informed, ahead of anticipated press coverage.                                                                                      |
| Apr. 6, 2012       | Bloomberg and the Wall Street Journal publicly report the “London Whale” trades for the first time.                                                                                                                                     |
| Apr. 10, 2012      | First trading day after the story breaks: SCP initially reports a \$6 million daily loss, revised 90 minutes later to \$415 million — the largest single-day loss to date; YTD losses exceed \$1 billion for the first time.            |
| Apr. 13, 2012      | JPMorgan Q1 earnings call: CFO Braustein calls SCP transparent to regulators, long-term, and Volcker-compliant; CEO Dimon dismisses the affair as “a complete tempest in a teapot.”                                                     |
| May 10, 2012       | 10-Q filed: SCP losses disclosed at \$2 billion; Q1 average VaR restated from \$67M to \$129M after reverting to the old VaR model; Dimon calls the strategy “flawed, complex, poorly reviewed, poorly executed, and poorly monitored.” |
| May 2012           | Deputy CRO Ashley Bacon orders CIO to mark its book using the same independent pricing service as the Investment Bank, ending the favorable-marking practice.                                                                           |
| May 14, 2012       | Ina Drew’s retirement announced.                                                                                                                                                                                                        |
| June 13 & 19, 2012 | Dimon testifies before the Senate Banking Committee and the House Financial Services Committee.                                                                                                                                         |
| End of June 2012   | Cumulative reported losses reach \$4.4 billion.                                                                                                                                                                                         |
| July 12, 2012      | JPMorgan terminates Iksil, Martin-Artajo, and Macris; Grout is suspended (later resigns).                                                                                                                                               |
| July 13, 2012      | JPMorgan restates Q1 2012 earnings, adding \$660 million in losses (\$459M after-tax) after finding CIO personnel had not marked positions in good faith.                                                                               |
| Nov. 6, 2012       | OCC issues six Supervisory Letters citing 20 “Matters Requiring Attention.”                                                                                                                                                             |
| Jan. 14, 2013      | OCC issues a formal Cease-and-Desist Order against JPMorgan.                                                                                                                                                                            |
| Jan. 16, 2013      | JPMorgan’s internal Management Task Force (led by Michael Cavanagh) releases its 129-page public report.                                                                                                                                |
| Mar. 15, 2013      | U.S. Senate PSI releases its 300-page report, “JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses.”                                                                                                            |
| Aug. 14, 2013      | SEC and DOJ charge Martin-Artajo and Grout with fraud (in absentia).                                                                                                                                                                    |
| Sept. 19, 2013     | Global settlement: Federal Reserve (\$200M), OCC (\$300M), SEC (\$200M), UK FCA (~\$220M) — total \$920M; JPMorgan admits wrongdoing.                                                                                                   |
| Oct. 16, 2013      | CFTC settles separately for \$100 million, finding CIO traders “acted recklessly” and that the Feb. 29 IG.9 sale violated the Commodity Exchange Act’s manipulation provisions.                                                         |

| Date                      | Event                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------------|
| Dec. 10, 2013             | The Volcker Rule is finalized by five federal agencies, partly informed by lessons from the Whale trades. |
| End of 2012 (final tally) | Total SCP trading losses reach at least \$6.2 billion.                                                    |

### 3. Key Individuals

The Senate Report is emphatic on one point worth memorizing verbatim: the Whale trades “were not the acts of rogue traders, but involved some of the bank’s most senior managers.” The org chart below traces the reporting line from the trading desk to the CEO.

| Name                 | Role                                                 | Key Fact                                                                                                                                                                                                           |
|----------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jamie Dimon          | Chairman & CEO, JPMorgan Chase                       | Co-issued the Dec. 2011 RWA-reduction directive; approved a temporary VaR-limit increase; received multiple communications about the VaR model change; called the affair a “tempest in a teapot” on Apr. 13, 2012. |
| Douglas Braunstein   | CFO (to Dec. 2012)                                   | Co-issued the RWA directive; made the misleading Apr. 13, 2012 earnings-call statements; received VaR-model-change communications; stepped down as CFO Dec. 31, 2012.                                              |
| Ina Drew             | Head of CIO (2005–May 2012)                          | Set the CIO’s (conflicting) 2012 priorities for SCP; ordered the Mar. 23, 2012 trading halt; resigned May 2012.                                                                                                    |
| Achilles Macris      | International CIO (London)                           | Drew’s top deputy; oversaw SCP; told the bank CRO on Mar. 30 he had “lost confidence” in his team; terminated July 2012.                                                                                           |
| Javier Martin-Artajo | Head of Credit & Equity Trading (reported to Macris) | Directly oversaw SCP and Iksil; instructed marking at “fair value” rather than midpoint; terminated July 2012; indicted for fraud Aug. 2013 (in absentia).                                                         |
| Bruno Iksil          | Senior SCP trader (“the London Whale”)               | Devised and executed the trading strategy; privately called the book “monstrous” and its values “idiotic”; terminated July 2012; entered a non-prosecution agreement.                                              |
| Julien Grout         | Junior SCP trader (reported to Iksil)                | Marked the book daily; kept the “shadow spreadsheet” tracking the gap between reported and true midpoint values; suspended July 2012 (later resigned); indicted for fraud Aug. 2013 (in absentia).                 |
| Irvin (Irv) Goldman  | CIO’s first-ever Chief Risk Officer (Jan.–July 2012) | Appointed by CRO John Hogan; had no prior risk-management experience; nominated by his brother-in-law Barry Zubrow; resigned July 2012.                                                                            |
| Peter Weiland        | CIO Head of Market Risk (to Jan. 2012)               | Senior-most CIO risk officer before Goldman; dismissed the \$6.3B Comprehensive Risk Measure estimate as “garbage”; received the Apr. 4 call from a WSJ reporter; resigned July 2012.                              |
| John Hogan           | Bank-wide Chief Risk Officer (from Jan. 2012)        | Succeeded Barry Zubrow; appointed Goldman as CIO’s first CRO; told the Senate he was unaware of SCP’s size/losses before April 2012.                                                                               |

| Name             | Role                                                      | Key Fact                                                                                                                                         |
|------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Barry Zubrow     | Prior bank-wide CRO (to Jan. 2012)                        | Nominated Goldman (his brother-in-law) to the new CIO CRO post; resigned from JPMorgan effective Feb. 2013.                                      |
| Patrick Hagan    | CIO quantitative analyst                                  | Built the new VaR model despite never having designed one before; later called the model “wrong” after the Apr. 10 loss exceeded VaR by ~6x.     |
| Ashley Bacon     | Deputy Chief Risk Officer                                 | Ordered CIO (May 2012) to mark its book using the same independent pricing source as the Investment Bank, ending the favorable-marking practice. |
| Michael Cavanagh | Co-CEO, Corporate & Investment Bank                       | Led JPMorgan’s internal Management Task Force investigation (report issued Jan. 16, 2013).                                                       |
| Thomas Curry     | Comptroller of the Currency (from Apr. 9, 2012)           | Directed a “clean slate” re-examination of CIO; oversaw the OCC’s Jan. 2013 Cease-and-Desist order.                                              |
| Sen. Carl Levin  | Chairman, Senate Permanent Subcommittee on Investigations | Led the nine-month bipartisan investigation culminating in the 2013 Senate PSI report.                                                           |

## 4. Part I — Risk Management and VaR Model Failures

---

### 4.1 The Synthetic Credit Portfolio: from hedge to proprietary bet

CIO's stated mandate (per its internal "CIO 2012 Opportunities and Challenges" presentation) was to "optimize and protect the firm's balance sheet from potential losses, and create and preserve economic value over the longer-term." Its main activity was conservative: investing JPMorgan's ~\$350 billion of deposits in excess of loans (deposits of \$1.128 trillion vs. loans of \$724 billion at year-end 2011) in a AA+-rated bond book. The Synthetic Credit Portfolio (SCP), authorized in 2006 as a "portfolio hedge" against the bank's overall credit exposure, was a much smaller sideline — but one built entirely from credit derivatives (CDS index and tranche positions on the CDX.NA.IG, CDX.NA.HY, and iTraxx families), which the course's Market Risk module (lecture pp. 93–98) flags as instruments carrying leverage risk, counterparty risk, basis risk, liquidity risk, and complexity risk "improperly" used.

