

A publication of PwC's Financial Services Institute (FSI)

# ***Too Good to Fail:*** Defining the New Gold Standard for Risk Management in Financial Services

March 2011



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# *Section 1*

Point of view

## Point of view

Both market and regulatory forces have generated incentives for financial institutions to fundamentally re-examine how they govern and manage risk.

**The rapid changes taking place in the financial services industry have significant implications for the effectiveness of financial services organizations' existing risk management structures. There is a need and an opportunity to re-examine and enhance most organizations' strategies, processes, and infrastructure for measuring performance and analyzing risk.**

- **Heightened regulatory expectations for risk management coverage and oversight**—Regulators are calling for financial institutions to significantly improve their company-wide risk management and oversight. Specifically, regulators are calling for companies to increase their focus on specific risk management topics, including valuation practices, stress testing, liquidity risk management, compensation practices, risk concentration, off-balance sheet exposures and securitization risk, and reputational risk and implicit support. New banking laws affecting most consumer products and derivatives trading and settlement also will introduce new levels of risk scrutiny and analysis. The level of change and the impact on the organization have never been more significant.
- **Industry structural change requires enhanced analysis of risk factors**—While the intention of much regulation is aimed at simplifying and “de-risking” institutions, the rate and extent of structural change will continue to accelerate. During this time of change, institutions will seek new ways to do business and will look for growth in new markets using new business models. For many institutions, these changes will introduce new complexity, making it more challenging to fully understand risk and potentially leading to an inadvertent increase in overall risk.
- **Correlated risk exposures require visibility into multiple data sets**—As the banking industry moves toward market-based intermediation, there is a greater probability that many areas of a financial institution may be exposed to a common set of products, risk factors, or counterparties. When combined, these can lead to material risks and losses.
- **Demands for greater transparency require more sophisticated risk information and reporting**—Financial reporting is becoming more dependent on risk-based models to reflect fair value. As finance and risk information continue to converge, financial institutions should establish ways to more quickly, accurately, and completely aggregate and report risk information.
- **Opportunity to make risk a more explicit contributor to business decision making**—Bank CEOs are much more likely than their peers in other industries to be putting more emphasis on risk management—particularly, allocating resources to risk-related information gathering and analysis; integrating risk management with their business units; reassessing risk tolerance; and preparing for systemic risk and low-probability, high-impact events.<sup>1</sup> Despite this increased effort, many bank CEOs are not comfortable that they have yet struck the right balance between company executives and the board or are using the full suite of risk information available for strategic business decision making. Such banks need to reengineer their strategies, systems, and processes to take advantage of the analytical information available to the organization.

<sup>1</sup> PricewaterhouseCoopers LLP 13th Annual Global CEO Survey 2010. [www.pwc.com/ceosurvey](http://www.pwc.com/ceosurvey)

## Point of view

Executive management should re-evaluate and change risk management capabilities to make risk an explicit contributor to business decisions.

### A comprehensive approach to assess risk management should address the following:

<b>Governance and strategy</b>	<b>Financial institutions should align risk management to the business model.</b>	<ul style="list-style-type: none"><li>▪ This will require a shift from focusing primarily on risk type (such as market, credit, or operational risk) to aligning the risk management model to the business model and focusing on the underlying asset class and product (such as commercial real estate). This realignment will allow institutions to more effectively understand aggregate exposures across the business model and de-risk the portfolio of exposures to specific asset classes as necessary.</li></ul>
	<b>Institutions should rebalance the relationship between risk managers and the business.</b>	<ul style="list-style-type: none"><li>▪ Executive management and the board should reassert that risk managers have company-wide risk oversight authority, mandates, and responsibilities. In addition, executive management and the board should reinforce the stature of risk managers beyond written policy.</li></ul>
	<b>Risk should be managed in the context of risk appetite and strategy.</b>	<ul style="list-style-type: none"><li>▪ Risk managers should be asking: Do we agree with the strategic risk/reward trade-offs that come with this business? What is the inherent risk in our fundamental business model and product mix? Have we adequately deployed people, processes, and technology to manage that risk profile?</li></ul>
<b>Risk management processes</b>	<b>Financial institutions should shift to an integrated reporting framework.</b>	<ul style="list-style-type: none"><li>▪ To assess whether risk concentrations are properly identified, evaluated enterprise-wide across business units, and effectively reported to senior management and the board of directors, financial institutions should shift from siloed reporting of financial, risk, and compliance information to an integrated reporting framework based on customer- and product-data elements.</li></ul>
	<b>A tactical aggregated reporting program should be applied to customer and product data elements across the institution .</b>	<ul style="list-style-type: none"><li>▪ A tactical, aggregated reporting program should be applied to the two major data elements across a financial institution: customer and product data. These elements form the anchors of key inputs into risk, finance, and compliance reporting requirements. A core process, such as record-to-report, can and should be leveraged to drive process standardization and to facilitate the rollout of an executable program.</li></ul>
<b>Analytics and infrastructure</b>	<b>Performance should be measured on a risk-adjusted basis.</b>	<ul style="list-style-type: none"><li>▪ To drive accountability, performance should be measured on a risk-adjusted basis both at the business-unit level through profit and loss (P&amp;L) and the balance sheet, and at the individual level.</li></ul>
	<b>Institutions should expand their stress-testing capabilities and processes.</b>	<ul style="list-style-type: none"><li>▪ Stress testing should become a business-as-usual management tool. In addition to being a key component of overall risk management, stress testing should be aligned specifically with liquidity risk management.</li></ul>
<b>Values and incentives</b>	<b>Incentive plans should become more closely linked to risk-adjusted performance.</b>	<ul style="list-style-type: none"><li>▪ Compensation and incentive plans should be linked to long-term performance across the full P&amp;L and the balance sheet to drive a culture of responsible risk taking, accountability, and ownership.</li></ul>

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## *Point of view*

Financial institutions should align risk management to the business model.

**Financial institutions should fundamentally enhance the way they govern and manage risk. Rather than primarily analyzing risk by type (such as market, credit, and operational risk), the risk management model should be aligned to the business model, and the focus should be on the underlying asset class and product (such as commercial real estate). Doing so will allow risk managers to more effectively understand aggregate exposures across the business model and de-risk the portfolio of exposures to an asset class as necessary.**

The traditional organizational model for risk management has focused on risk by type, such as market, credit, and operational risk. When risk types are correlated in a limited way, this approach has merits. However, the recent financial crisis has shown that there is greater correlation across risk types than most people estimated. Accordingly, the need to challenge the traditional model is warranted.

In this regard, there are three practical ways to think about and manage the overall risk portfolio for a financial institution:

**Management model**—Because business performance is measured and resources are deployed using a management model, the accountability and ownership for taking and managing risk should follow the management model.

