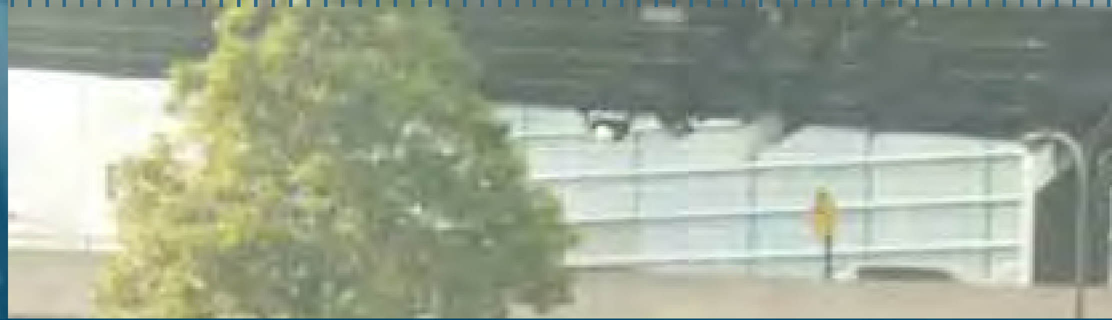

THE PROFESSIONAL RISK MANAGER (PRM™) CERTIFICATION PROGRAMME

PRM Self Study Guide – Exam IV

(FOUR OF FIVE)

CASE STUDIES · STANDARDS OF BEST PRACTICE
CONDUCT AND ETHICS · PRMIA GOVERNANCE

PRMIA
The Professional Risk Managers' International Association

PRM™ SELF-STUDY GUIDE – EXAM IV

Case Studies, Standards of Best Practice, Conduct and Ethics, and PRMIA Governance

OVERVIEW

Exam IV of the PRM™ certification tests a candidate's knowledge and understanding of the Case Studies, Standards of Best Practice, Conduct and Ethics and PRMIA Governance.

Exam IV is where we study some failed practices, standards for the performance of the duties of a Professional Risk Manager, and the governance structure of our association, the Professional Risk Manager's International Association. The materials for this exam are freely available on our web site – *http://prmia.org/index.php?page=training&option=trainingWebBasedResource.*

You can use this Self-Study Guide to focus your study on the key Learning Outcome Statements from each chapter. These Learning Outcome Statements form the basis for the questions asked during the examination that you will take as Exam IV of the PRM™ certification program. We recommend that you first read the materials, then review the Learning Outcome Statements, then re-read the materials with particular emphasis on these points.

We recommend strongly that you do not simply read the Learning Outcome Statements and then try to find the information about each in the books as a short-cut way of preparing for the exam. Real-life risk management requires your ability to assemble information from many simultaneous inputs and you can expect that some exam questions will draw from multiple Learning Outcome Statements.

After studying the materials for this section, becoming comfortable with your knowledge and understanding of each Learning Outcome Statement, and working through the Study Questions and the Sample Exam Questions, you will have read the materials necessary for passing Exam IV of the PRM™ Certification program. You may also wish to purchase access to online Sample Exams (Diagnostics) via the PRMIA website to assess your readiness.

Taking the PRM™ qualification, as well as working as a risk officer, requires a certain amount of mathematical expertise. This is not excessive. Anyone who was passed mathematics studies at advanced high school level, or who has completed the first year of a university degree in a mathematical-based qualification (physics, economics, engineering, etc) should have no problem with the requirements. For others, we recommend that they take tuition in the mathematics required and that they focus on this as the first part of their studies for the PRM™.

Please note that testing conditions, your state of mind and various factors can make your performance on the actual exams somewhat less strong than on the Sample Exams. If your Sample Exam scores are near to the passing mark, you may wish to study the subject materials even further.

Please remember that the exams of the PRM™ certification are very challenging. After all it's "a higher standard in risk certification" and you would expect nothing less. There is no guarantee that using the Self-Study Guide, in combination with the reading materials

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and Sample Exams will give you a passing score. But, they should all provide you with assistance in doing your best. We wish you much success in your effort to become certified as a Professional Risk Manager!

WORD DEFINITIONS

In this guide, we use Command Words. These are similar to those used by the CFA Institute, with a few additional words, and indicate levels of ability expected from successful candidates on each Learning Outcome Statement.

Calculate	To ascertain or determine by mathematical processes.
Characterize	To describe the essential character or quality of.
Compare	To examine the character or qualities of, for the primary purpose of discovering resemblances.
Construct	To create by organizing ideas or concepts logically and coherently.
Contrast	To compare in respect to differences.
Deconstruct	To disassemble the key elements of ideas or concepts.
Define	To set forth the meaning of; specifically, to formulate a definition of.
Demonstrate	To prove or make clear by reasoning or evidence; to illustrate and explain, especially with examples.
Derive	To obtain by reasoning.
Describe	To transmit a mental image, an impression, or an understanding of the nature and characteristics of.
Differentiate	To mark or show a difference in; to develop different characteristics in.
Discuss	To discourse about through reasoning or argument; to present in detail.
Draw	To express graphically in words; to delineate.
Explain	To give the meaning or significance of; to provide an understanding of; to give the reason for or cause of.
Identify	To establish the identity of; to show or prove the sameness of.
List	To enumerate.
Show	To set forth in a statement, account, or description; to make evident or clear.
State	To express in words.