The course lecture is explicit that basis risk means "the derivative doesn't perfectly match the hedged item" — precisely the drift SCP underwent. What began as buying protection broadly correlated with the bank's loan book evolved by 2011–12 into directional bets on the relative movement of high-yield versus investment-grade credit spreads that had no clear, documented linkage to any specific balance-sheet exposure. Senate PSI Finding #2 states this plainly: JPMorgan "mischaracterized high risk trading as hedging" — the bank never identified what assets the SCP was hedging, never tested its size or effectiveness as a hedge, and never demonstrated that it lowered (rather than raised) the bank's overall risk. By March 2012, CIO's own internal presentations did not even list the Synthetic Credit Portfolio by name among its nine described investment portfolios, despite its then-\$157 billion size — a telling sign of how opaque and disconnected from its stated purpose SCP had become.

### 4.2 The conflicting-mandate problem (December 2011–January 2012)

In December 2011, Dimon and Braunstein instructed CIO to shrink Risk-Weighted Assets (RWA) — because under incoming Basel III rules, synthetic credit derivatives positions like SCP's would require materially more capital than under Basel II (a direct application of the course's Basel II→III capital-regulation module, lecture pp. 138–139, 147–178). But CIO's internal directives layered several other goals on top: minimize the cost of any unwind, preserve upside from a repeat of the 2011 American Airlines-style windfall, avoid repeating the January 2012 Eastman Kodak-style loss, and manage VaR down. JPMorgan's own internal Task Force later concluded this combination of "potentially conflicting priorities" — rather than any single trading error — is what "prompted at least some of the complicated trading strategies that led to the losses," and that CIO management should have prioritized among these goals (or escalated the tension to senior firm management) rather than leaving traders to reconcile them ad hoc.

- **Cheapest way to cut RWA:** simply divesting risk positions — "the most typical" approach per the Senate Report — was rejected as too costly (estimated at \$500–600 million to unwind).
- **Actual approach taken:** rather than divest, Iksil proposed buying additional protection to offset existing short positions — a strategy that, paradoxically, increased both the size and the risk of the book instead of shrinking it.

This is the single most testable structural point in the entire case: JPMorgan set out to reduce risk-weighted assets and instead tripled its risk. Any exam answer explaining “what went wrong” should open with this inversion.

### 4.3 Escalating the strategy and the market-impact problem

SCP’s net notional exposure grew from roughly \$4 billion (year-end 2010) to \$51 billion (year-end 2011) to \$157 billion by March 31, 2012 — a more-than-tenfold increase in fifteen months, tripling in Q1 2012 alone. By late February 2012, Iksil’s trading in the CDX.NA.IG.9 index had become so large relative to the market that on February 29, 2012 alone he sold protection on over \$7 billion notional — more than 90% of that single day’s total market volume in the instrument, and roughly triple the average daily volume across all market participants combined. INSEAD Case INS370’s Exhibit 5 shows CIO’s share of total street volume reaching 48–49% in several index/tenor combinations across January–April 2012 — meaning CIO had, in effect, become the market for these products.

This connects directly to two lecture concepts. First, market risk measurement via VaR assumes a portfolio can be liquidated (or its risk offset) at prevailing market prices — an assumption that collapses when a single trader’s position is the market. Second, the lecture’s liquidity-risk framework distinguishes Asset Liquidity Risk (“risk that a position cannot easily be unwound or offset at short notice without significantly influencing the market price, because of inadequate market depth”) from Funding Liquidity Risk. SCP’s problem was a textbook case of asset liquidity risk: once counterparties recognized the size and one-sidedness of JPMorgan’s position, they traded against it (buying the same protection cheaper via the distorted index than by buying the underlying single names, per Case A’s arbitrage example), making an orderly unwind progressively more expensive as the position grew.

### 4.4 Risk limit breaches: “flashing red and sounding alarms”

CIO tracked five risk metrics: Value-at-Risk (VaR), CS01/CSBPV (Credit Spread Basis-Point Value — dollar sensitivity to a 1bp spread move), CSW10% (Credit Spread Widening 10% — a stress scenario for a simultaneous 10% widening of every position’s spread), a Comprehensive Risk Measure (CRM) stress-loss limit, and stop-loss advisories. Notably, CIO lacked concentration limits, a standard control at JPMorgan’s own Investment Bank for identical instruments. Between January 1 and April 30, 2012, these risk limits and advisories were breached more than 330 times.

| Metric              | What it measures                                                                                                   | How it was breached / manipulated                                                                                                                                                                                             |
|---------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VaR (Value-at-Risk) | Maximum expected 1-day loss at a given confidence level under normal market conditions (course lecture pp. 99–103) | Both CIO-level and firmwide VaR limits breached for four straight days in January 2012; rather than reduce risk, a new model was adopted that cut reported VaR ~44–50% overnight, ending the breach on paper (see 4.5 below). |
| CS01 / CSBPV        | P&L sensitivity to a 1 basis-point parallel move in credit spreads (“credit duration”); ignores convexity          | Exceeded by 100% in January, 270% in early February, and over 1,000% by mid-April 2012.                                                                                                                                       |

| Metric                           | What it measures                                                                                | How it was breached / manipulated                                                                                                                                                                                |
|----------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSW10%                           | Stress scenario: P&L impact of every spread widening simultaneously by 10% of its current level | Breached repeatedly in March 2012; the March 22 breach (on a \$10B+ single-day protection sale) was the trigger for Ina Drew's Mar. 23 trading halt — she considered CSW10% the single most important CIO limit. |
| Comprehensive Risk Measure (CRM) | Internal worst-case stress-loss estimate                                                        | Feb. 22, 2012 run projected a potential \$6.3 billion annual loss; a CIO risk manager dismissed the number as “garbage” rather than escalating it.                                                               |
| Stop-loss advisories             | Informal trigger for review once cumulative losses reach a threshold                            | Repeatedly breached in March 2012 alongside the other four metrics; by Mar. 23 all five metrics were simultaneously in breach.                                                                                   |

The Senate Report's characterization of the institutional response is the most citable line for a governance-and-risk-culture discussion: breaches were “routinely reported” up the chain but did not “spark an in-depth review... or require immediate remedial actions.” Instead, breaches were “largely ignored or ended by raising the relevant limit,” while CIO personnel simultaneously worked to discredit the accuracy of the risk metrics themselves. The OCC's own Examiner-in-Charge offered the aviation metaphor now closely associated with the case: if SCP was “an airplane” (as Macris himself put it), the risk metrics were its flight instruments — and in Q1 2012 “those flight instruments began flashing red and sounding alarms,” yet were “disregarded, discounted, or questioned” rather than acted upon.

#### 4.5 The January 2012 VaR model change — the case's central risk-management failure

This is the most heavily tested topic across all four sources and maps most directly onto the course's VaR module. The course lecture's own “Criticisms of VaR During the Crisis” slide (pp.101–102) names exactly this failure mode in the abstract: “Internal models at some investment banks were designed to minimize regulatory capital, not truly measure risk,” and “traders and banks could manipulate inputs (e.g., holding periods, confidence levels) to artificially reduce VaR.” The Whale case is a real-world instance of both sentences.