**Geographical model**—Because risks of all types are directly influenced by the environment in which the business activities are being conducted, there should be an alignment of the organization's risk with the geographical footprint of the business model. This also helps to establish accountability and assign ownership for managing risk within the legal entity structure.

**Product/asset class model**—Because exposure to the same product or asset class often exists across the management model and geographic model—but institutions neither deploy resources nor measure performance by product or asset class across the management and geographic models—risk management plays an important role in providing the lens into these exposures, and should have the authority to de-risk the portfolio of exposures to a particular product line or asset class.

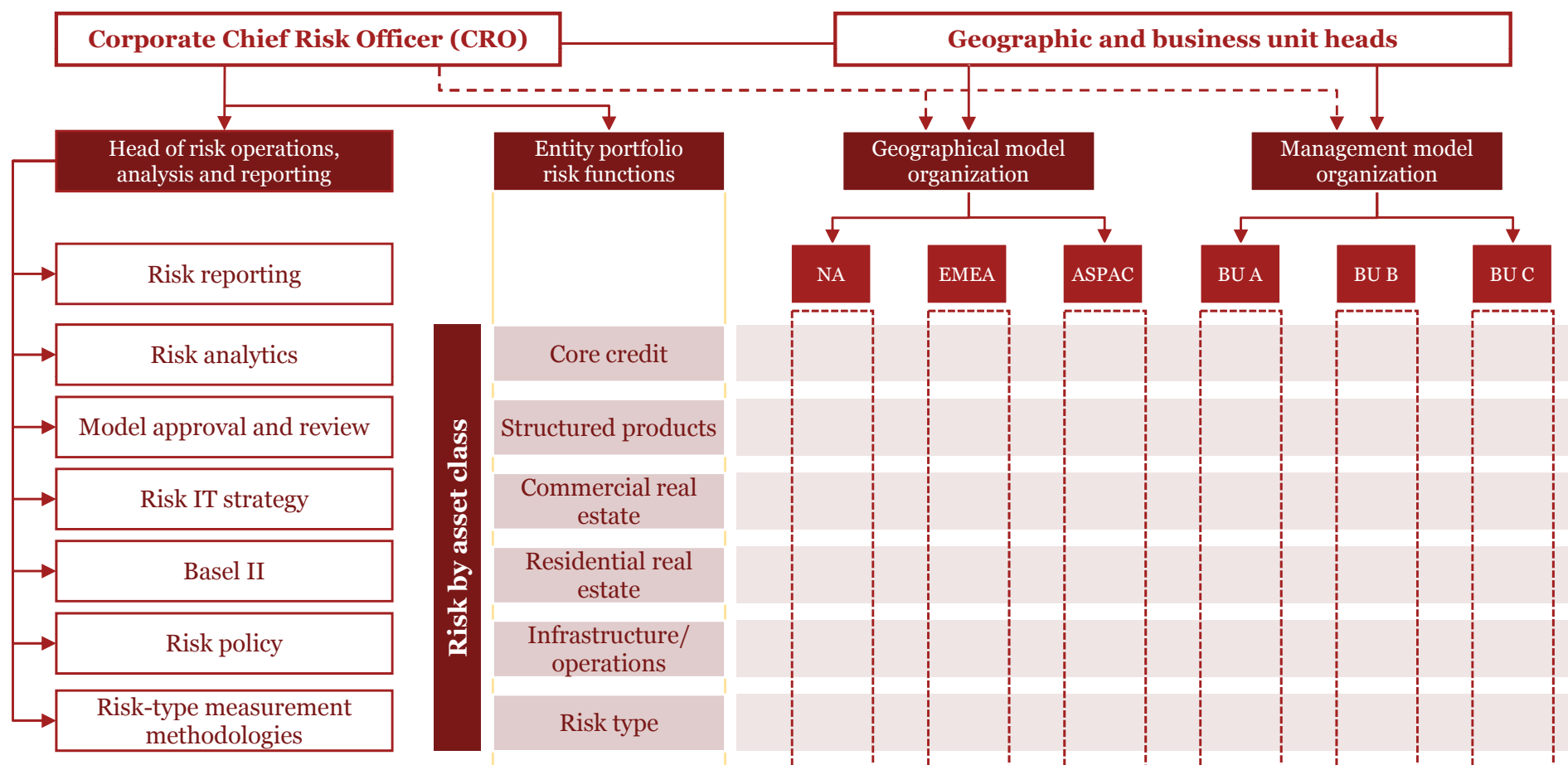
The following page provides an illustration of an organizational model designed to drive a focus on these three key ways to manage risk across an enterprise.

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## Point of view

### Illustrative organizational structure

This model deviates from traditional models that focus on risk type. In this model, the risk measurement techniques used include those used to measure risk by type, and also embed these core risk management methods and analytics in a way that leverages the *management, geographic, and product/asset class* models.



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## *Point of view*

Institutions should rebalance the relationship between risk managers and the business.

**Now is the time for executive management and the board to reassert that risk managers have company-wide risk oversight mandates and responsibilities.**

Surprisingly, the corporate risk management function often does not have formal oversight over some businesses or other risk-taking entities within the company, such as treasury. Corporate risk oversight, of course, is no guarantee against excessive risk taking, just as brakes on a car are not protection against speeding. However, such oversight allows the business to “go faster” in a more controlled manner. Risk managers, on whom the board relies to form an independent view of risk, should have reporting lines independent of the business. This does not supplant the need for the business to perform the “first line of defense” in taking and managing risk.

**Risk managers should define and communicate the separate and complementary roles and responsibilities of the risk management function and business-unit management.**

When executed well, such clarity can strengthen both the quality of oversight and the sense of risk ownership in the business. Too often, there is ambiguity around the role of the business-line risk manager with respect to authorization or escalation, which can lead to costly delays in decisions.

**The risk management function should interact with the business in a direct, proactive way.**

The need for the risk management function to be independent frequently creates distance between the function and the business. This relegates the risk manager to the role of scorekeeper, which is detrimental to effective risk management. This should not be the case. Risk managers who are structurally independent and have the right incentive and evaluation structures can be more hands-on and proactive, yet retain objectivity. For example, when independent risk management teams execute their roles effectively, they form a specific view on operations and control effectiveness at the process level; perform internal/external benchmarking; and provide critical input on sensitive, high-risk projects such as systems implementations. To be successful, these teams cannot be seen as an extension of internal audit. If the business is the first line of defense, risk managers should be the second line of defense, not bystanders. The current environment is more receptive than ever to risk managers taking on that role.

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## *Point of view*

Risk should be managed in the context of risk appetite and strategy.

### **Risk should be tailored to address the unique attributes of each institution's business model.**

Risk events have the potential to create deviations from planned strategies and outcomes, yet risk managers too often have limited, or belated, input into the strategy-setting process of their institutions.