STUDY TIME

Preparation time will vary greatly according to your knowledge and understanding of the subject matter prior to your self-study, your ability to commit dedicated and uninterrupted time to your study and other factors. In general, candidates who prepare for the exams of the PRM™ certification program allocate about three months to preparation for each exam.

You may spend three hours each week in study, or as much as ten or more, each week to ready yourself. Follow the suggestions above regarding the use of the Learning Outcome Statements and Sample Exams. Once you are comfortable with your readiness, it's time to register for the exam.

TESTING STRATEGIES

All questions are multiple-choice and there are no penalties for incorrect answers. Bear in mind that it is vitally important to finish the exam in the time allotted. Do not linger over questions longer than is sensible.

For example, if the exam has 30 questions in 90 minutes, do not spend longer than three minutes per question. If at the end of three minutes you have not answered the question, decide on the best answer you can (ignoring the obviously wrong), mark your answer and move on. If you do have any spare time at the end of the exam you can always go back and review the answer. However, make absolutely sure that you have an answer for every question at the end of the exam!

Another strategy would be to go through all the questions answering the ones you find easier ones first. Then after a first pass, divide the remaining questions by the time remaining and proceed as above.

STUDY QUESTIONS

A few questions, with answers, have been provided to help the candidate understand some of the concepts of the PRM™ Handbook. These study questions are not comprehensive of all concepts in the exam, nor are they necessarily questions of a similar type to those in the exam. They are provided in good faith as a study aid.

SAMPLE EXAM QUESTIONS

In Volume 5 of this Study Guide there are sample questions from all for exams. These sample questions should give you a flavor for the format and content of the actual exams. They are only part of the length of the actual exams and therefore do not cover all subjects contained in the detailed content description provided in this document. Questions on any of the subjects listed previously may appear on the actual exam.

CASE STUDIES

An integral part of the study of risk management is the lessons to be learnt from failures that have occurred globally. The case studies in this section describe the failures, their causes and the lessons to be learnt from them.

BARINGS

This case study consists of the "Report of the Board of Banking Supervision Inquiry into the Circumstances of the Collapse of Barings, 18 July 1995."

Barings

Learning Outcome Statement

The candidate should be able to:

- Describe how the massive losses were incurred
- Describe why the true position was not noticed earlier
- Describe the role of the External Auditors
- Describe the supervision done by the Bank of England
- Describe the role of The Securities And Futures Authority (SFA, now knownas the Financial Services Authority, the FSA)
- Describe the Lessons learnt from the Barings Case Study
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Massive Losses incurred by Nick Leeson, the General Manager and Head Trader of Barings Financial Services (BFS) by reason of unauthorised and concealed trading activities within BFS.
- The true position was not noticed earlier by reason of a serious failure of controls and managerial confusion within Barings.
- The external auditors, supervisors or regulators of Barings had not detected the true position prior to the collapse.

Risks Incurred

- Operational Risk – A lack of segregation between front and back office. Leeson was permitted throughout to remain in charge of both front office and back office at BFS (Handbook Volume III, Chapter 12).
- Operational Risk – The lack of understanding of BFS's trading activities, the lack of reconciliation to client records of the funding provided by Barings in London to BFS and the lack of verification of the (false) information provided by BFS, the deficiencies and inaccuracies in large exposure reporting to the Bank of England (Handbook Volume III, Chapter 12).
- Operational Risk – The system of checks and balances necessary for the proper management and control of a financial institution failed in the case of Barings with regard to BFS in a most serious way, at a number of levels and in more than one location (Handbook Volume III, Chapter 12).

Potential Mitigation

- *http://riskinstitute.ch/135340.htm*
- Management teams have a duty to understand fully the businesses they manage.
- Responsibility for each business activity has to be clearly established and communicated.
- Clear segregation of duties is fundamental to any effective control system.

- Relevant internal controls, including independent risk management, have to be established for all business activities.
- Top management and the Audit Committee have to ensure that significant weaknesses, identified to them by internal audit or otherwise, are resolved quickly.

NATIONAL AUSTRALIA BANK – FX OPTIONS

This case study consists of the "Investigation into foreign exchange losses at the National Australia Bank, 12 March 2004."