- **Why the model was changed:** CIO quantitative staff concluded the existing VaR model was “too conservative” and overstated SCP's risk. A new model, built by quant analyst Patrick Hagan — who had never designed a VaR model before — was “hurriedly adopted in late January 2012,” while CIO was in active breach of its own and the bank-wide VaR limit, explicitly to end that breach.
- **Effect:** The new model cut CIO's reported 95% VaR by roughly 44–50% overnight. A January 27, 2012 internal update shows firmwide 95% VaR dropping from \$125M to \$108M, “driven by CIO implementation of newly approved VaR model.” The Q1 2012 average CIO VaR, as first disclosed on Apr. 13, was \$67 million — later restated on May 10 to \$129 million once the bank reverted to the old model, roughly double the original disclosure and roughly double the 2011 average of \$60–61 million.
- **Validation failure:** The model was never submitted to the OCC for approval and skipped the bank's own standard practice of running old and new models concurrently for months before adoption. It was

later found to be “improperly implemented,” requiring error-prone manual data entry and containing outright formula and calculation errors.

- **Senior management awareness:** Both Dimon and Braunstein received multiple email notifications about the model change and its ~44% VaR-reducing effect, and both attended a February 2012 CIO Business Review presentation with a dedicated “VaR Highlights” slide describing the new methodology. Dimon personally approved a temporary VaR-limit increase explicitly because the new model would soon lower CIO’s reported VaR. Despite this documentary record, both Dimon and Braunstein later told the Senate they did not recall or were unaware of the change until “things blew up” — a claim the Subcommittee’s exhibits directly contradict.
- **Proof the model was simply wrong:** On April 10, 2012, SCP lost \$415 million in a single day against a VaR model that predicted, at 95% confidence, a maximum one-day loss of roughly \$67 million — a loss more than six times the model’s stated boundary. Hagan, the model’s own developer, later told the Subcommittee this meant the model was simply “wrong.” The March 30 loss of \$319 million was likewise nearly 4x the VaR estimate for that day.

#### Exam-ready line

Dimon later admitted to the Senate that had the VaR jump from \$69M to \$129M been disclosed honestly and promptly, investors “would ask about it” — and separately called the original VaR disclosure practice “deceptive.” This is arguably the single most quotable admission in the entire record for an essay on disclosure and model risk.

## 4.6 Mismarking the book: hiding losses through valuation discretion

Historically, CIO priced its credit-derivative positions at the midpoint of the daily bid-ask spread — the industry’s standard “fair value” convention and a GAAP safe harbor most firms rely on. Starting in late January 2012 and accelerating through February and March, Julien Grout — under Iksil’s direction, per Martin-Artajo’s instructions — began marking positions at prices more favorable than the midpoint, systematically understating daily losses. Recorded phone calls captured direct awareness of the practice: Grout told Iksil, “I am not marking at mids as per a previous conversation”; Iksil told Grout the marking had gotten “idiotic” and that he didn’t know “where [Martin-Artajo] wants to stop.”

From March 12–16, 2012, Grout tracked the widening gap between reported and true midpoint values on a private “shadow spreadsheet”: \$203 million (Mar. 12) growing to roughly \$498–512 million by mid-to-late March. By March 16, reported year-to-date losses stood at \$161 million versus \$593 million at true midpoint prices — a \$432 million gap. On March 30 (the last trading day of the quarter), CIO reported a sudden \$319 million loss; the Valuation Control Group later found the reported-vs.-midpoint gap had reached \$512 million by March 31. On April 10, 2012 — the first trading day after the story broke publicly — CIO initially reported a \$6 million daily loss, then revised it 90 minutes later to \$415 million, after (per one trader’s later admission) personnel were “scared” to reveal the true size.

Because JPMorgan’s own Investment Bank valued economically identical positions using true midpoints, while CIO used favorable marks, counterparties who traded against JPMorgan’s book disputed the collateral values assigned to those trades — disputes that peaked at \$690 million across ten counterparties (the largest with Morgan Stanley). This is a clean illustration of a market-discipline mechanism working as

intended (Basel's "Pillar 3" — see Section 7.5): outside counterparties' own risk management caught a valuation problem internal controls had not. Mismarking ended only in May 2012, when Deputy CRO Ashley Bacon ordered CIO to use the same independent pricing service as the Investment Bank.

Once JPMorgan's internal investigation reviewed the recorded trading-desk calls in June 2012 and concluded personnel had not marked the book in "good faith," the bank restated its Q1 2012 results on July 13, 2012 — reducing net revenue by \$660 million (2.5%, from \$26.712B to \$26.052B) and after-tax net income by \$459 million (8.5%, from \$5.383B to \$4.924B). This restatement is significant precisely because it is rare: companies restate earnings only when the original figures cannot be defended as a good-faith estimate, which is itself powerful evidence that the original marks crossed from aggressive-but-defensible valuation into misrepresentation.

#### 4.7 Summary: the risk-management failure chain

1. Senior management issued multiple, unreconciled objectives to the trading desk (cut RWA, cut it cheaply, preserve upside, manage VaR) without prioritizing among them.
2. The resulting strategy required an enormous, illiquid, one-directional position that outgrew the market it traded in.
3. As losses emerged, risk limits were breached repeatedly — the institutional response was to raise limits and change the risk model rather than reduce risk.
4. The VaR model change (adopted hastily, without validation, while in breach) mechanically halved reported risk without changing actual risk.
5. Simultaneously, traders began marking the book favorably to hide the losses the (understated) risk metrics were already failing to fully capture.
6. By the time the position became public, the true risk, true losses, and true model integrity had all been misstated for months.

## 5. Part II — Governance, Culture, and Oversight Failures

### 5.1 CIO's structural conflict of interest

Ina Drew held ultimate authority over both the investment decisions and the risk management of CIO — a structural conflict of interest the INSEAD case highlights directly. Compounding this, CIO had no dedicated Chief Risk Officer at all until January 2012, when bank CRO John Hogan appointed Irvin Goldman to the newly created post. Goldman had no prior risk-management experience despite a long capital-markets career, and had been nominated by his own brother-in-law, Barry Zubrow (the outgoing bank-wide CRO) — a textbook independence failure by the course's own "Independence Test" framework (Position, Information, Protection, Escalation; lecture pp.169–171). Peter Weiland, CIO's actual senior risk officer prior to Goldman's appointment, formally reported to the bank-wide CRO but functioned on a de facto basis as reporting to Drew — meaning the person meant to check the CIO head's risk-taking effectively answered to her.

This directly illustrates the course's "Independence" framework and its explicit discussion prompt: "Should the Chief Risk Officer have veto power over major transactions? How should a board respond when management repeatedly overrides risk recommendations? Should control-function compensation be linked to business-unit profitability?" CIO's risk function in 2012 satisfied none of the four independence tests — it lacked the reporting position, complete information (see mismarking, 4.6), protection from retaliation, and a clear escalation path to the board that the framework requires.