***Risk managers can and should play a greater role in the strategic management of risk, which can be accomplished by:***

- Having senior management and the board facilitate the articulation of risk appetite.
- Using a combination of qualitative and quantitative approaches.
- Creating an explicit link between these expressions of risk appetite on one side, and company-wide policies and limit structures that govern day-to-day risk taking in the institution on the other side.

***There is no one-size-fits-all approach to governance and risk management.*** The specifics of any one business model directly affect the governance and control operating model. Furthermore, the choices made around the business model and the corresponding governance and control operating model directly affect the quality of governance and risk management. Each institution should explicitly align its governance and risk management operating model with its business model. Risk managers can play a crucial role in challenging their institution's business model and by highlighting areas where the business model or the governance and risk management model needs to change. This includes, but goes beyond, the consideration of risk in the new product-approval process.

***Risk managers should be asking:***

- Do we agree with the strategic risk/reward trade-offs that come with this business?
- What is the inherent risk in our fundamental business architecture, including the business mix; the deployment of people, process, and technology; the risk profile; and the environment?

Answering these questions can be a critical step in identifying and assessing strategic and emerging risks that may cross traditional market, credit, operational, or liquidity risk silos.

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## *Point of view*

### Financial institutions should shift to an integrated reporting framework.

**To assess whether risk concentrations are properly identified, evaluated, and reported to senior management and the board, financial institutions should shift from siloed reporting of financial, risk, and compliance information to an integrated reporting framework. This framework should be based on customer- and product-data elements. Furthermore, the framework should leverage the financial reporting record-to-report process and platform to drive complete, timely, accurate, and standardized risk reporting.**

Financial institutions that are woven into the core fabric of the global banking and capital markets system face an increased need to provide frequent, timely, and accurate views into key financial, risk management, and compliance reporting information across business functions. Today, most financial institutions face numerous challenges related to the aggregation of risk, compliance, and finance information to support external reporting requirements. The design and deployment of appropriate aggregation and accurate reporting are complicated when the underlying source data is unreliable and/or inaccurate.

To target and remediate short-term issues that impact the aggregation requirements across finance, risk, and compliance functions, we believe a tactical remediation program should be applied to the two major data elements across financial institutions: customers and products. Customer and product master data is the linchpin in aggregating risk, compliance, and finance information to support external reporting requirements. In the long run, this master data also forms a foundation for gaining insights into customer performance and experience. These data elements are typically collected independently and often gathered multiple times, which drives inefficiencies, inconsistencies, and increased risk to the financial institution. As a result, the initial stages of the remediation program should be geared toward creating a common customer and product data model, establishing a unique global ID for customers and products, and establishing an operational data governance model at both the strategic (policy) and tactical (enforcement) levels.

Once an enterprise-wide customer and product data model is developed, financial institutions can reconcile finance, risk, and compliance data. Once reconciled, the standard record-to-report process used for traditional financial reporting can be extended to integrate client onboarding. This will facilitate aggregation, scenario analysis, and the monthly reconciliation of risk, finance, and compliance reporting.

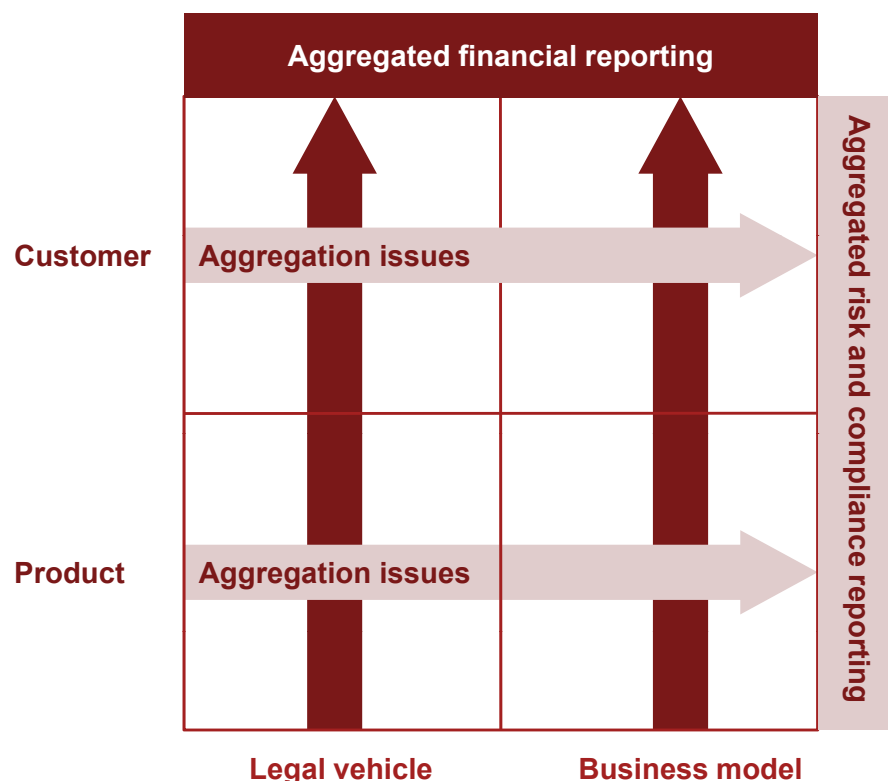
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## Point of view

A tactical, aggregated reporting program should be applied to customer and product data elements across the financial institution.

A key challenge inhibiting the ability of financial institutions to aggregate risk and compliance information is that customer and product data are not structured as uniformly as finance data.

Additionally, the hierarchy structures are not common across the functional domains, and aggregation activities are not anchored to a proven core process. These factors impede the ability to aggregate within each function, and hinder the convergence of finance, risk, and compliance data across a common entity.



We believe that a tactical aggregated reporting program should be applied to the two major data elements across a financial institution: customer and product data. As depicted in the above figure, these elements form the anchors of key inputs into risk, finance, and compliance reporting requirements. Further, we believe that a core process, such as record-to-report, can and should be leveraged to drive process standardization and facilitate the rollout of an executable program.

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## *Point of view*

Performance should be measured on a risk-adjusted basis.

**To drive accountability, performance should be measured on a risk-adjusted basis at the business-unit level through P&L and balance sheet, and at the individual level.**

Risk-adjusted performance is critical to evaluate risk relative to risk appetite and strategic planning. While risk-adjusted performance measures exist, they are frequently unavailable or unreliable at levels more granular than the business line. This results in:

1. An unbalanced focus on top-line or bottom-line growth.
2. Hindrances to the effective deployment of capital.
3. The creation of detrimental incentive effects from a risk management perspective, as evidenced by the recent financial crisis.

Risk-adjusted performance measures, by themselves, do not guarantee that the right management decisions will be made. However, as part of a general overhaul of management practices, a number of institutions are deploying significant resources, including people, to develop and/or improve capabilities in this area. The development of effective risk-adjusted performance measures requires close collaboration among risk, finance, and the business.