National Australia Bank – FX Options

Learning Outcome Statement

The candidate should be able to:

- Describe the sequence of events and trading activities that led to the losses
- Describe the analysis of the losses and how they occurred, with an initial focus on foreign currency option transactions entered into on or after 1 October 2003
- Describe the key policies, procedures, systems and control failures within the foreign currency options trading business responsible for the losses.
- Describe the Impacts on customers and third parties
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- The National Australia Bank staff members involved in the currency options trading are referred to as Traders.
- The Traders' activities were contrary to the NAB's strategy. The risk exposure of the currency options desk to the US dollar increased significantly in late 2003. This exposure resulted in significant losses when the US dollar fell by some ten cents against the Australian dollar.
- By the 12th of January 2004, false transactions with a reported value of A$185 million were included in Horizon (the currency options trading and processing system), and on 13 January 2004 the NAB made the first announcement of the losses, then estimated at A$180 million. By the 27th of January 2004, after adjusting for a revaluation of the portfolio, total losses of A$360 million were announced.
- The Traders concealed losses by entering various types of false transactions into the trading system, Horizon. Various methods were used which exploited gaps in controls. The key methods were:
    - Incorrectly recording genuine transactions
    - Entering false transactions
    - Using incorrect revaluation rates.

Risks Incurred

- Operational Risk – Integrity of people (Handbook Volume III, Chapter 12).
- Operational Risk and Market Risk – Risk and control framework (Handbook Volume III, Chapter 12 and Handbook Volume III, Chapters 2 and 3).
    - The currency options trading activity lacked adequate supervision.
    - Risk management failed.
    - There was an absence of financial controls.
- There were significant gaps in back office procedures.
- Operational Risk – Governance and culture (Handbook Volume III, Chapter 12).

Potential Mitigation

- The daily profit and loss analysis for large movements is "not an effective tool" because significant profit and loss differences arose from the use of different systems in the front and back offices. In addition the profit and loss is not reconciled daily to the general ledger, but monthly. Other experience shows the importance of this control and the need to explain large daily profit and loss movements.
- The extent of proprietary trading and how to monitor and control it.
- The involvement of the Chairman and CEO in the risk infrastructure and regular reporting to them to monitor the trading business.
- That all transactions should be checked for reasonableness of market price and economic rationale.
- Proper limits need to be in place.
- The need for several senior managers in a unit to understand the intricacies of proprietary trading before it is undertaken.

BANKGESELLSCHAFT BERLIN

This case study focuses on the losses incurred at Bankgesellschaft Berlin, one of Germany's 10 largest banks in summer 2001.

Bankgesellschaft Berlin

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe how property-based funds carried unforeseen and uncovered risks
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- BgB sets up property-backed funds that are a lot riskier for the bank than for its retail investors. It also approves a series of risky loans to property developers and becomes involved with many of Berlin's landmark regeneration projects.
- The property bubble bursts in Berlin and surrounding regions leading to massive losses and liabilities in the bank's property-linked portfolios.
- Early in summer 2001, the Berlin senate was informed that Bankgesellschaft Berlin, one of Germany's 10 largest banks, needed an emergency transfusion of E2 billion in new capital.

Risks Incurred

- Credit Risk – Loans to property developers (Handbook Volume III, Chapter 6).
- Operational Risk – Management (Handbook Volume III, Chapter 12).

Potential Mitigation

- Investment guarantees can prove a disastrously expensive way to build business volumes: the downside economic risks must be assessed, tracked and managed.
- Strict loan approval procedures, and best-practice approaches to tracking credit risk concentration and deterioration are critical to sound bank risk management.
- Supervisory boards, like boards of directors in the US and UK, must ensure that they are well educated and informed about the economic risk factors underlying key business activities.
- Strict loan approval procedures, and best-practice approaches to tracking credit risk concentration and deterioration are critical to sound bank risk management.
- Politicians and bank risk management don't mix well, a lesson that could have been learned from Paris' Credit Lyonnais debacle a decade earlier.

RIGGS BANK

This case study focuses on how Riggs Bank made losses because it disregarded its anti-money laundering (AML) obligations and maintained a dysfunctional AML program.

Riggs Bank

Learning Outcome Statement

The candidate should be able to:

- Describe the findings regarding AML
- Understand which regulations were involved
- Describe Riggs' AML Deficiencies and Regulators' Inadequate Oversight
- Describe the Recommendations
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Since at least 1997, Riggs has disregarded its anti-money laundering (AML) obligations.
- Maintained a dysfunctional AML program despite frequent warnings from OCC regulators.
- And allowed, or at times, actively facilitated suspicious financial activity.

Risks Incurred

- Operational Risk – The anti-money laundering program at Riggs Bank was almost completely dysfunctional (Handbook Volume III, Chapter 12).

Potential Mitigation

- Strengthen anti-money laundering enforcement processes.
- Carry out annual anti-money laundering assessments.
- Develop policies when offering employment to those previously employed by regulators and supervisors.
- Develop facilities for disclosure of information between banks.
- Ensure conformity with the Foreign Corrupt Practices Act.

