



Operational Risk Management — Beyond Compliance to Value Creation

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Introduction

In the early 1990's, operational risk management (ORM) initially entered the lexicon of risk professionals when corporate disasters — Barings, Kidder, Daiwa — were caused by factors that fell outside of the purview of traditional risk management functions (credit/market risk management). Fast forward to recent years, the rogue trader has been replaced by the rogue CEO, CFO, and others entrusted with shareholder money. While the titles have changed, the underlying issues — accounting fraud at Enron and WorldCom; market timing and late trading in mutual funds; kickbacks in insurance brokerage; and options back-dating — have continued to highlight the importance of ORM. Moreover, the consequences for the mismanagement of operational risk have become much more severe in terms of CEO/CFO firings, regulatory fines, and criminal investigations and jail sentences.

While companies have always needed to manage operational risks, the practice of ORM as a separate discipline is still evolving. In recent years, most risk professionals have considered ORM the “next frontier” in risk management. Relative to credit risk and market risk, operational risk is more difficult to define, quantify, and manage. Nonetheless, the imperative to improve governance, risk, and compliance processes at banks and other risk-intensive companies has never been greater. More than ever, corporate directors, business executives, and risk professionals realize that operational risk is critical not only for regulatory compliance but also for operational efficiency and effectiveness.

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Today, ORM professionals are at an important crossroad. Given the significant investments companies have made in building ORM practices and technologies, risk professionals are now asking an important question: How can we leverage ORM programs to realize tangible business value? In the context of this question, this white paper will discuss:

1. **Value proposition for ORM**, including key empirical research studies that clearly show how improvements in governance, risk, and compliance processes lead to better financial and shareholder value performance.
2. **The ORM Maturity Model**, which provides activity-based benchmarks for ORM development through four key stages — Stage I: Foundation Setting, Stage II: Regulatory and Policy Compliance, Stage III: Integration and Rationalization, and Stage IV: Business Value Creation.
3. **Roadmap to an Effective ORM Program**, including key strategies on how companies can leverage their ORM programs to realize business value at each stage of the ORM Maturity Model.

Research Methodology

In preparation for the development of this white paper, a comprehensive review of existing research studies and surveys on operational risk practices was conducted. In addition, U.S. and Canadian banks with assets ranging from \$80 billion to \$320 billion participated in case study interviews to provide first-hand industry insights and perspectives on the key ORM challenges and opportunities. Risk management professionals interviewed included senior ORM, audit, and compliance executives. The banking industry was selected because of the significant investments that banks have made in developing their ORM capabilities over the past five years.

Value Proposition for ORM

The need to establish the value proposition of ORM was a common sentiment shared by the ORM executives who participated in this study. As stated by one of the operational risk executives interviewed, “The biggest issue with any organization building ORM is to demonstrate its value proposition.” The role of ORM in regulatory compliance is clear — non-compliance can lead to regulatory fines and penalties, regulatory constraints on business activities and/or higher capital requirements, and long-term damage to a company’s reputation. Beyond regulatory compliance, is there empirical evidence that ORM can add value to companies? In other words, is there statistical evidence that would correlate ineffective ORM with poor corporate performance, or sound ORM with superior corporate performance? The value proposition of ORM can be supported by isolating the negative impact (downside risk) when operational risk is not effectively managed, and the positive impact (upside risk) when it is effectively managed. In fact, there is a growing body of empirical research and survey data that would support two observations about ORM — (1) ineffective ORM is a key contributing factor when companies suffer a significant decline in market value, and (2) companies with effective governance, risk, and compliance programs are associated with higher levels of profitability and market valuation.

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ORM — Downside Risk

The negative impact of ineffective ORM can be demonstrated by performing statistical and qualitative analyses to identify companies that have suffered a major decline in market value, and which risk factors represented the underlying root causes. The following provides a summary of three key studies:

- Deloitte Research (2005) analyzed stock price data among the Thomson Financial Global 1000 companies from 1994 to 2003. The study noted that almost half of the 1000 largest global companies suffered stock price declines of more than 20 percent in a one-month period, relative to the Morgan Stanley International World Index. Among the 100 companies that suffered the greatest declines, 66 observations involved strategic risks, 62 observations involved external events, 61 observations involved operational risks, and 37 observations involved financial risks.¹
- The Corporate Executive Board (2005) also reported that non-financial risk factors have greater negative impact on stock price. The study indentified the top 20% of the Fortune 1000 companies that suffered the greatest market value decline from 1988 to 2002, and attributed each observation to a main risk driver. Their research and analysis indicated that 65% of these companies were exposed to strategic risks, 20% were exposed to operational risks, and 15% were exposed to financial risks.
- James Lam & Associates (2004) found that 76 companies within the S&P 500 had experienced a 30% or greater stock price decline in a one-month period from 1982 to 2003, relative to the S&P 500 Index. Based on analysis of public disclosures and news reports, the root cause (or first order risk) was determined for each company. The study found that 61% of these companies were exposed to strategic risks, 30% were exposed to operational risks, and 9% were exposed to financial risks.