The use of full balance sheets and P&Ls is an effective way to drive a culture of accountability and ownership for performance and risk at multiple levels in an organization. This includes business heads as well as geographic heads. Furthermore, having oversight functions monitoring full risk-adjusted performance for a business or geography offers those in the oversight role a full and complete view of business activities and a firsthand sense of the rhythm of the business.

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## *Point of view*

**Institutions should expand their stress-testing capabilities and processes.**

### **Stress testing should become a business-as-usual management tool.**

PwC expects thorough, rigorous, and forward-looking stress tests, such as those initiated by banking supervisors, to become integral parts of business-as-usual activities, including business planning and forecasting, contingent capital and liquidity planning, capital allocation, execution, and performance evaluation processes. In our view, they are even likely to gain prevalence relative to other internal risk management techniques. As a result, institutions generally should expand their capabilities and processes in this area. New scenarios will need to be generated and calibrated over time to capture changing macroeconomic conditions and emerging risks. Alignment of stress testing with liquidity management also will be necessary. In addition, loss mitigation activities will continue to be center stage, as those banks that acted quickly to mitigate losses have been able to create substantial benefits from their stress-test results.

As noted in our FS Viewpoint *Comprehensive Stress Tests*:

1. Stress tests, at least temporarily, create higher capital targets for the largest US banks. Open questions remain as to how stress tests will impact the evolution of the regulatory capital framework.
2. Stress tests introduce new explicit targets focused on composition and quality of capital.
3. The immediate focus for all banks is to develop capital plans to raise common equity and/or support the repayment of Troubled Asset Relief Program (TARP) loans.
4. Bank executives will begin to focus on assessing business-model implications and the impact of returns on capital across asset classes and activities.
5. Moving forward, thorough stress tests will be integrated into business-as-usual processes for management and supervisors.
6. Finally, as an outcome of the stress tests, risk management oversight will be reinforced, and further disclosures are expected.<sup>1</sup>

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<sup>1</sup> "Stress Tests: From stressful times to business as usual—an updated point of view," PwC FS Viewpoint, [www.pwc.com/fsi](http://www.pwc.com/fsi)

## *Point of view*

Incentive plans should become more closely linked to risk-adjusted performance and more transparent.

**The issue of incentives has been heavily debated recently, especially in the court of public opinion. Shareholders, regulators, and now taxpayers are demanding changes to prevailing practices.**

Much of the recent debate has focused on the *level* of compensation and a perceived missing link to risk-adjusted performance and true profitability. Clearly, bonuses should recognize long-term value rather than short-term gain. To this end, there are increasing calls that effective compensation systems should include vesting periods for options and mechanisms under which bonuses could be forfeited if risk taking is reckless or if performance lags.

Evidence that these issues are gaining attention can be heard in a January 2010 speech by Mary Schapiro, SEC Chairman. She described the December 2009 issuance of new rules that will “require companies to disclose their compensation policies and practices if they create risks that are reasonably likely to have a material adverse effect on the company.” She further noted that the SEC expects that “companies will carefully examine their own practices” and that this “should enable companies and their boards to more appropriately calibrate risks and rewards.” Describing additional disclosures about the fees paid to compensation consultants, she noted that these rules will “provide investors with information to help them better assess the potential conflicts of interest a compensation consultant may have in recommending executive compensation.”<sup>1</sup>

Until recently, the following options had not been seriously considered because long-standing institutional practices prevented them from ever being proposed:

- The funding of incentive plans for independent control functions, including the corporate risk management function, should be carefully designed not to impede the objectivity of these functions. When business results fund the incentives for a business-line risk manager, this creates an obvious conflict of interest—if not in fact, then certainly in appearance. The same is true for finance and compliance functions. Funding incentives from a well-funded corporate plan is far more suitable.
- Periodically, the overall number, complexity, and funding of incentive plans for employees should be evaluated carefully to help ensure that these factors neither result in an undue reduction in management discretion nor a weakened link between individual performance and incentives.
- Key causes for operational risk events include people and/or inadequate or failed processes. A well-defined performance evaluation process should help ensure that the right people are in the right roles, and processes should be evaluated and adapted as necessary.

<sup>1</sup> Chairman Mary L. Schapiro, US Securities and Exchange Commission. January 20, 2010. Alan B. Levenson Keynote Address, 37th Annual Securities Regulation Institute, Coronado, California. Available from: <http://www.sec.gov/news/speech/2010/spch012010mls.htm>

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## *Point of view*

Financial institutions should evaluate and adapt their risk management capabilities to serve as a competitive advantage.

**Institutions that regularly evaluate, emphasize, and update their risk management capabilities will be better positioned to meet the expectations of clients, shareholders, and regulators, and use their strengths as a competitive advantage.**

The regulatory expectations voiced as part of the recent stress-testing exercise by banking supervisors made clear that risk management effectiveness should be certified by the executive management team and ultimately the board. Supervisors expect that, as part of the capital planning process, firms will need to review their existing management and the board to ensure that the leadership has sufficient expertise and the ability to manage the risks presented by both the current economic environment and the business architecture of the firm. Clients and shareholders clearly have similar demands.

To meet this expectation, and to continually improve the effectiveness of risk management, the board and executive management will need to periodically assess their institution's risk governance and oversight structures, culture and incentives, risk management and measurement processes, as well as resources and the supporting risk IT infrastructure.

To be effective, this assessment should be:

- Conducted regularly and independent of line management.
  - Focused on identifying actionable improvement opportunities.
  - Shared with the board for its review and consideration.
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## *Point of view*

Changes to risk governance and management will enable cultural shifts that are long overdue in many institutions.

**By spearheading change in the areas of strategy definition, risk-adjusted performance measurement, and incentives, risk functions will be positioned to assume a far more proactive posture than in the past.**

These changes will require fundamental cultural shifts in (1) the way risk functions operate and interact with the business, and (2) in the risk culture of the firm as a whole. The risk cultures of institutions that weathered the recent financial crisis relatively well had the following characteristics:

***Clear accountability:*** Clearly defined roles and responsibilities, from the top down within the institution.

***Full transparency:*** Willingness to admit and address mistakes quickly, evidenced by the rapid escalation of issues.

***Continual improvement:*** Implementation of changes based on lessons learned, both positive and negative.

***Effective change management:*** Ability to recognize the need for, then the execution of, change.

***Collegial tension:*** Culture in which challenging colleagues within the organization is an expected behavior.

***Equal stature:*** Neither risk and control functions nor the business has override authority.

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## ***Section 2***

# Competitive intelligence

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## *Competitive intelligence*

While there are many actions being taken by institutions to improve risk management, below are four themes that are occurring in most institutions in some form today.