CONTINENTAL ILLINOIS / PENN SQUARE

This case study focuses on how in May 1984, Continental Illinois, Chicago's largest bank and one of the top ten banks in the US, was on the brink of insolvency from a combination of bad loans and funding liquidity risk.

Continental Illinois / Penn Square

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Understand portfolio risk
- Understand reputational risk
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- A massive portfolio of energy sector loans began to turn sour on Continental when the US oil and gas sectors lurched into recession in 1981. The $33 billion asset bank had compounded its mistakes by lending large amounts to lesser-developed countries prior to the August 1982 start of the major LDC crisis of the 1980s.
- With investors and creditors spooked by rumors that the bank might fail or be taken over, Continental was quickly shut out of its usual domestic and international wholesale funding markets.
- On May 9, 1984, it began a frantic battle to counter reports that it was on the brink of insolvency from a combination of bad loans and funding liquidity risk.

Risks Incurred

- Portfolio Risk – Excessive dependency on one sector (Handbook Volume III, Chapter 10).
- Operational Risk – A sharp drop in confidence can lead counterparties in the wholesale markets to suddenly withdraw funding from a damaged bank, spinning the institution into a funding liquidity crisis (Handbook Volume III, Chapter 12).

Potential Mitigation

- It's tempting for management to grow an institution by offering loans to the same credit hungry industry sectors. That incentive should be balanced by ensuring that portfolio concentration risks are correctly measured and factored into lending decisions.
- Decentralized lending decisions require controls and risk monitoring at the center of the bank.
- Deteriorating credit portfolios, leading to market rumor and the withdrawal of competitively priced funding, can send even large institutions careening down the liquidity death spiral.
- Some banks might be too big to fail from depositors and regulators point of view. But shareholders will still lose their shirts.

CREDIT LYONNAIS

This case study focuses on how Credit Lyonnais Bank faced near-bankruptcy in November 1993.

Credit Lyonnais

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- The bank used its freedom to create a massive portfolio of poor quality assets in every sector from publishing through to film and finance, while underwriting or directly investing in a string of hugely expensive real estate and development projects that never paid their way.
- Poor internal controls left the bank open to fraud from within and without, while deficiencies in financial and risk reporting led to a gross underestimation of the bank's dangerous condition as Europe's economic boom ran out of steam in the early 1990's.

Risks Incurred

- Credit Risk – Management (Handbook Volume III, Chapter 6).
- Credit Risk – Exposure (Handbook Volume III, Chapter 8).
- Operational Risk – Management (Handbook Volume III, Chapter 12).

Potential Mitigation

- Independent and timely risk reporting is critical during periods of expansion and economic boom.
- An imperious management style does not mean that things are under control.
- Government guarantees can take away any market constraints on how much money a bank can gamble.
- Politics and risk management make a dangerous cocktail.

US S&L CRISIS

This case study focuses on the US Savings and Loan Crisis that occurred in the 1980's and 1990's.

US S&L Crisis

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Between 1986 and 1995, the underwriting of the US Savings and Loan industry by the financial industry and the US taxpayer cost an extraordinary $153 billion.
- The losses were the result of unmanaged asset/liability gaps that led to interest rate exposures, speculative investments in junk bonds and service industries, fraud, and especially, massive losses from lending to and investing in the US commerical real estate sector.

Risks Incurred

- Market Risk – Interest Rate Risks (Handbook Volume III, Chapter 2).
- Operational Risk – Fraud (Handbook Volume III, Chapter 12).

Potential Mitigation

- Regulatory capital and accounting numbers are not a good guide to risk-adjusted profitability in the banking industry.
- It's easy for wounded institutions to move out of the frying pan and into the fire by taking cash up-front for assuming long-term or unreported risks.
- Poorly controlled lending institutions can easily 'recycle' poor loans (by granting more credit) and fabricate fee income (by churning transactions) to disguise their true level of risk and return.
- Rapid growth into new lines of business signals the need for tighter risk management and financial controls.

LTCM

This case study focuses on the collapse of hedge fund, Long-Term Capital Management.

LTCM

Learning Outcome Statement

The candidate should be able to:

- Describe the events that led to the collapse of LTCM
- Describe the lessons learnt
- Describe how UBS made a loss due to LTCM
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- LTCM had the ability to put on interest rate swaps at the market rate for no initial margin. It meant being able to borrow 100% of the value of any top-grade collateral, and with that cash to buy more securities and post them as collateral for further borrowing: in theory it could leverage itself to infinity.
- Most of LTCM's bets had been variations on the same theme, convergence between liquid treasuries and more complex instruments that commanded a credit or liquidity premium. Unfortunately convergence turned into dramatic divergence. LTCM's counterparties, marking their LTCM exposure to market at least once a day, began to call for more collateral to cover the divergence.

Risks Incurred

- Market Risk – Model Risk. The misguided assumption that 'our counterparty and the market it was operating in, were performing within manageable limits' (Handbook Volume III, Chapters 2 and 5).