### 5.2 Applying the Three (and Four) Lines of Defense

The course's Three Lines of Defense (3LoD) model — First Line (business units own and manage risk), Second Line (risk management/compliance monitor and challenge), Third Line (internal audit provides independent assurance) — maps cleanly onto CIO's failure, in the same way the lecture's own worked example maps it onto Wells Fargo's cross-selling scandal:

| Line of Defense                          | Role                                                                                                                             | How it failed at CIO                                                                                                                                                                                              |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First Line — Business Unit               | CIO trading desk (Macris → Martin-Artajo → Iksil/Grout) owns and manages the risk it takes on                                    | Traders pursued conflicting mandates without escalating the tension; mismarked positions to conceal losses rather than surface them.                                                                              |
| Second Line — Risk & Compliance          | CIO risk function should monitor, challenge, and enforce limits independently of the trading desk                                | No dedicated CRO existed until Jan. 2012; the new CRO (Goldman) lacked risk expertise and independence; risk staff who flagged the \$6.3B CRM result were overruled or ignored rather than escalating it further. |
| Third Line — Internal Audit              | Should provide independent assurance that the first two lines are functioning                                                    | Internal audit's critical report on CIO risk management was not issued until March 30, 2012 — after the trading halt and after the bulk of the losses had already occurred; too late to prevent the failure.      |
| Board / Fourth Line (External Assurance) | Sets risk appetite, oversees management, and (in the Four Lines of Defense model) is checked by external auditors and regulators | The Risk Policy Committee received a March 20, 2012 presentation without disclosure of that day's loss or the growing reported-vs.-midpoint marking gap; the OCC (external assurance) did not learn of SCP's      |

| Line of Defense | Role | How it failed at CIO                                                                                             |
|-----------------|------|------------------------------------------------------------------------------------------------------------------|
|                 |      | existence in explicit terms until a routine report on Jan. 27, 2012, referencing only a “core credit portfolio.” |

The course’s own citation of the Financial Stability Institute’s “Four Lines of Defence Model” (Occasional Paper No. 11, Dec. 2015) lists four generic reasons the lines-of-defense model fails in banking scandals — misaligned first-line incentives, lack of second-line independence, lack of second-line expertise, and third-line audits missing high-risk areas — and all four are directly visible in the case: traders were implicitly rewarded for repeating 2011’s American-Airlines-style windfall (incentive misalignment); CIO’s risk function reported informally to the business head it was meant to check (independence failure); the CIO CRO had no risk background (expertise failure); and internal audit’s critical report arrived only after the halt (audit-scope failure).

### 5.3 Senior management failure patterns — the lecture’s own checklist, applied

The MIBL lecture deck includes an explicit, near-diagnostic list titled “Senior Management Failure Patterns” (p.169). Nearly every item on that list has a direct, citable counterpart in the Whale case:

| Lecture’s failure pattern                                                                     | How it shows up in the Whale case                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| “Treats compliance as a cost center rather than a core control”                               | Unwinding SCP’s risk was estimated to cost \$500–600M; management repeatedly chose the cheaper option of adding more risk instead.                                                                                                |
| “Ignores weak signals from audit, compliance, or customer complaints”                         | The \$6.3B Comprehensive Risk Measure result was privately dismissed as “garbage” rather than investigated; Grout’s shadow spreadsheet documenting the marking gap was not escalated by CIO management.                           |
| “Allows dominant business units to override control functions”                                | CIO’s risk function had no independent CRO until Jan. 2012, and even then one embedded within, not independent of, Drew’s reporting line.                                                                                         |
| “Underinvests in systems, cybersecurity, data quality, or risk analytics”                     | The new VaR model was built by an analyst with no prior VaR-model experience, adopted without completing standard validation, and later found to contain outright formula/calculation errors.                                     |
| “Uses incentives that reward volume, revenue, or market share without regard to risk quality” | SCP’s 2009 and 2011 windfalls (GM and American Airlines bankruptcies) shaped management’s appetite to repeat outsized gains, contributing to the pressure to preserve upside optionality even while nominally trying to cut risk. |

| Lecture's failure pattern                                                                                                                                                                                                                                                                                                                                                                       | How it shows up in the Whale case                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| "Fails to escalate problems to the board"                                                                                                                                                                                                                                                                                                                                                       | The March 20, 2012 Risk Policy Committee presentation omitted that day's loss and the marking gap; the OCC was not told SCP's size had tripled until forced to by media exposure.                                                        |
| "Frames issues as 'isolated incidents' when they are actually systemic"                                                                                                                                                                                                                                                                                                                         | Dimon's April 13, 2012 "tempest in a teapot" remark — made after Dimon already knew of three straight months of escalating losses, the tripled book size, and the halted trading — is the case's clearest example of this exact pattern. |
| <b>Why this table matters for the exam</b><br>If asked to "diagnose" the Whale case using a governance framework, this lecture slide is very likely the intended rubric — the instructor's own list reads almost like a checklist written with this case in mind. Structuring an answer around it (cite the pattern, then the fact) demonstrates direct synthesis of lecture and case material. |                                                                                                                                                                                                                                          |

## 5.4 Risk culture and incentives inside CIO

The course defines risk culture as "shared values, norms, and behaviors that shape how risk is understood and acted upon," shaped by leadership behavior, incentive structures, past crises, and internal escalation/whistleblowing systems (lecture p.166). CIO's internal culture, as documented by the Senate Report, was oriented toward minimizing reported risk rather than accurately measuring it: CIO's lead quantitative analyst pressed the bank's broader quant group to help build a system to categorize SCP trades to produce the "optimal" (i.e., lowest) RWA total, and was cautioned against discussing this in writing — evidence the practice was understood internally to be sensitive. Achilles Macris's own "flying an airplane" metaphor for managing SCP, later turned back on the bank by the OCC's Examiner-in-Charge (the risk metrics were the "flight instruments," and they were "flashing red" while being ignored), captures a culture in which risk signals were treated as noise to be managed around rather than information to act on.

The case also illustrates the course's "tone from the top" concept in a specific, damaging way: Dimon had spent years publicly promoting JPMorgan's "fortress balance sheet" and best-in-industry risk management as core parts of the bank's identity, having weathered the 2008 crisis better than most peers. JPMorgan's internal Task Force explicitly found that CIO's risk management received less senior-management scrutiny than the bank's client-facing businesses — despite CIO managing nearly \$350 billion in assets, almost double JPMorgan's total stockholders' equity of \$184 billion — a finding that directly undercuts the "fortress" narrative and shows how organizational prestige/track record can itself become a governance blind spot (a pattern the lecture's Enterprise Risk Management module frames as ERM failing to be "a strategic tool for long-term resilience" and instead becoming a "compliance black box" nobody outside the unit fully understands).

## 5.5 Board oversight

Per the course's Board Responsibilities framework (lecture p.168): set risk appetite, approve risk governance structure, oversee senior management, ensure independent challenge, monitor major risks through meaningful reporting, and set the tone at the top. The record shows the board's Risk Policy Committee received a presentation on March 20, 2012 — the day of one of SCP's worst single losses to that point — without disclosure of that loss. This is a direct failure of the "monitor major risks" and "ensure independent challenge" board duties: a board cannot exercise oversight over information it is not given, and CIO management's choice not to disclose deteriorating results to the very body charged with challenging it is a governance failure distinct from (though caused by the same culture as) the trading and valuation failures described in Section 4.