1. Institutions are organizing to see and govern risk through three lenses:
  - **The management model**—Facilitates accountability of business owners.
  - **Geographic footprint**—Facilitates a view into legal entities.
  - **Asset class across the institution**—Provides an aggregate view of risk across the management model and legal entity structure at a level that allows action to be taken.
2. Institutions are integrating the reporting of risk and financial performance to support “one view.”
3. Institutions are seeking to integrate the infrastructure that underpins risk and financial management.
4. Institutions have initiated actions to better align performance with risk taking and to enhance risk governance. However, these improvements will continue to evolve as the three themes above are realized.

## Competitive intelligence

Institutions are moving toward seeing and governing risk through three lenses.

The following table illustrates the range of practices we see in the industry:

Risk management leading industry practice	Industry observations	
	Financial institution 1	Financial institution 2
<b>Alignment of risk management to the business model, as demonstrated by the management model, the geographic model, and the product/asset class model</b>	<ul style="list-style-type: none"><li>▪ This global institution developed a three-year effort to adapt its risk governance structure as well as its risk function's structure and capabilities, in light of anticipated market changes. Key priorities included:<ul style="list-style-type: none"><li>- Strengthening firm-wide functional risk areas with oversight and standard-setting responsibilities for credit, market, and operational risk.</li><li>- Aligning independent risk managers to all major businesses/products and treasury.</li><li>- Creating a strategic risk management group reporting to the chief risk officer (CRO).</li><li>- Adopting a regional risk management and governance model to satisfy business needs and regulator expectations in Europe and Asia.</li><li>- Implementing a risk services function to consolidate utility functions such as risk systems, risk reporting, and model review.</li></ul></li></ul>	<ul style="list-style-type: none"><li>▪ This global institution structured its risk management organization along three leading dimensions:<ul style="list-style-type: none"><li>- Each of the major businesses has a chief risk officer with an independent reporting line to the institution's CRO.</li><li>- Similarly, each global region has a risk officer who is accountable for his/her geographic area.</li><li>- Finally, the firm has product specialists with market and management expertise with risk oversight responsibilities specific to a product/asset class.</li></ul></li><li>▪ Risk oversight is exerted globally by risk committees at the regional and business-line levels.</li><li>▪ The risk function includes a utility team focused on risk infrastructure, processes, and management reporting.</li></ul>

## *Competitive intelligence*

Institutions are integrating the reporting of risk and financial performance to support “one view.”

The following table illustrates the range of practices we see in the industry:

Risk management leading industry practice	Industry observations	
	Financial institution 1	Financial institution 2
<b>Integrated reporting</b>	<ul style="list-style-type: none"><li>▪ This global financial institution has established business reviews with participation from business leaders and representatives of the operations, IT, finance, and risk functions.</li><li>▪ The monthly review focuses on business performance and risk metrics, including a discussion of risk-adjusted performance measures.</li></ul>	<ul style="list-style-type: none"><li>▪ This financial institution has launched a multi-year systems and data review to enable the integrated reporting of risk and performance information across businesses, products, and geographies.</li><li>▪ The revised framework is enabling the production of risk-adjusted performance measures as well as decisions at the local business level; the aim is to increase reporting granularity, where appropriate, moving forward.</li><li>▪ The initiative is led jointly by the risk and finance organizations, with extensive participation from the institution’s data group and IT function.</li></ul>

## Competitive intelligence

Institutions are seeking to integrate the infrastructure that underpins risk and financial management.

The extent of integration between the risk and finance functions can be arrayed on a continuum.

		Independent	Aligned	Integrated
Governance and organization	Leadership	<ul style="list-style-type: none"> <li>CFO and CRO roles and responsibilities segregated with limited interaction.</li> </ul>	<ul style="list-style-type: none"> <li>CFO and CRO roles and responsibilities aligned, with joint control over certain functions that have aligned objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Single CRFO role created with full ownership of/responsibility for risk and finance.</li> </ul>
	Committees	<ul style="list-style-type: none"> <li>Siloed committee structure.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinated membership in committee structure.</li> </ul>	<ul style="list-style-type: none"> <li>Integrated committee structure (mandate and members).</li> </ul>
	Organization	<ul style="list-style-type: none"> <li>Separate organizational models with limited overlap.</li> </ul>	<ul style="list-style-type: none"> <li>Organizational models aligned with joint responsibility around strategic, capital, financial planning, and other functions.</li> <li>Potential physical co-location.</li> </ul>	<ul style="list-style-type: none"> <li>Single organizational model with joint risk and finance disciplines across functions as appropriate.</li> </ul>
	Interaction with business	<ul style="list-style-type: none"> <li>Finance and risk have separate touch points with the business.</li> <li>Finance has active business partners in all business units.</li> <li>Risk managers exist for key business lines.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinated approach to business interaction between risk and finance.</li> <li>Risk and finance are respected by the business and play an active role in decision making at all levels.</li> </ul>	<ul style="list-style-type: none"> <li>Integrated risk and finance business partner role with single touch point into the business to ensure that risk and finance are considered hand-in-hand for decision making.</li> </ul>
	Talent, skill sets, and incentives	<ul style="list-style-type: none"> <li>Risk and finance staff have separate talent management, career development paths, and training and development.</li> <li>Limited movement of staff across areas.</li> <li>Inconsistent incentives.</li> </ul>	<ul style="list-style-type: none"> <li>Active talent management between the two areas to rotate staff through a cycle of risk and finance (and business) experience.</li> <li>Combined development and training activities.</li> </ul>	<ul style="list-style-type: none"> <li>Risk and finance team development integrated as part of joint function.</li> <li>Employees develop both risk and finance competencies along with business placements.</li> </ul>

## Competitive intelligence

Institutions are seeking to integrate the infrastructure that underpins risk and financial management.

The extent of integration between the risk and finance functions can be arrayed on a continuum.