ORM — Upside Risk

The positive impact of effective ORM can be demonstrated by statistical analyses of the relationship between corporate performance and sound governance, risk, and compliance practices. While using different research methodologies, sample companies, and time periods, research studies and surveys have consistently indicated that companies which have adopted more stringent governance programs are associated with higher levels of profitability and market valuation. The following provides a synopsis of four key studies:

- Cheng and Wu (2005) and their research team at Institutional Shareholder Services examined the correlation between the ISS' Corporate Governance Quotient ratings and 16 financial performance metrics for more than 5,200 U.S. companies in the 2002-2004 period. They found that companies with better corporate governance have lower risk, better profitability and higher valuation. The study found that that the top decile companies performed significantly better than the bottom decile companies, including 3-to-10% versus negative return on assets; 8-to-15% versus 0.3% return on equity; and 16-to-20% vs. 10-to-15% stock price to earnings ratio.
- Brown and Caylor (2004) analyzed the relationship between corporate governance and company performance. They found that firms with better governance achieve better financial performance, including higher return on equity (9.2% above industry average), higher profit margin (46% above industry average), and higher dividend payout (0.4% above industry average).

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¹ The observations do not total to 100 because the companies were exposed to more than one type of risk.

- Cremers and Nair (2003) investigated how internal governance mechanisms interacted with external governance mechanisms. Based on equity prices from 1990 to 2001, they found that a portfolio with strong internal and external governance produced excess annualized returns of 8%. The same companies achieved 5.5% higher ROA (return on assets).
- Gompers, Ishii, and Metrick (2003) constructed a “Governance Index” based on 24 governance rules to measure the level of shareholder rights at about 1,500 large firms. They found that during the 1990s, an investment strategy that bought firms with the strongest rights and short firms with the weakest rights would have earned excess annualized returns of 8.5% during that period.

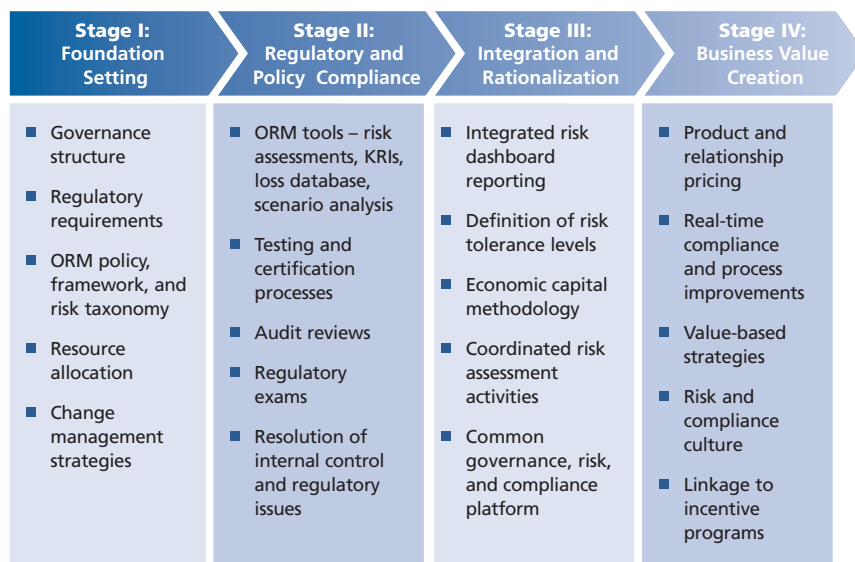
The above research studies clearly demonstrated the value proposition of effective governance, risk, and compliance programs. They showed that beyond its role in regulatory compliance, effective ORM can help companies avoid major setbacks in market valuation as well as improve financial performance and investor returns.

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The ORM Maturity Model

ORM executives feel significant pressure to evolve their ORM programs in order to add value to their companies. As one U.S. banker said “With earnings pressure, corporate and business executives are losing patience with ORM activities. We must have a compelling story and strategy to add value to them, but we are not there yet.” How can companies evolve their ORM programs? While the specific development and evolution of ORM is unique to each company, there are logical and common stages that companies generally go through.