Potential Mitigation

- Model risk
- Unexpected correlation or the breakdown of historical correlations
- The need for stress-testing
- The value of disclosure and transparency
- The danger of over-generous extension of trading credit
- The woes of investing in star quality and investing too little in game theory

BANKERS TRUST

This case study focuses on the losses and loss of reputation at Bankers Trust (BT) in 1994 after it was sued by four of its major clients who asserted that Bankers Trust had misled them with respect to the riskiness and value of derivatives that they had purchased from the bank.

Bankers Trust

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- BT's reputation took a pounding after the bank was sued by several customers alleging various forms of fraud and racketeering with respect to derivatives transactions they had entered into with the bank. Several of these suits have since been settled both in and out of court, costing the company millions of dollars in settlement and possibly much more in damage to its reputation.
- The root cause appears to have been that BT's clients felt that BT had unfairly exploited their comparative lack of sophistication in handling these sophisticated derivative products.
- This appears to be an example of poor stakeholder management. In focusing on increasing profits, Bankers Trust didn't pay adequate attention to the fact that its clients were vital to its business. Even if it did nothing dishonest, it failed to serve its clients in terms of making them feel informed and at ease with their deals.

Risks Incurred

- Operational Risk – Sales practices (Handbook Volume III, Chapter 12).

Potential Mitigation

- Give adequate attention to all aspects of risk. An enterprise risk management program must balance the "hard side" of risk management (including policies, limits and systems) and the soft side (including people, culture and incentives).
- Reputation risk management suggests that in a time of crisis, management should focus on integrity and openness in dealing with customer complaints and public perception.
- Align incentives properly. Performance pressure may encourage participation in deals that ultimately backfire, especially if incentives and oversight are not aligned properly.
- Practice good stakeholder management. Clients are stakeholders, too! In the rush to create profits for shareholders, attention must still be given to the clients who are integral to the business.

ORANGE COUNTY

This case study focuses on the bankruptcy of Orange County, US in December 1994 after suffering losses of $1.6 billion from a wrong-way bet on interest rates in one of its principal investment pools.

Orange County	Learning Outcome Statement
	The candidate should be able to:
	▪ Describe the Timeline of Events
	▪ Describe the lessons learnt
	▪ Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Robert Citron, the treasurer of Orange County who controlled the $7.5 billion pool had riskily invested the pool's funds in a leveraged portfolio of mainly interest-linked securities. His strategy depended on short-term interest rates remaining relatively low when compared with medium-term interest rates.
- But from Febuary 1994, the Federal Reserve Bank began to raise US interest rates causing many securities in Orange County's investment pool to fall in value.
- On December 6, 1994 Orange County declared bankruptcy after suffering losses of arounf $1.6 billion.

Risks Incurred

- Market Risk – Interest Rate Risks (Handbook Volume III, Chapter 2).

Potential Mitigation

- Beware the unconstrained star performer, even when he or she has a long track record. Where there's excess reward, there's risk – though it might take time to surface.
- If the organisational structure, planning and risk oversight mechanisms of an institution are fractured, it is easy for powerful individuals to hide risk in the gaps.
- Borrowing short and investing long means liquidity risk, as every bank knows.
- Risk-averse investors must tie investment objectives to investment actions by means of a strict framework of investment policies, guidelines, risk reporting and independent and expert oversight.
- Risk reporting should be complete, and easily comprehensible to independent professionals. Strategies that are not posiible to explain to third parties should not be employed by the risk averse.

DAIWA

This case study focuses on the losses at Daiwa Bank, Japan in July 1995. A loss of $1.1 billion was incurred while dealing in US Treasury Bonds.

Daiwa

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Toshihide Iguchi, the executive vice president of Daiwa's New York branch had traded away the bank's money over 11 years, while using his position as the head of the branch's securities custody department to cover up the loss by selling off securities owned by Daiwa and it's customers.
- He had lost around $1.1 billion while dealing in US Treasury bonds.

Risks Incurred

- Operational Risk – Management failure of oversight, attempted cover-ups, and the breakdown of risk management in the New York branch (Handbook Volume III, Chapter 12).

Potential Mitigation

- Risk-taking functions must be segregated from record-keeping and risk assessment functions. It's a lesson that's now been largely learned in terms of segregating traders from the back office – but it has much wider applications.
- Structural problems in risk management don't put themselves right. Daiwa had many warning signals about the way risk management was organised at the New York branch, but chose to believe that local management had learned its lesson.
- Massive fraud can continue for many years in an environment of lax controls. Iguchi made his confession not because he feared he was about to be caught, but instead when he realised that the situation might otherwise carry on indefinitely.
- Years after an event, failures in risk management remain a threat to the personal finances of senior executives if the executives can be shown to have acted inappropriately.

CALIFORNIA POWER CRISIS

This case study focuses on the California Power Crisis in 2000-2001.