## 6. Part III — Regulatory Response and the Volcker Rule

### 6.1 Misleading investors, regulators, and the public

The Senate Report devotes its longest analytical chapter to the statements JPMorgan made publicly between April 6 and May 10, 2012, concluding that “together, these misstatements and omissions... misinformed investors, regulators, and the public about the nature, activities, and riskiness of the CIO’s credit derivatives.” On the April 13, 2012 earnings call, CFO Braunstein made four claims the Subcommittee found false or misleading, alongside Dimon’s now-infamous dismissal:

| Public claim (Apr. 13, 2012)                                                   | What the record actually showed                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SCP was “fully transparent to the regulators”                                  | SCP positions had never been disclosed to the OCC in any regular report; the bank first described SCP to the OCC only days before the call, and only in general terms.                                                                         |
| Positions were “put on pursuant to the risk management at the firm-wide level” | Firm-wide risk managers, including CRO John Hogan, knew little about SCP and had no role in establishing its positions until after the earnings call.                                                                                          |
| Decisions were “made on a very long-term basis”                                | An internal CIO admission described SCP as “actively traded”; a March 2012 CIO presentation described its horizon as “short.”                                                                                                                  |
| SCP provided “stress loss” protection                                          | Days before the call, Drew herself described SCP internally as net “long” credit — a posture inconsistent with providing crisis protection; internal analysis two days earlier showed SCP would lose money in a credit-deterioration scenario. |
| SCP would be “allowable under the Volcker Rule”                                | The bank omitted its own prior written concern to regulators (Feb. 13, 2012 letter) that SCP-style activity could be “prohibited” under the proposed rule, and told the Subcommittee no legal analysis supporting the public claim existed.    |
| Dimon: the matter is “a complete tempest in a teapot”                          | At the time of the remark, Dimon already knew of three straight months of escalating losses, the book’s tripling in size, its flip to net-long credit risk, the Mar. 23 trading halt, and internal audit’s critical report.                    |

Also omitted from the April 13 call: the reported Q1 VaR figure of \$67 million came from the brand-new, artificially low VaR model — concealing that the underlying portfolio had tripled in size and changed materially in composition even as its “risk number” looked stable. The Senate Report concludes the bank’s claims that risk managers and regulators were fully informed, and that SCP was a long-term, risk-reducing hedge permitted under Volcker, were “fictions irreconcilable with the bank’s obligation to provide material information to its investors” — language that frames this squarely as a potential Rule 10b-5 / Securities Act §17(a) disclosure issue, not merely a public-relations misstep.

### 6.2 OCC supervisory failure

The course frames bank regulation around Basel’s Pillar 2 (supervisory review) — regulators assessing internal capital adequacy, governance, and risk management directly, to catch what formulas alone miss (lecture p.177). The OCC, JPMorgan’s primary federal regulator, had 65 examiners embedded on-site at the bank — yet the Senate Report found SCP remained effectively “off the radar screen” for nearly six years. Specific, documented OCC failures include:

- Failing to investigate JPMorgan’s own reports of CIO stress-limit breaches, which had occurred eight times in the first half of 2011 alone, some lasting weeks, without follow-up.

- Not learning of SCP's existence in explicit terms until January 27, 2012, via a routine VaR report that referenced only a "core credit portfolio."
- Not questioning the new VaR model despite routine reports flagging that it would cut SCP's reported risk by roughly 44–50% overnight.
- Failing to notice that JPMorgan stopped delivering a required CIO management report in February–March 2012 — the gap wasn't caught until after the April 6 media exposure.
- Never requesting assistance from the UK's Financial Services Authority (FSA) to examine CIO's London office, despite having no OCC staff of its own examining those operations directly — a cross-border supervisory gap the case notes JPMorgan exploited in much the same way it misled the OCC domestically.
- Tolerating resistance and delay from the bank when the OCC sought further information in 2012 — the bank's Chief Risk Officer initially denied that CIO had mismarked the book when directly asked.

The Senate Report is careful to spread responsibility rather than let JPMorgan absorb all of it: "not all fault should be laid at the foot of the bank... the OCC failed to notice or investigate bank reports of CIO risk limit breaches, failed to realize when monthly CIO reports weren't delivered, failed to insist on detailed trading data... and failed to take firm action when the bank delayed or denied its requests for information." This is a useful counterweight for any analysis: the Whale case is as much a supervisory-failure case study as a bank-governance case study, and the course's "Why FIs Are Regulated" module (lecture pp.147–148) — regulation exists because banks "operate with other people's money, are highly leveraged, are deeply interconnected" — helps explain why regulators, not just internal governance, are expected to be a backstop, and why that backstop's failure here matters independently of JPMorgan's own conduct.

The OCC's response once the failure became visible: six Supervisory Letters in 2012 citing 20 "Matters Requiring Attention," followed by a formal Cease-and-Desist Order on January 14, 2013 — and an internally commissioned "lessons learned" review (completed October 2012) that produced six accepted recommendations for the OCC's own Large Bank Supervision division, including greater use of derivatives experts, periodic cross-checks of desk-level versus senior-management reporting, and more disciplined follow-up on outstanding Matters Requiring Attention.

### 6.3 The regulatory settlements

| Date           | Regulator                                          | Amount                          | Notes                                                                  |
|----------------|----------------------------------------------------|---------------------------------|------------------------------------------------------------------------|
| Sept. 19, 2013 | US Federal Reserve Board                           | \$200 million                   | Part of coordinated global settlement.                                 |
| Sept. 19, 2013 | US Office of the Comptroller of the Currency (OCC) | \$300 million                   | Part of coordinated global settlement.                                 |
| Sept. 19, 2013 | US Securities and Exchange Commission (SEC)        | \$200 million                   | JPMorgan required to admit wrongdoing — unusual for an SEC settlement. |
| Sept. 19, 2013 | UK Financial Conduct Authority (FCA)               | £137.6 million (~\$220 million) | Part of coordinated global settlement.                                 |

| Date          | Regulator                                      | Amount        | Notes                                                                                                                                                                                                               |
|---------------|------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oct. 16, 2013 | US Commodity Futures Trading Commission (CFTC) | \$100 million | Settled separately, one month later; found the Feb. 29, 2012 sale of \$7B+ notional of CDX.NA.IG.9 violated the Commodity Exchange Act's manipulation provisions; JPMorgan admitted CIO traders "acted recklessly." |

**Combined total:** approximately \$1.02 billion across five regulators in the US and UK — an unusually large and unusually candid (i.e., wrongdoing-admitting) settlement package for a single trading-loss episode, reflecting the multiplicity of failures found (market manipulation, disclosure violations, and supervisory-cooperation breakdowns) rather than a single infraction.

## 6.4 The Volcker Rule connection

Note for the exam: the MIBL lecture deck itself does not name the Volcker Rule anywhere in its 190 pages — the closest reference is a generic listing of "Trading Accounts / Proprietary Trading" as a bank use of funds. Volcker Rule analysis must therefore be drawn from the case materials and general knowledge rather than the lecture slides; treat this as a place the course expects students to synthesize beyond the deck itself.

The Volcker Rule (Dodd-Frank Act §619, the "Merkley-Levin provisions") generally prohibits FDIC-insured banking entities from proprietary trading and from owning hedge funds or private-equity funds, subject to exemptions including bona fide hedging and market-making. At the time of the Whale trades, the rule had been proposed but not finalized — final adoption by five agencies (the Federal Reserve, CFTC, FDIC, OCC, and SEC) came on December 10, 2013, after receiving roughly 18,000 comment letters, including a 67-page letter from JPMorgan itself.

The Whale trades became a central real-world test case in the Volcker Rule debate for a specific reason: SCP was JPMorgan's own preferred example of a legitimate "portfolio hedge" — precisely the kind of activity the rule's hedging exemption was meant to preserve. Yet the case ultimately illustrated the opposite: a book that began as a portfolio hedge drifted, through the conflicting-mandate dynamics described in Section 4, into what the Senate Report calls "a high risk proprietary trading operation," one Dimon "has not acknowledged" was proprietary in nature even while conceding the book "morphed into something that rather than protect the firm, created new and potentially larger risks." This is precisely the boundary problem the Volcker Rule's hedging exemption exists to police — and the case shows how difficult that boundary is to enforce in practice, especially when: (a) the hedge's target exposure is never documented at inception, as Senate Finding #2 notes; (b) hedge effectiveness is never tested against the claimed exposure; and (c) the size of a "hedge" can grow, via ordinary trading decisions, until it swamps the size of what it was originally meant to offset.