The ORM Maturity Model shown below illustrates the four key stages of development. Based on our research and case study interviews, most banks are between Stage II and Stage III.



Stage I: Foundation Setting

In Stage I, companies are focused on establishing the basic foundation for the overall ORM program. This includes the governance structure for ORM, or how critical policy and operational decisions are made at the board, corporate, and business unit levels. Most banks have established board and executive risk committees, as well as dedicated committees for ORM at the corporate and business unit levels. Regulatory requirements for ORM must be captured, and in the past three years, banks have dedicated significant resources to Sarbanes-Oxley (SOX) compliance and Basel II readiness. In order to document regulatory and business requirements, roles and responsibilities, and a common taxonomy, an ORM policy framework is developed. Given that ORM impacts everyone within a company, a change management strategy is developed that includes resource requirements and allocation, training and education initiatives, and realignment of performance measurement and incentive programs.

Stage II: Regulatory and Policy Compliance

In Stage II, companies must ensure that they are indeed in compliance with key regulatory requirements. In this regard, banks have established task forces or program management offices for SOX, Basel II, anti-money laundering (AML), and other major regulations. To support these initiatives, they have developed various ORM tools, including risk-control self assessments, key risk indicators (KRIs), internal and external loss-event databases, and scenario analyses. To comply with SOX sections 302 and 404, financial controls, testing and certification processes, and test results are documented. More importantly, banks have developed and taken action steps to resolve material control weaknesses identified by these tools and processes, as well as issues identified through internal audits and regulatory exams.

Stage II is where most banks (and other companies) find themselves today. While they have been able to meet SOX, AML, and other regulatory and corporate requirements, there are significant overlaps and redundancies across internal efforts. For example, one bank ORM executive pointed out that they had “14 separate risk-control self assessment processes that are not linked together, and the business units were asked similar questions.” Corporate and business unit executives are concerned about “compliance fatigue” in terms of the level of company resources dedicated to these efforts. ORM professionals realize that they must adopt an integrated solution that can support the foundational components of ORM, as well as the unique requirements of specific regulations and policies. Only then can they move towards the next stages of ORM development.

Stage III: Integration and Rationalization

In Stage III, companies strive to integrate and rationalize their ORM processes. This is a critical step given the large number of complex regulations that banks must deal with, and the various oversight functions (e.g., risk management, finance, legal and compliance, audit) that are responsible for ORM. Today, one of the key risk management initiatives at many banks is to develop a role-based risk dashboard reporting capability to enhance risk transparency. To establish the appropriate context and boundaries for operational risk exposures, banks are also beginning to define risk tolerance levels (analogous to credit risk and market risk limits). In order to comply with Basel II, as well as develop a valuable management tool, banks are developing economic capital methodologies for operational risk.

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In addition to mounting regulatory compliance costs, banks are also concerned about the burden on business units in terms of time and resources. As such, oversight groups are coordinating their activities. For example, at a large Canadian bank the ORM and audit groups would coordinate their plans so that a low-risk business unit would be subject to an ORM risk assessment or an internal audit in alternating years. To effectively integrate and rationalize their ORM activities, banks need to establish a common technology platform in order to automate manual processes and integrate disparate systems and databases. A common technology platform would enhance efficiency by reducing manual and redundant processes, as well as increase effectiveness by delivering more timely and consistent risk information to decision makers.

Stage IV: Business Value Creation

In Stage IV, companies apply their ORM capabilities to create business value. First and foremost, companies must take risks in order to achieve return. That is generally true with all types of companies and all forms of risks. However, there is only one mechanism that companies can use to ensure that they are appropriately rewarded for the risks that they assume, and that is through the pricing of their products and services. As such, ORM must impact product and/or relationship pricing in order to create top-line value. However, bottom-line results can also be improved through operational efficiency. In this regard, ORM should be integrated into business processes and operations in order to achieve real-time compliance, as well as reduce time-to-market, errors and re-works, and other operational expenses.

By embedding risk management into business processes through the use of technology, ORM issues can be addressed on a real-time basis (e.g., preventing a non-permitted transaction before it occurs instead of detecting it after the fact). ORM can also be applied to support value-based management decisions with respect to business and product strategies. Finally, operational risks may arise from unexpected sources and thus ORM cannot be based entirely on policies, systems, and documented processes. Companies must foster a risk and compliance culture that is reinforced through negative consequences and positive incentives.