		Independent	Aligned	Integrated
Processes	Strategic, capital, and financial planning	<ul style="list-style-type: none"> <li>Different teams with limited overlaps perform the strategic, capital, and financial planning process.</li> </ul>	<ul style="list-style-type: none"> <li>High level of interaction between risk and finance in all planning areas, including risk appetite definition and allocation, to provide a balanced view of risk, capital allocation, and return.</li> </ul>	<ul style="list-style-type: none"> <li>Single team dedicated to producing strategic plans with supporting integrated capital and financial planning teams.</li> <li>Finance and risk budgets integrated as part of one process.</li> </ul>
	Ongoing monitoring and controls	<ul style="list-style-type: none"> <li>Risk and finance both run separate control activities with multiple areas of duplication between risk control, financial control, operational risk, SOX, and internal audit.</li> </ul>	<ul style="list-style-type: none"> <li>Clear responsibilities and boundaries for control between risk and finance.</li> <li>Joint centers of excellence for areas such as IPV, model validation, analytics, and modeling.</li> </ul>	<ul style="list-style-type: none"> <li>Single risk and finance control function, with clear boundaries and responsibilities agreed with the business, internal audit, and operations.</li> </ul>
	Performance management	<ul style="list-style-type: none"> <li>Performance management is performed purely on a financial basis, with limited weighting given to risk metrics.</li> </ul>	<ul style="list-style-type: none"> <li>Performance management considers both risk and reward metrics supported by combined risk and finance input in business review process.</li> </ul>	<ul style="list-style-type: none"> <li>Integrated performance management team, framework, and metrics ensure risk and reward are considered on a dynamic basis.</li> </ul>
Infrastructure	Data and systems	<ul style="list-style-type: none"> <li>Separate finance and risk data, and supporting system architecture.</li> <li>Reconciliations are conducted only at the highest level and for regulatory reporting purposes.</li> </ul>	<ul style="list-style-type: none"> <li>Common data dictionary between risk and finance.</li> <li>Aligned strategy for the supporting system architecture.</li> <li>Data reconciled at lower level and used for management purposes.</li> </ul>	<ul style="list-style-type: none"> <li>Common finance and data dictionary and warehouse running on a single financial platform.</li> <li>No requirement to reconcile data as drawn from single “golden source.”</li> </ul>
	Sourcing and delivery	<ul style="list-style-type: none"> <li>Separate functions are dedicated to the production of periodic reports. Separate sourcing strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Coordination in producing risk and finance reports.</li> <li>Shared sourcing strategy.</li> </ul>	<ul style="list-style-type: none"> <li>Integrated sourcing and shared functions to produce integrated risk and finance reports.</li> </ul>

## Competitive intelligence

Institutions have initiated actions to better align performance with risk taking, and to enhance risk governance.

The following table illustrates the range of practices we see in the industry:

Risk management leading industry practice	Industry observations	
	Financial institution 1	Financial institution 2
<b>Incentive plans for line management and oversight functions</b>	<ul style="list-style-type: none"><li>▪ A US bank reviewed incentive plans as a first step to rationalization. This effort identified opportunities to:<ul style="list-style-type: none"><li>- Significantly reduce the number of plans and the associated administrative costs and operational risk.</li><li>- Re-align the funding of plans for control functions such as Risk and Finance, to ensure greater independence vis-à-vis the business, as well as appropriate funding levels.</li><li>- Simplify plan governance and oversight structures.</li></ul></li></ul>	<ul style="list-style-type: none"><li>▪ A major US financial services company developed strategies to better link risk taking, performance management, and variable compensation in response to TARP and Federal Reserve regulatory mandates. As part of that effort, the institution:<ul style="list-style-type: none"><li>- Designed a repeatable process to assess the inherent business-unit risk, evaluate the influence levels of relevant job positions, assess time horizon risk, identify appropriate risk-adjusted metrics for measuring performance, and assess the plan design risk.</li><li>- Refined and documented the processes and governance framework associated with the annual review, redesign, and approval of variable compensation plans.</li></ul></li></ul>

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## *Section 3*

A framework for response

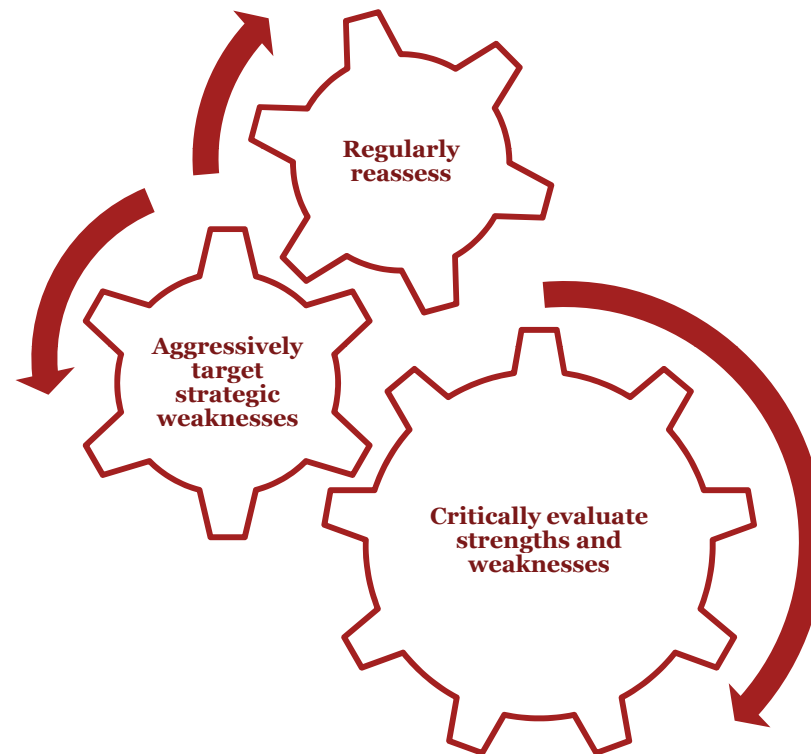


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## *A framework for response*

The leadership of financial institutions can immediately initiate three steps to begin to fundamentally improve risk management.

The appetite for change expressed by regulators, investors, customers, and financial institutions is genuine and lasting. The challenge for most institutions lies in identifying, prioritizing, implementing, and harvesting the benefits from improvements in risk management, and maintaining these benefits as the institution's environment changes, creating new and different demands. We believe that institutions should take the following three steps to begin tackling these challenges today:

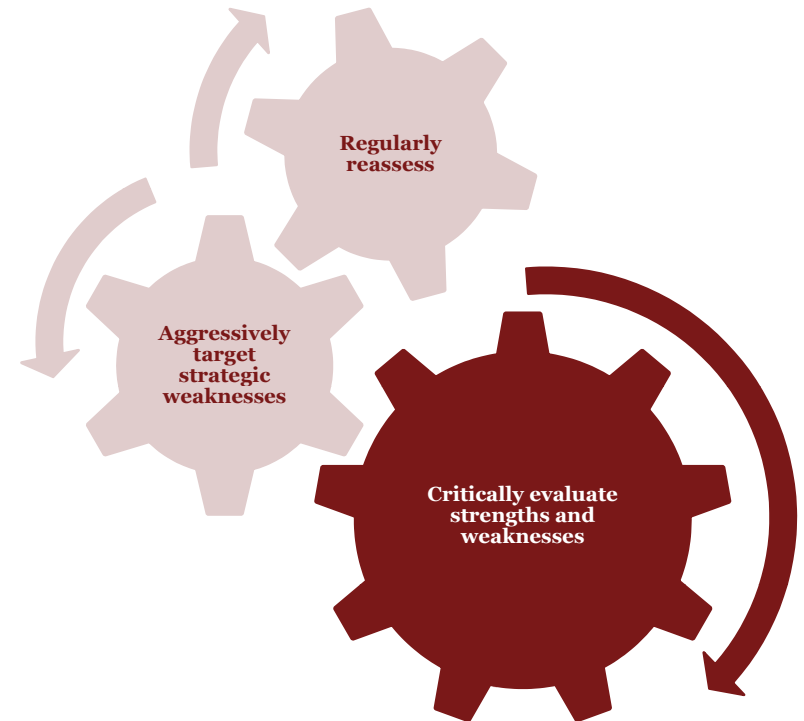


## *A framework for response*

### Step 1—Critically evaluate the strengths and weaknesses in the way you govern and manage risk across the enterprise.

#### **Critically evaluate strengths and weaknesses**

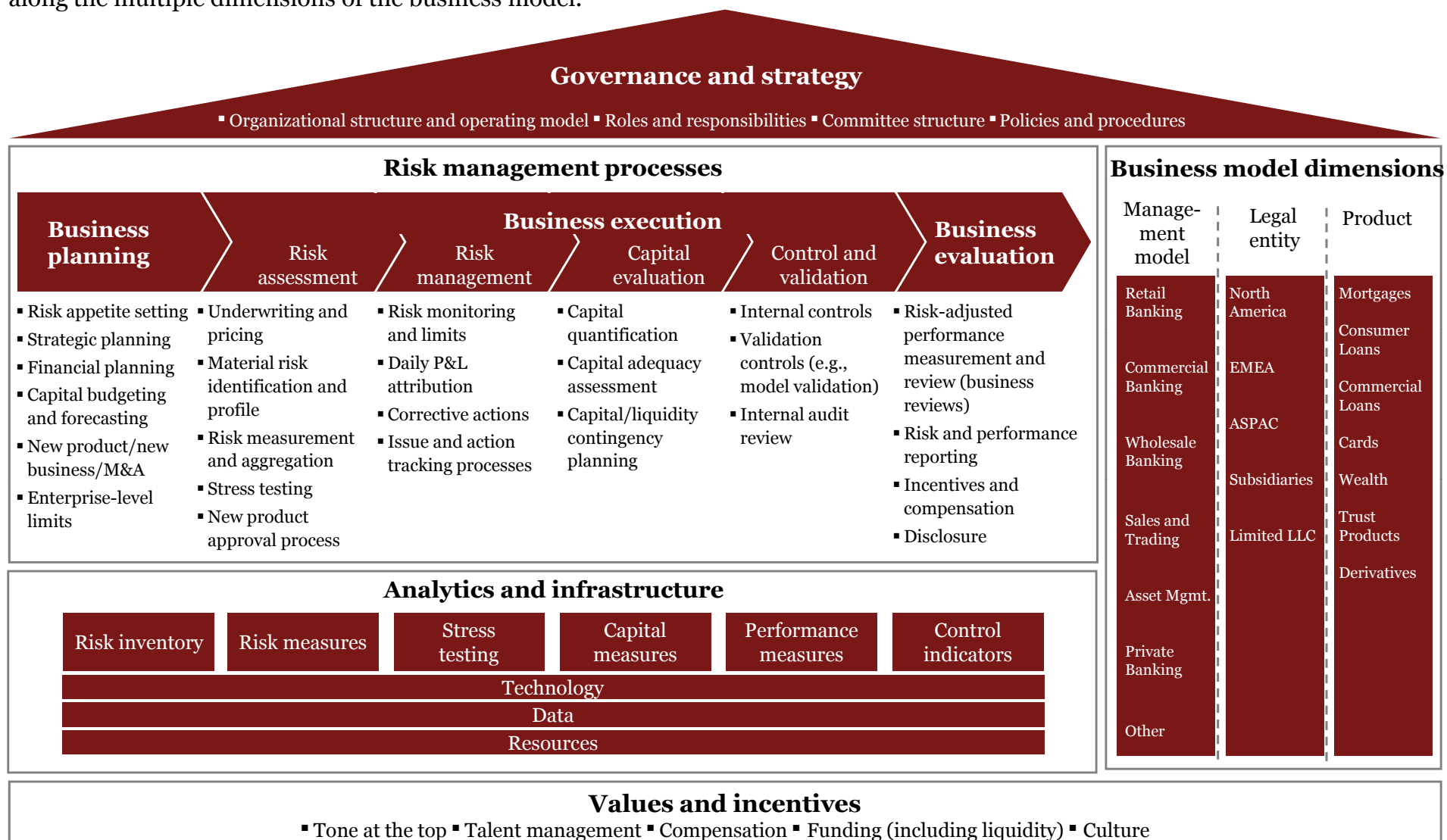
- To be effective, the diagnostic should be conducted independently from—and have the support of—line management.
- The diagnostic should be holistic—that is, the diagnostic should consider, both individually and jointly, the risk management capabilities of the business, the risk and control functions, and internal audit.
- The review should consider the adequacy of governance and organization, culture and incentives, risk management and measurement processes, as well as resources and the supporting risk IT infrastructure.
- The review should not only take into account the size and complexity of the institution, but also be based on a systematic evaluation framework.
- This framework should draw upon leading practices, recent regulatory publications, industry papers, and lessons learned from analyzing other institutions during the financial crisis.
- Such an analysis is more comprehensive than the traditional reviews conducted by internal audit.



## A framework for response

### Key components of the enterprise risk management framework

The risk management framework extends the governance, processes, and analytics of managing risk into how the business is executed along the multiple dimensions of the business model.