Two additional facts sharpen this connection. First, JPMorgan's own February 13, 2012 letter to the OCC and other regulators — written while actively expanding SCP — argued that Volcker-style restrictions could endanger banks' "asset-liability management activities," explicitly citing the kind of activity SCP represented; this is difficult to reconcile with the bank's later public claim (Apr. 13, 2012) that SCP would clearly be "allowable" under the rule. Second, an internal 2007 JPMorgan audit report had itself characterized CIO's credit-trading activities as "proprietary position strategies" years before the public dispute over the hedge-

versus-proprietary-trading label — suggesting the bank’s own internal auditors saw the tension earlier than its public statements later admitted.

The Senate Report’s Recommendation #6 makes the policy conclusion explicit: federal regulators should “immediately finalize the Volcker Rule... to stop high-risk proprietary trading and asset build-up at insured banks and their affiliates” — a direct citation of the Whale trades as part of the evidentiary case for finishing that rulemaking, which occurred seven months after the report’s release.

## 6.5 The Senate Report’s formal findings and recommendations

### *Seven Findings of Fact*

7. Increased Risk Without Notice to Regulators — built a \$157B portfolio using bank deposits via high-risk, complex, short-term strategies, disclosed only after media exposure.
8. Mischaracterized High Risk Trading as Hedging — never identified what SCP hedged, never tested its effectiveness or size.
9. Hid Massive Losses — mismarked the book for months, ignoring conflicting valuations and collateral disputes.
10. Disregarded Risk — breached all five major risk limits in Q1 2012 without reducing risk.
11. Dodged OCC Oversight — omitted SCP from routine reports and gave blanket assurances rather than substantive disclosure.
12. Failed Regulatory Oversight — the OCC itself failed to investigate breach reports, notice missing reports, or question the new VaR model.
13. Mischaracterized the Portfolio Publicly — misled investors, regulators, policymakers, and the public after the trades became public.

### *Seven Recommendations*

14. Require large banks to report detailed performance data on internal derivatives portfolios above a notional threshold.
15. Require contemporaneous documentation of any hedge’s purpose, target exposure, and effectiveness testing at inception.
16. Strengthen credit-derivative valuation practices (independent pricing, disclosure of valuation disputes).
17. Require regulators to investigate large or sustained risk-limit breaches rather than merely record them.
18. Require disclosure and investigation of any risk-model change that materially lowers reported risk or capital requirements.
19. Finalize the Volcker Rule promptly to curb high-risk proprietary trading and asset build-up at insured banks.
20. Enhance capital charges on derivatives trading claimed as a “permitted activity,” prioritizing Basel III trading-book reforms.

## 7. Connecting Every Lecture Module to the Case

---

The course covers risk category-by-category across Sessions 6–17 before culminating in the London Whale exam case. The table below maps every major lecture module to its specific point of contact with the case, so that a comprehensive answer can draw on the full breadth of the course rather than only the VaR and governance modules already covered in depth above.

### 7.1 Credit risk (lecture pp.56–72, 182–183)

The course’s credit-risk framework — Expected Loss =  $PD \times LGD \times EAD$ , and Unexpected Loss as “Credit Value-at-Risk” — describes the risk SCP was originally meant to hedge (JPMorgan’s loan-book default risk), not the risk it ended up creating. This is a useful contrast to draw: SCP itself carried CDS counterparty credit risk (the risk a protection seller cannot pay out) layered on top of the market risk of the index positions themselves, meaning a “credit hedge” became a new source of both market and counterparty risk — the lecture’s BIS definition of risk concentration (“any single exposure... with the potential to produce losses large enough to threaten a bank’s health,” p.70) applies directly once SCP’s IG.9 position alone reached tens of billions of dollars concentrated in a single, correlated basket of names.

### 7.2 Liquidity risk (lecture pp.109–125, 184)

The lecture’s core liquidity distinction — Asset Liquidity Risk (“a position cannot easily be unwound... without significantly influencing the market price”) versus Funding Liquidity Risk — maps directly onto Section 4.3 above: SCP’s problem was overwhelmingly an asset liquidity failure, not a funding liquidity failure. Unlike Lehman Brothers or Silicon Valley Bank (the lecture’s two central liquidity case studies), JPMorgan never faced a deposit run or a funding freeze — the bank remained liquid and solvent throughout. This is precisely why the course’s recurring line “you can be solvent and still die of illiquidity” does not apply to JPMorgan itself in 2012; it applies instead, in miniature, to the SCP book, which could not be exited without moving the market against itself.

### 7.3 Operational risk (lecture pp.133–140, 185)

The lecture’s Basel II definition of operational risk — “loss resulting from inadequate or failed internal processes, people, and systems” — is, notably, the frame the course’s own slides use to introduce the JPMorgan \$6.2 billion loss (lecture p.140, shown alongside Wells Fargo as the deck’s only direct case reference). Read this way, the VaR model’s formula errors, the absence of a validated CRO function, and the mismarking practice are all “failed internal processes and people” in the operational-risk sense — meaning the case can legitimately be argued as an operational-risk failure with market-risk symptoms, not purely a market-risk failure. This framing also explains why the loss produced compliance, conduct, and reputational consequences (Section 7.4) far beyond the dollar loss itself — exactly the “indirect losses” operational risk is defined to include.

### 7.4 Compliance and conduct risk (lecture pp.140–147, 186)

The lecture’s three-question framework — “Are we following the rules?” (compliance), “Are we treating customers, markets, and counterparties fairly?” (conduct), “Are products offered/priced/serviced without harm?” (consumer protection) — applies most cleanly to the market-conduct dimension of the case: the

CFTC’s finding that CIO traders “acted recklessly” in a Feb. 29, 2012 sale representing over 90% of that day’s market volume is a conduct-risk finding (market abuse/manipulation) as much as a market-risk one. The lecture’s general Risk Transmission Chain — “aggressive [incentive] targets → mis-selling / market abuse / customer harm” — is the same causal logic the case shows running from CIO’s conflicting P&L-preserving mandates to the CFTC’s market-manipulation finding.

## 7.5 Basel capital regulation and RWA (lecture pp.138–139, 147–178, 186)

The entire strategy exists because of Basel III’s incoming capital treatment of synthetic derivatives: the lecture explains Risk-Weighted Assets (RWA) as management’s tool for translating different exposures into comparable risk units, with “derivatives exposure” drawing charges for both counterparty credit risk and market risk (CVA). JPMorgan’s attempt to cut RWA cheaply, rather than by simply divesting risk, is what produced the disastrous strategy — meaning the entire episode can be read as a direct, real-world consequence of Basel III capital rules changing the economics of holding a derivatives book, exactly the transition the lecture frames as the difference between Basel II (“capital only”) and Basel III (adds liquidity standards, leverage ratio, and greater resilience focus). The lecture’s three-pillar description of Basel II — Pillar 1 (minimum capital), Pillar 2 (supervisory review), Pillar 3 (market discipline) — also maps onto the case’s three points of failure: Pillar 1’s capital math drove the flawed strategy; Pillar 2’s supervisory review (the OCC) failed to catch it in progress; and Pillar 3’s market discipline (counterparty collateral disputes) was the mechanism that ultimately forced the mismarking into the open.