Simply stated, each stage of the ORM Maturity Model is designed to address a specific question for ORM:

- **Stage I: Foundation Setting.** How should we get organized to manage operational risks?
- **Stage II: Regulatory and Policy Compliance.** Are we in compliance with major regulations and company policies?
- **Stage III: Integration and Rationalization.** How can we become more efficient (“doing things right”) in our ORM activities?
- **Stage IV: Business Value Creation.** How can we become more effective (“doing the right things”) and create tangible business value through ORM?

At this time, banks are at a crossroad in terms of their ORM programs. Over the past several years, the key ORM activities at banks have been focused on Stage I and Stage II, and now they have plans and ambitions to migrate their ORM programs to Stage III and IV.

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Banking Analogs to the ORM Maturity Model

In retrospect, the development and maturity process for ORM is very similar to what has occurred in the management of market risk and credit risk at banks over the past 12-15 years. For market risk management, in Stage I, banks established asset/liability management committees and interest rate risk and trading risk policies, with significant consideration to bank regulatory requirements. In Stage II, market risk analyses are performed to ensure that market risk processes and exposures are in compliance with corporate risk policies and regulatory requirements. In Stage III, banks integrated the risk analytics and reporting across all products in the banking and trading books, and developed common risk metrics such as value-at-risk, economic capital, and exposure limits. In Stage IV, transfer pricing systems, risk-based pricing models, and derivative products are used to ensure that they are fully rewarded for the assumption of market risks.

For credit risk management, in Stage I, banks established credit review committees and credit policies based on management and regulatory requirements. In Stage II, credit transactions are reviewed by the central credit department and/or committee to ensure that they are in compliance with credit policies. In Stage III, credit exposures across all lending units are aggregated and compared to country, industry, and counterparty risk limits. In Stage IV, risk-based pricing models, active portfolio management techniques, and credit derivatives are applied to optimize the risk-adjusted return of the overall credit portfolio.

At leading banks, market risk and credit risk practices have evolved from a regulatory compliance and management control function to one that is recognized as a core competence and value-creating capability. Now, operational risk management is in need of a similar process of evolution. ORM professionals are both challenged and encouraged by this mandate. On the one hand, the evolution for ORM is daunting given the external regulatory and litigation environment, as well as internal cultural, data, and quantification challenges. On the other hand, there is wide acceptance for ORM as a management discipline, and the tools available to measure and manage operational risks (e.g., ORM systems and databases, risk transfer products) are quickly becoming more robust. As such, ORM professionals are well positioned to deliver greater value to their companies.

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Roadmap to an Effective ORM Program

In the previous sections we discussed the value proposition for ORM and the current challenge facing ORM professionals to evolve their practices similar to their credit risk and market risk counterparts. The further development of ORM is particularly important since the overwhelming majority of large banks and non-financial corporations have adopted enterprise risk management programs. Operational risk is a critical component of enterprise risk management, and it also has important interdependencies with other forms of risk. For example, in banking a material portion of loan losses can be attributed to operational risk factors (e.g., quality of loan documentation). In the hedge fund industry, the biggest single cause of failure is not market risk, but operational infrastructure and control.

How should companies evolve their ORM programs? While each company has unique challenges and requirements, ten recommendations based on common implementation challenges and industry best practices are discussed below. These recommendations are organized by the four stages of the ORM Maturity Model.

Stage I: Foundation Setting

- **Recommendation #1: Develop an overall framework for ORM.** Given the complexities of ORM, it is critical to develop an integrated ORM framework during the early stages of development. This framework should include a definition for operational risk, governance structure and decision processes, ORM policies and requirements, roles and responsibilities, and risk taxonomy. Business units and operational functions should participate in the development of the ORM framework. It should also be reviewed and approved by the management and board committees responsible for ORM.
- **Recommendation #2: Establish the ORM vision and business case.** In order to establish consensus and management buy-in for the ORM program, a clear vision and compelling business case should be developed. The business case for ORM should include cost/benefit analyses, expected outcomes, and measures of success. In addition to the business case, a vision should be developed that articulates the “goal state” for ORM at the company, including how ORM will be integrated into the key business decision processes within the company.
- **Recommendation #3: Develop an implementation plan.** Developing a best-practice ORM program is a multi-year effort. An implementation plan should be developed that provides key plans and initiatives, interim milestones, resource requirements, and change management strategies. To support the implementation of ORM, an integrated technology platform is required. The technology platform for ORM should be flexible in order to model the organization’s current business structure and processes. It should also be configurable in order to incorporate future business requirements on a cost-effective basis.