California Power Crisis

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Californian utilities suffered for more than a year as a massive gap had opened up between the rates that Californian utilities were allowed to charge consumers, and the price they had to pay for supplies in the wholesale electricity market.
- On April 6, 2001, Pacific Gas and Electric, one of the largest investor-owned utility companies in the US, filed for bankruptcy protection after sustaining devastating financial losses.

Risks Incurred

- Market Risk – Price Differential in the electricity market (Handbook Volume III, Chapter 2).

Potential Mitigation

- If the structure of an industry or market risk changes, predictions of "likely" or "unlikely" market extremes can be far from the mark.
- It's often the interaction between risks – market, credit, liquidity, regulatory – that turns a survivable incident into a crisis.
- In a competititive market, players behave selfishly at critical moments; profit and self-preservation are the only real motivators.
- Don't rely on regulatory action as a form of worst-case market risk management, as gaps can open up between the motivations and powers of key regulators and regulators' actions may be too little, too late.
- It's easy to find yourself in trouble in a physical commodity market. The California Power Crisis was unusual only in that a complete industry segment ended up in a corner, having first helped build the walls.

METALLGESELLSCHAFT

This case study focuses on the losses of approximately $1.5 billion made by the "Energy Group" of Metallgesellschaft AG in December, 1993.

Metallgesellschaft

Learning Outcome Statement

The candidate should be able to:

- Describe the trading strategies employed by the conglomerate
- Describe how proper supervision could have averted disaster
- Describe how similar financial crises may be avoided in the future
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- Metallgesellschaft revealed publicly that its “Energy Group” was responsible for losses of approximately $1.5 billion.
- These losses were due mainly to cash-flow problems resulting from large oil forward contracts it had written.

Risks Incurred

- Market Risk – A lack of necessary funds needed to maintain their position (Handbook Volume III, Chapter 2).

Potential Mitigation

- The management of MG would have benefited from implementing the recommendations put forth in the Group of Thirty Derivatives study. These recommendations are basic, but the blatant disregard for these principles cost MG a mere $1.5 billion.
- MG's disaster in the oil markets should be seen as a reminder to the corporate community to understand the nature of their position in financial markets and to understand the ramifications of market movements on your financial positions.

WORLDCOM

This case study focuses on the collapse of WorldCom in 2002 due to accounting fraud.

Worldcom

Learning Outcome Statement

The candidate should be able to:

- Describe the Timeline of Events
- Describe the lessons learnt
- Discuss the events leading up to the losses, the risks incurred and the mitigation processes described

Events

- WorldCom achieved its position as a significant player in the telecommunications industry through the successful completion of 65 acquisitions. Between 1991 and 1997, WorldCom spent almost $60 billion in the acquisition of many of these companies and accumulated $41 billion in debt.
- Mergers and Acquisitions, especially large ones, present significant managerial challenges in at least two areas. First, management must deal with the challenge of integrating new and old organizations into a single smoothly functioning business. The second challenge is the requirement to account for the financial aspects of the acquisition.

Risks Incurred

- Operational Risk - Failed corporate governance, accounting abuses, and outright greed (Handbook Volume III, Chapter 12).

Potential Mitigation

- When well conceived and executed properly, a growth-through-acquisition strategy is an accepted method to grow a business. Is there a need to put in place protections to insure stakeholders benefit from this strategy? If so, what form should these protections take?

STANDARDS OF BEST PRACTICE, CONDUCT AND ETHICS, AND PRMIA GOVERNANCE

GROUP OF THIRTY BEST PRACTICES

The Global Derivatives Study Group conducted a study on derivatives and their uses. The Study formulated and disseminated recommendations about their management.

Group of Thirty Best Practices

Learning Outcome Statement

The candidate should be able to:

- Describe the Twenty Four Recommendations made by the Study Group

Objectives

Many, both inside and outside of the financial industry, remain uncomfortable with derivatives activity. They see it as complex and obscure, potentially subject to abuse that might lead to the failure of individual firms or even to a crisis in the financial system. This Study recognizes and addresses these concerns by explaining derivatives and their uses and by formulating and disseminating recommendations about their management. The distinguishing feature of this Study is the practical character of its contents. This Study was conducted largely by market participants.

Actions

The Global Derivatives Study consists of the Recommendations, an Overview of Derivatives Activity, and three Appendices:

The Study offers 20 recommendations to help dealers and end-users manage derivatives activity and continue to benefit from its use. The Study also recommends four ways that supervisors and regulators, for their part, can help the financial infrastructure keep up with derivatives activity.