## 7.6 The synthesis: Basel’s “Three Pillars of Modern Risk Management”

The lecture’s final synthesis slide (p.189) proposes three pillars for evaluating any financial institution’s risk position: Pillar I — Capital (Basel II): “Is the financial institution solvent?” Pillar II — Liquidity (Basel III): “Can it survive a shock?” Pillar III — Governance (ERM): “Does it know and understand the risks it really faces?” Applied to JPMorgan in 2012:

- **Pillar I (Capital): intact.** JPMorgan remained comfortably capitalized throughout — the \$6.2 billion loss, while enormous in absolute terms, represented roughly 3% of JPMorgan’s \$184 billion stockholders’ equity and never threatened the bank’s solvency.
- **Pillar II (Liquidity): intact.** JPMorgan never faced a funding freeze, deposit run, or counterparty flight — the crisis never became a liquidity crisis for the bank as a whole (see 7.2).
- **Pillar III (Governance): failed.** Every failure documented in Sections 4–6 — conflicting mandates, an under-resourced and non-independent risk function, a manipulated VaR model, mismarked positions, misleading disclosures, and a supervisory relationship that let it all go undetected for years — is a governance failure in the course’s own definition: the bank did not “know and understand the risks it really faces.”

### Suggested thesis statement

“The London Whale case demonstrates that Basel-style capital and liquidity regulation, however well-designed, cannot substitute for internal risk governance: JPMorgan Chase remained solvent and liquid throughout the episode, proving Pillars I and II of modern bank regulation intact, while a collapse in Pillar III — governance’s ability to know and understand the risks the institution actually faced —

allowed a nominally defensive hedge to become a \$6.2 billion proprietary loss, hidden from risk models, internal auditors, the board, and the bank's primary regulator alike."

## 8. How the Four Source Documents Differ

Knowing which source covers which angle in the greatest depth is useful both for allocating study time and for citing the right document if the exam allows source citation.

| Source                             | Narrative window                                                  | Primary emphasis                                                                                                                                                                                                                                                                                     | What it does NOT cover in depth                                                                                                                                                                                                                                                        |
|------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Case A — “Risky Business”          | Nov. 2011 (RWA directive) through the 2013 regulatory settlements | The trading strategy itself: conflicting mandates, the CDX.NA.HY/IG mechanics, position growth, and market-impact dynamics (the Feb. 29 IG.9 sale).                                                                                                                                                  | The VaR model change and mismarking scandal are only briefly noted, reserved for companion Cases B/C/D in the full 9-case series.                                                                                                                                                      |
| INSEAD INS370                      | Company background through Apr. 4–6, 2012 (story about to break)  | Risk-model and valuation mechanics in detail: VaR methodology, CSBPV/CS01, CSW10%, the January VaR model change, marking discretion, and CIO’s internal org structure/independence problems.                                                                                                         | Ends before the earnings call, the mismarking scandal’s full unwind, the restatement, firings, or regulatory settlements — it is a decision-forcing case cut off at the point of discovery.                                                                                            |
| Case Z — “Background and Overview” | 2005 origins through 2014 reorganization                          | The aftermath: restatement, personnel terminations/indictments, the five regulatory settlements, OCC supervisory gaps, and the Volcker Rule connection; serves as the index/summary for the other eight cases in the series.                                                                         | Does not narrate the trading strategy’s day-to-day mechanics in the depth Case A does — it summarizes rather than dramatizes.                                                                                                                                                          |
| Senate PSI Report                  | 2005 origins through the 2013 report’s release                    | The most comprehensive and most critical account: seven formal findings of fact, the fullest documentary evidence (emails, call transcripts) on senior-management awareness, the deepest analysis of the VaR model change and mismarking, and the most detailed critique of OCC supervisory failure. | As a government investigative report rather than a teaching case, it does not offer discussion questions or an explicit pedagogical framework — its findings must be paired with course frameworks (as this guide does) rather than read as already structured for classroom analysis. |

A practical implication: if an exam question asks specifically “how did the risk models fail,” the INSEAD case and the Senate Report are the deepest sources; if it asks “how did the strategy itself fail,” Case A is the primary source; if it asks about consequences, accountability, or the Volcker Rule, Case Z and the Senate Report’s recommendations section are the primary sources.

## 9. Exam Preparation: Likely Questions and Answer Outlines

---

### 9.1 “Why did JPMorgan’s VaR model change fail, and what does it teach us about model risk?”

- Open with the lecture’s own criticism of VaR during the crisis: models can be “designed to minimize regulatory capital, not truly measure risk,” and inputs can be manipulated to artificially reduce reported risk (pp.101–102).
- State the facts: adopted hastily in late Jan. 2012 while in breach of VaR limits; built by an analyst with no prior VaR experience; skipped standard concurrent-model validation; never submitted to the OCC; cut reported VaR ~44–50% overnight.
- Cite the proof of failure: the Apr. 10 loss of \$415M against a ~\$67M VaR estimate (>6x), and the model developer’s own admission the model was “wrong.”
- Close with the governance dimension: senior management (Dimon, Braunstein) received documentation of the change but later denied awareness — showing model risk is inseparable from governance risk, not a purely technical failure.

### 9.2 “Was the Synthetic Credit Portfolio a hedge or proprietary trading, and why does that distinction matter?”

- Define both terms and the Volcker Rule’s hedging exemption.
- Argue using Senate Finding #2: JPMorgan never documented what SCP hedged, never tested its effectiveness, and never showed it reduced risk — the hallmark of an undocumented, untested “hedge” claim.
- Use the lecture’s basis-risk concept (derivative doesn’t match the hedged item) to explain the drift from a portfolio hedge toward a directional bet on relative HY/IG spread movement.
- Note the internal contradiction: a 2007 internal audit called the same activity “proprietary position strategies,” while public statements in 2012 called it hedging — illustrating how the same trading book can be honestly ambiguous, or dishonestly characterized, depending on context and incentive.
- Conclude that this ambiguity is precisely why the case became a real-world argument for finalizing the Volcker Rule (Recommendation #6).

### 9.3 “Evaluate JPMorgan’s risk governance using the Three (or Four) Lines of Defense.”

- Use the Section 5.2 table directly: First Line (traders pursued conflicting mandates, mismarked positions), Second Line (no independent CRO until Jan. 2012, and even then non-independent), Third Line (internal audit’s critical report arrived after the halt), Fourth Line/External (OCC missed SCP for years).
- Cite the FSI Occasional Paper 11 four-point failure taxonomy from the lecture and map each point to a CIO fact.
- Conclude with the lecture’s own critique of the 3LoD model as potentially reducing “an accountability, culture, and decision-making problem” to “an organizational chart problem” — argue that CIO’s failure

was ultimately cultural/incentive-based, not merely structural, since even the eventual appointment of a CRO (Goldman) did not fix the underlying independence problem.

#### 9.4 “What responsibility does the OCC bear, separate from JPMorgan’s own misconduct?”

- Use Section 6.2: 65 embedded examiners yet SCP undetected for six years; missed stress-limit breach reports in 2011; didn’t question the Jan. 2012 VaR model change; didn’t notice missing CIO reports; never engaged the UK FSA for cross-border coverage of CIO’s London desk.
- Cite the Senate Report’s own balanced conclusion: “not all fault should be laid at the foot of the bank.”
- Connect to the lecture’s Basel Pillar 2 concept (supervisory review) — the OCC’s job was precisely to catch what internal models and market discipline missed, and it did not.
- Note the OCC’s own corrective response (Cease-and-Desist order, internal “lessons learned” review, six accepted recommendations) as evidence the regulator itself treated this as a supervisory failure, not solely a bank failure.

#### 9.5 “Apply Basel’s ‘Three Pillars’ framework to assess whether the London Whale case represents a regulatory success or failure.”