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Stage II: Regulatory and Policy Compliance

- **Recommendation #4: Implement deep-dive risk mitigation strategies.** While the development of corporate-wide processes are important to ensure a consistent approach to ORM, the value of ORM should be demonstrated through deep dives in terms of specific business applications and/or risk mitigations strategies. For example, ORM practices can be used to identify and resolve emerging regulatory issues, or an operational risk problem within a business unit. ORM can also be used to enhance or reinforce specific initiatives such as business contingency planning, anti-money laundering, and information security.
- **Recommendation #5: Develop an integrated ORM technology platform.** In the past several years, many companies have developed various tools for ORM — risk and control assessments, KRIs, loss-event database, and scenario modeling. However, these tools are often developed independently based on manual processes and disparate systems. Yet there are common components to all of these tools, including business entities, control processes, operational risk categories, and internal controls. As such, these tools would be much more effective if they are supported by an integrated platform. The technology platform should support automation of risk and compliance workflows, as well as be accessible and easy to use to encourage business unit adoption and application.

Stage III: Integration and Rationalization

- **Recommendation #6: Apply a top-down risk-based approach.** In order to rationalize governance, risk, and compliance activities, a top-down risk-based approach must be adopted. Critics have argued that the regulatory requirements (e.g., SOX, Basel II) that companies must comply with are too complex, granular, and prescriptive. A bottom-up approach to ORM often leads to “compliance fatigue” or “risk myopia.” Simply stated, the general outcome of a bottom-up approach is too much activities and work products but not enough insights and value-added actions. In contrast, a top-down risk-based approach would focus attention and resources on the most important operational risk issues based on financial materiality, potential impact to business objectives, and management ability to influence.
- **Recommendation #7: Establish risk tolerance levels for ORM.** One of the key tenets of best-practice risk management is the clear definition of risk tolerance levels, and ORM is no exception. In credit risk and market risk management, risk limits are established to ensure that financial exposures are not excessive. In ORM, risk tolerance levels can be established in terms of number/criticality of control weaknesses, timeliness in resolving outstanding ORM issues, risk assessments by internal oversight functions, and performance goals and minimum standards for KRIs. For certain operational risks (e.g., major regulations, code of ethics, reputation risks), it may also be useful to explicitly state zero tolerance as the corporate policy. Finally, leading banks use economic capital as the common currency for risk and have established economic capital based limits or targets for all major types of risk.

In ORM, risk tolerance levels can be established in terms of number/criticality of control weaknesses, timeliness in resolving outstanding ORM issues, risk assessments by internal oversight functions, and performance goals and minimum standards for KRIs.

- **Recommendation #8: Develop risk dashboard reporting.** Given that operational risks are dispersed throughout an organization, it has been said that ORM is everyone's job. As such, an ORM program should provide useful role-based risk dashboard information to various levels of the organization. An integrated technology platform would enhance risk visibility and support business decisions by synthesizing and delivering risk information to each group based on their specific needs. For example, board reporting should focus on regulatory compliance, policy decisions and exceptions, and major strategic investments, while management reporting should focus on key corporate and business unit objectives as well as day-to-day operations.

Stage IV: Business Value Creation

- **Recommendation #9: Develop risk-based pricing for operational risk.** In order to achieve the appropriate return on operational risk, companies must develop and implement risk-based pricing. In other words, business activities with greater operational risk exposures should command higher pricing and/or higher hurdle rates of returns. For example, the pricing of products and services should fully incorporate expected operational losses, allocated risk and compliance costs, and other administrative and operational expenses. Pricing should also include the cost of economic capital, which is a function of unexpected loss.
- **Recommendation #10: Apply ORM to support business decision making.** Beyond risk-based pricing at the transactional level, ORM can help support decision making in other critical business areas. To support revenue growth initiatives, ORM can reduce operational risk issues and time-to-market by establishing more efficient due diligence processes for new products and business acquisitions. ORM can also support real-time compliance and process improvements by integrating controls into business operations. Another key opportunity is to leverage ORM to enhance risk transfer decisions, including covered risks, retention levels, and insurance premium pricing.

Summary

ORM has advanced significantly since the early 1990's when large losses caused by rogue traders caught the attention of corporate boards and executives, risk professionals, and regulators. It is now a widely accepted discipline. ORM requirements are also codified in regulations such as SOX, Basel II, and Solvency II. However, ORM professionals are at an important crossroad. Beyond regulatory compliance, they must demonstrate that they can add tangible value to their companies. Similar to their credit risk and market risk counterparts, ORM professionals must rationalize their activities, leverage advanced technologies, and integrate ORM into business processes. Only then can ORM evolve from a compliance cost to a value-added function. ■

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WP2060607