The 20 recommendations for a dealer and end-user of derivatives cover:

- The Role of Senior Management
- Marking to Market
- Market Valuation Methods
- Identifying Revenue Sources
- Measuring Market Risk
- Stress Simulations
- Investing and Funding Forecasts
- Independent Market Risk Management
- Practices by End-Users
- Independent Credit Risk Management
- Measuring Credit Exposure
- Aggregating Credit Exposures
- Master Agreements
- Credit Enhancement
- Promoting Enforceability
- Professional Expertise
- Systems
- Authority
- Accounting Practices
- Disclosures

In addition, there are four recommendations for legislators, regulators, and supervisors:

- Recognizing Netting
- Legal and Regulatory Uncertainties
- Tax Treatment
- Accounting Standards

PRMIA GOVERNANCE PRINCIPLES

As an independent association of professional risk managers from diverse industries in more than 150 countries, PRMIA provides the premier meeting place for financial and non-financial corporations, their stakeholders and their regulators to engage in and verify the existence of best practice corporate governance. The tool we use is the *PRMIA Standards of Corporate Governance*.

PRMIA Governance Principles

Learning Outcome Statement
The candidate should be able to:
- List the Seven Principles of Corporate Governance
- Describe the applications of the Principles

Objectives

The seven principles have been gleaned from international sources, non-commercial and commercial, and from various disciplines, all addressing aspects of good governance. They are designed to be cross-cultural norms that provide Boards, Audit Committees and Senior Executives with a standard framework for effective governance and regulators and auditors with an evaluation tool to ensure that good governance principles are actually being employed.

Best practice governance and risk management do not attempt to eliminate risk. Rather, they are designed to aid corporations in the pursuit of maximizing the risk-adjusted return on capital and in their transformation of uncertainty, which is unmanageable and unmeasurable, to risk, which is substantially more measurable and manageable.

These seven principles of corporate governance are based on common themes in a variety of literatures on corporate governance (see Source Documents):

- Principle One: Sufficiency of Key Competencies
- Principle Two: Sufficiency of Resources and Process
- Principle Three: Independence of Key Parties
- Principle Four: Clear Accountability
- Principle Five: Ongoing Education and Discernment
- Principle Six: Disclosure and Transparency
- Principle Seven: External Validation

These principles are applied in the following areas: Board and Audit Committees, Risk Management Infrastructure and Financial Accounting and Reporting Infrastructure and the Corporation as a Whole.

Actions

The essence of good corporate governance is a deliberate and sustained effort to adhere to the principles defined above. The areas coverd provide an introductory checklist to the major areas in which the PRMIA Standards of Corporate Governance should be applied for Boards and Audit Committees, the Risk Management Infrastructure, the Financial Accounting and Reporting Infrastructure and the Organization as a Whole.

PRMIA STANDARDS OF BEST PRACTICE, CONDUCT AND ETHICS

It is the duty of every PRMIA member to know and abide by standards of conduct that reflect positively on our profession, instill confidence from our colleagues and employers and that are consistent with local rules, regulations and cultural standards. This document has been prepared by the members of the PRMIA Ethics Committee.

PRMIA Standards of Best Practice, Conduct and Ethics

Learning Outcome Statement

The candidate should be able to:

- Describe the Purpose of Professional Standards
- Describe the Guidance on Best Practices
- Describe the Guidance on Professional Conduct
- Describe the Guidance on Ethical Behavior
- Describe the Guidance on Conflict Resolution

Objectives

This document sets out minimum qualifications and conduct standards for risk professionals. These standards will promote the highest levels of ethical conduct and disclosure with respect to methods of analysis.

- It is the duty of every PRMIA member to know and abide by these standards and the applicable local rules and regulations. When local rules and regulations conflict with these standards, the PRMIA member must respect local rules and regulations.

Guidance on Best Practices

Best practices for risk managers are a minimum set of guidelines for which each PRMIA member should be expected to be accountable.

- Basic Knowledge
- Rules and Regulations
- Generally Accepted Risk Practices
- Advances in Risk Management
- Honesty and Integrity
- Diligence
- Independence

Guidance on Professional Conduct

Professional conduct by a risk manager is consistent with a minimum set of guidelines described below, for which each PRMIA member should be expected to be accountable.

- Rules and Regulations
- Clarity and Accuracy
- Suitability
- Presentation of Results
- Disclosure of Limits
- High Level of Professionalism
- Supervision of Others
- Departure from Accepted Practices
- Conflicts of Interest
- Confidentiality
- Respect Laws and Regulations
- Respect for Local Customs

Guidance on Conflict Resolution

Guidance on Ethical Behavior

Ethical conduct by a risk manager is consistent with a minimum set of guidelines described below, for which each PRMIA member should be expected to be accountable.

- Personal Behavior
- Responsibility
- Judgment and Independence
- Use of Risk Services
- Respect Laws and Regulations
- Respect for Local Customs

Guidance on Conflict Resolution

PRMIA BYLAWS

One of the criteria of the PRM certification is that the recipient must be a member of PRMIA. Every PRMIA member must be aware of and understand the articles of incorporation of PRMIA.