- Use Section 7.6 directly: Pillar I (Capital) and Pillar II (Liquidity) held — JPMorgan never became insolvent or illiquid.
- Pillar III (Governance) failed comprehensively — walk through the chain from conflicting mandates to mismarking to misleading disclosure.
- Argue this shows Basel-style capital/liquidity regulation is necessary but not sufficient (a direct lecture phrase, p.187) — regulation must be paired with genuine risk culture and governance, which cannot be fully captured by capital ratios alone.
- Bring in the eventual regulatory response (Volcker Rule finalization, \$1.02B in settlements, OCC Cease-and-Desist order) as the system’s post-hoc correction — and note the exam-worthy irony that all of this occurred after JPMorgan had already passed every capital and liquidity requirement in place at the time.

## 10. Glossary of Key Terms

| Term                                            | Definition                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CIO (Chief Investment Office)                   | The JPMorgan Chase unit, spun off from Treasury in 2005 and headed by Ina Drew, responsible for investing the bank's excess deposits and partially hedging firm-wide credit risk.                                                                                                 |
| SCP (Synthetic Credit Portfolio)                | CIO's book of credit-derivative (CDS index and tranche) positions, authorized in 2006 as a portfolio hedge, that generated the \$6.2 billion loss.                                                                                                                                |
| CDX.NA.IG / CDX.NA.HY                           | Credit-default-swap indices tracking baskets of 125 North American investment-grade (IG) or 100 North American high-yield (HY) companies, administered by Markit; the primary instruments SCP traded.                                                                             |
| Value-at-Risk (VaR)                             | A statistical estimate of the maximum expected loss over a defined period at a given confidence level (e.g., 95%); does not capture losses beyond that confidence threshold (tail risk).                                                                                          |
| CS01 / CSBPV                                    | Credit Spread Basis-Point Value: a portfolio's dollar P&L sensitivity to a 1-basis-point move in credit spreads; a linear (non-convex) risk measure.                                                                                                                              |
| CSW10%                                          | Credit Spread Widening 10%: a stress-test measure of P&L impact if every position's credit spread simultaneously widens by 10% of its current level.                                                                                                                              |
| Comprehensive Risk Measure (CRM)                | CIO's internal worst-case stress-loss model; projected up to \$6.3 billion in potential 2012 losses in February 2012, a figure dismissed internally as "garbage."                                                                                                                 |
| Risk-Weighted Assets (RWA)                      | A regulatory measure translating different asset/exposure types into comparable risk units, used to calculate minimum required bank capital; the Dec. 2011 directive to reduce RWA ahead of Basel III triggered the flawed 2012 strategy.                                         |
| Basel III                                       | The post-2008-crisis global bank regulatory framework strengthening capital quality and introducing liquidity standards (LCR, NSFR) and a leverage ratio, layered on Basel II's capital-only approach; changed the capital treatment of synthetic derivatives positions like SCP. |
| Volcker Rule                                    | Dodd-Frank Act §619 (the Merkley-Levin provisions), finalized Dec. 10, 2013, generally prohibiting FDIC-insured banking entities from proprietary trading and from owning hedge funds/private-equity funds, subject to a bona fide hedging exemption.                             |
| Three/Four Lines of Defense                     | A governance model dividing risk responsibility into the business unit (first line), risk/compliance functions (second line), internal audit (third line), and external auditors/regulators (fourth line, in the extended model).                                                 |
| OCC (Office of the Comptroller of the Currency) | JPMorgan Chase's primary federal banking regulator; found by the Senate Report to have missed SCP's existence and risk for nearly six years despite 65 on-site examiners.                                                                                                         |
| Mismarking                                      | Valuing a position at a price more favorable than the true bid-ask midpoint to understate losses; practiced by SCP traders Feb.–Apr. 2012, leading to JPMorgan's July 2012 earnings restatement.                                                                                  |
| "Tempest in a teapot"                           | Jamie Dimon's April 13, 2012 characterization of the then-emerging Whale trades controversy, later shown by the Senate Report to have been made with knowledge of far greater risk than the phrase suggested.                                                                     |

| Term           | Definition                                                                                                                                              |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| "London Whale" | Nickname given to trader Bruno Iksil by hedge fund and bank counterparties, reflecting the outsized market impact of his CDX.NA.IG.9 trading positions. |

## Finals Study Guide: Financial Risk Regulation of Financial Institutions

### Learning Objective 1: Describe the Key Types of Financial Risks

- Credit Risk – default, counterparty, concentration (Case: Urban Bank 2000).
- Market Risk – interest, FX, equity, commodity (Case: Barings 1995).
- Liquidity Risk – funding vs. asset liquidity (Cases: Northern Rock 2007, Urban Bank).
- Operational Risk – process, people, systems (Cases: Barings, Wells Fargo).

### Learning Objective 2: Analyze Techniques to Mitigate Risks

- Credit Risk Mitigation – collateral, covenants, diversification, securitization.
- Market Risk Mitigation – derivatives, duration matching, stop-loss limits.
- Liquidity Risk Mitigation – LCR, NSFR, contingency funding, deposit stability.
- Operational Risk Mitigation – segregation of duties, audits, cyber resilience.

### Learning Objective 3: Apply Risk Management Tools in Evaluating Exposure

- Capital Adequacy Ratio (CAR), Risk-Weighted Assets (RWA).
- Liquidity Ratios – LCR, NSFR, Loan-to-Deposit Ratio.
- Market Risk Tools – VaR, Expected Shortfall, Stress Testing.
- Credit Risk Tools – IFRS 9 ECL, CVA, diversification metrics.
- Operational Risk Tools – Basel capital charges, KRIs, back-testing.

### Learning Objective 4: Evaluate How Regulatory Requirements Influence Risk Behavior

- Basel I–IV evolution: CAR, OpRisk, Liquidity, Output Floors.
- Behavioral impact: CAR → safer assets, LCR/NSFR → long-term funding.
- Philippine context: BSP 10% CAR, DOSRI rules, PDIC deposit insurance.
- Case studies: Barings (1995), Urban Bank (2000), Northern Rock (2007), GFC (2008).

#### Basel Accords Timeline

| Accord           | Focus            | Key Features                             |
|------------------|------------------|------------------------------------------|
| Basel I (1988)   | Credit Risk      | CAR 8%, simple risk weights              |
| Basel II (2004)  | Risk Sensitivity | IRB models, OpRisk, Pillars 2 & 3        |
| Basel III (2010) | Post-GFC Reform  | CET1, LCR, NSFR, leverage ratio, buffers |
| Basel IV (2017)  | Standardization  | Output floors, recalibrated RWAs         |

## Sources

---

Asian Institute of Management, MIBL Term 6, “Financial Risk Regulation of Financial Institutions” (course lecture slides, Sessions 1–18), instructor J.V. Camus.

Zeissler, Arwin G.; Ikeda, Daisuke; Metrick, Andrew. “JPMorgan Chase London Whale A: Risky Business.” *Journal of Financial Crises*, Vol. 1, Iss. 2 (2019), pp. 40–59. Yale Program on Financial Stability Case Study 2014-2a-V1.

Chen, Andrew (under supervision of Claudia Zeisberger). “JPMorgan and the London Whale.” INSEAD Case INS370, ref. 03/2014-6003 (2014).

Zeissler, Arwin G.; Bennett, Rosalind; Metrick, Andrew. “JPMorgan Chase London Whale Z: Background and Overview.” *Journal of Financial Crises*, Vol. 1, Iss. 4 (2019), pp. 23–44. Yale Program on Financial Stability Case Study 2014-2z-V1.

United States Senate, Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs. “JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses.” Report, March 15, 2013.