PRMIA Bylaws

Learning Outcome Statement

The candidate should be able to:

- Describe Article 1: Name, Corporate Offices And Official Language
- Describe Article 2: Mission Statement And Purpose
- Describe Article 3: Membership
- Describe Article 4: Meetings Of Members And Regional Directors
- Describe Article 5: Board Of Directors
- Describe Article 6: Officers And Duties
- Describe Article 7: Committees
- Describe Article 8: Regional Chapters
- Describe Article 9: Finances
- Describe Article 10: Indemnification
- Describe Article 11: General Provisions
- Describe Article 12: Amendments

STUDY QUESTIONS

Barings

Q: Which position would have partially hedged Nick Leeson's primary option position at Barings?

a) Long futures
b) Short Strangle
c) Long Strangle
d) Total Return Swap

The option positions were due to sales of puts and calls on the Nikkei 225 index. A long strangle is a position that gives a positive return if the price of the underlying goes up or down, a small loss if not (V shape, but with a flat bottom). Total return swaps, which are credit derivatives, apart from the fact that they did not exist at this time, would not have protected him. Long futures would not have protected in case of drop in the index: c).

Metallgesellschaft

Q: What caused the losses for Metallgesellschaft?

a) At the final maturity date the price in the futures was well below the market price
b) To hold the position, they assumed a constant interest rate to invest the proceeds
c) At the final maturity date the price in the futures was well above the market price
d) To hold the position, they assumed an unbounded pool of resources

What went wrong was during the hedge. Answers a) and b) assume this was not a hedge but a speculation. Interest rates played a lesser role in the story, while the covering of the unrealised losses during the operation was what made the parent company to unwind the positions, judged to show too deep losses: d).

Long Term Capital Management

Q: LTCM's balance sheet as of August 31, 1998 showed the following (USD):

a) 100 billion in assets, -0.5 billion in equity
b) 125 billion in assets, 2.3 billion in equity
c) 400 billion in assets, 4.0 billion in equity
d) 125 billion in assets, 6.1 billion in equity

Although answer a) would probably have meant liquidation, this is really a question of knowing the degree to which LTCM leveraged their balance sheet, which was approximately 60:1: b).

Group of 30 Report

Q: According to the G-30, derivative credit exposure should be measured by:

a) Current Exposure
b) Potential Exposure
c) a) plus b)
d) a) plus b) minus Posted Collateral

This is principle 10, although collateral is mentioned in recommendations 7 and 14. Current exposure includes the credit exposure should the position be unwound, potential exposure includes exposure due to future market fluctuations. Collateral protects its owner against the impact of credit risk: d).

PRMIA Bylaws and Code of Conduct

Q: Which of the following is NOT part of PRMIA's guidance on Best Practices?

a) Only standard methods of assessing risk should be used
b) PRMIA members must possess, be under the supervision of someone who possesses, or inform their supervisor of the lack of required skills and/or certification to complete their risk assessment work.
c) PRMIA members must not intentionally deceive others
d) PRMIA members must value validation of their work by peers

Innovation is always required in the new discipline that is Risk Management. Competence and ethics are always required in financial professions. The Risk Management profession progresses because owing to discussion with peers and cross-validation of work. Fortunately, PRMIA does not prescribe orthodoxy, and encourages members to use sound practices rather than use, let alone blindly use, standard methods: a).

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PRM Self-Study Resources

To meet the demand from PRM candidates for distance learning opportunities, PRMIA has developed a suite of self-study options to make studying for the PRM exam convenient and effective.

ICMA CENTRE INTERACTIVE STUDY GUIDE

PRMIA, in partnership with The ICMA Centre, University of Reading, offers a complete personal learning training package for the PRM exams I, II, III and IV featuring leading faculty members like Carol Alexander, Jacques Pezier, Salih Neftci, Moorad Choudhry, John Board, and others. This access will not expire and is for your personal use on PC or laptop, and the video can even be viewed on your iPod. This package includes:

- Studio-recorded lectures on DVD
- Adobe Captivate demonstrations of Excel workbooks
- A set of fully worked examples to accompany the lectures

EPRM COACH ONLINE TRAINING

ePRM Coach is a comprehensive self-study guide for the PRM™ Certification Exam. Designed in accordance with the PRM™ exam structure, the ePRM Coach is equipped with concepts and practices, including:

- Exhaustive theoretical material supplemented with contemporary case studies
- Learner friendly courses complete with formulae, definitions, concise summaries, and interactive simulations
- State-of-the-art simulated learning environment
- Solved examples, practice exercises and quizzes
- Mock exams from a proprietary database
- Timed tests in exam format
- Personalized results for self assessment
- Glossary, FAQs, tips center and pocket reference
- Valuable reference extracts
- Online access with 24x7 customer support

EPRM DIAGNOSTIC EXAMS

ePRM Diagnostic Exams are mock exams designed in accordance with PRMIA's exam structure and feature:

- Simulation of the actual PRM™ Exam
- State-of-the-art learning environment
- Timed tests in exam format
- Personalized results for self-assessment
- 24x7 online access

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