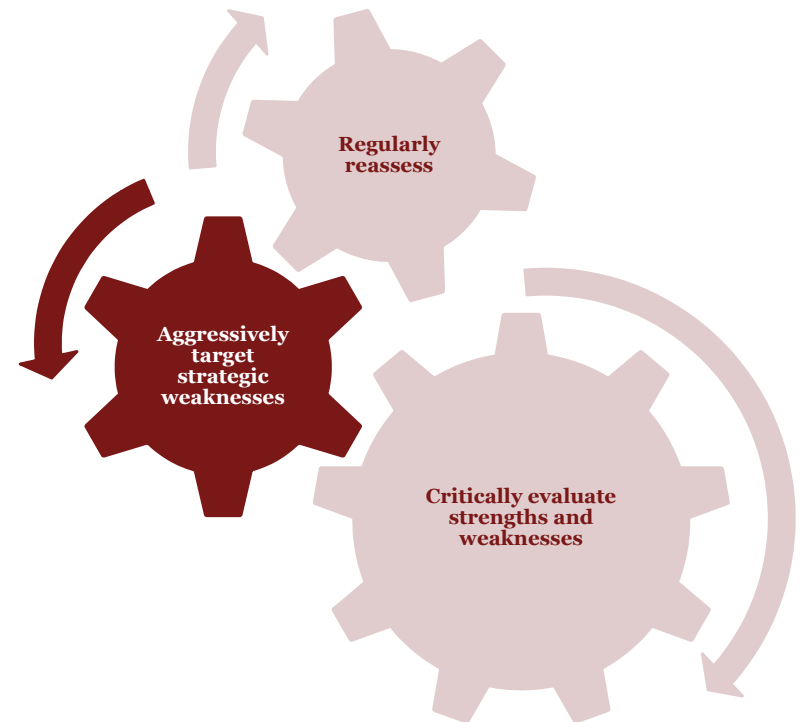


## *A framework for response*

### **Step 2—Aggressively target strategic weaknesses through a coordinated program of actionable initiatives.**

#### **Aggressively target strategic weaknesses**

- Weaknesses in risk management capabilities, whether previously known or identified through the end-to-end review, should be prioritized and targeted for remediation.
- Next, executive management and the board should have a portfolio of actionable initiatives to address these weaknesses.
- In many cases, these initiatives will require fundamental change in some areas, such as those outlined previously: implementation of risk-adjusted performance measurement tools, rebalancing of the role of the corporate risk function relative to the business, and turning stress testing into a business-as-usual management tool.
- Executing these initiatives will take time, stamina, and coordination, and brings with it its own set of risks.
- Clients who have done well in this area have dedicated program management resources to this initiative and focused on long-term benefits.

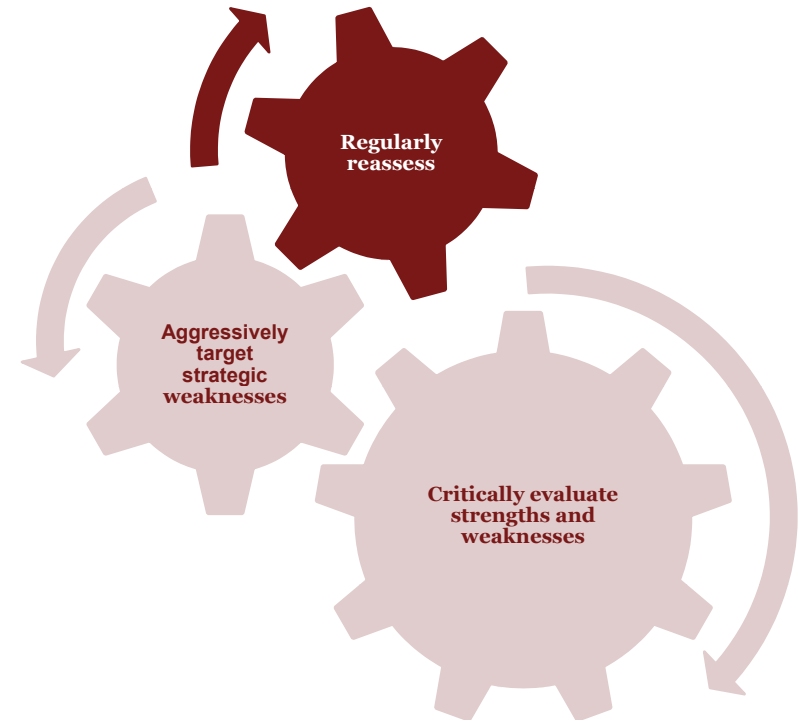


## *A framework for response*

### **Step 3—Regularly reassess the adequacy of risk management capabilities relative to the size and complexity of the institution.**

#### **Regularly reassess continued adequacy**

- Complex financial institutions do not stand still, nor should their risk management capabilities.
- Businesses that fared better during the recent financial crisis are characterized by their ability to recognize and act upon the need for continuous improvement.
- PwC recommends that institutions reassess their risk management capabilities at least annually and report the results to their board's audit or risk committee.
- Changes to the size and/or complexity of the institution should also trigger the reassessment of risk management capabilities.



## A framework for response

### Risk management leading practices—recommendations

We take into consideration findings of recent industry studies such as those published by the Seniors Supervisor Group (SSG), Institute of International Finance (IFF), and Counterparty Risk Management Policy Group (CRMPG).

Areas of focus	Subsection	Risk management leading practice recommendations
Organization and governance	Board role, committees, and composition	Boards have an essential oversight role in risk management. In attending to this duty, each board should include members who have an adequate understanding of risk management. Each board should have the means to understand the risk profile of the firm and the firm's performance against it.
Organization and governance	Board role, committees, and composition	The board should consider, depending on the characteristics of the firm, whether there should be separate audit and risk committees. It should also consider whether at least some members of the risk committee, or equivalent, should be individuals with technical financial sophistication in risk disciplines.
Organization and governance	Board role, committees, and composition	The board should review and periodically affirm the firm's risk appetite as proposed by senior management. In doing so, the board should assure itself that management has comprehensively considered the firm's risks and has applied appropriate processes and resources to manage those risks.
Organization and governance	Board role, committees, and composition	Stress testing needs to have a meaningful impact on business decisions. Senior management and boards have an important role evaluating stress-testing results and their impact on the risk profile of the firm.
Organization and governance	Organizational structure, operating model	The CRO should have a sufficient degree of autonomy, be independent of the line of business management, and have sufficient seniority and internal voice in the firm to have a meaningful impact on decisions.
Organization and governance	Organizational structure, operating model	Firms should strongly consider having the CRO report directly to the CEO and assign the CRO a seat on the management committee. The CRO should be engaged directly on a regular basis with a risk committee of the board.
Organization and governance	Firm organizational structure, operating model	Thorough, firm-wide approaches to risk management should be implemented by all organizations. Such an approach should allow the firm to identify and manage risks across business lines and portfolios. Robust communication mechanisms should be established so that the board, senior management, business lines, and control functions can effectively exchange information about risk.
Organization and governance	Organizational structure, operating model	Finance and treasury functions should operate in a coordinated and cohesive manner with the risk management function to promote checks and balances.
Organization and governance	Organizational structure, operating model	Risk management and other critical control functions should be positioned within all large integrated financial intermediaries in a way as to ensure that their actions and decisions are appropriately independent of the income-producing business units and include joint approval of key products and transactions. This would generally mean having a CRO with a direct line of responsibility to the CEO, and having the CEO and the board take a highly active role in ensuring that the culture of the organization as a whole recognizes and embraces the independence of its critical control functions. Even without the direct reporting, the CRO should have a clear line of communication to the board.

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## ***Section 4***

How PwC can help

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## *How PwC can help*

Among the key distinguishing characteristics of PwC is the depth and reach of the firm's global network of professionals.

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### **Experience**

- We have significant, relevant, and recent experience in providing actionable recommendations to leading financial institutions on improving risk management effectiveness and efficiency.
  - Our clients include leaders in capital markets and wholesale banking, retail and consumer lending, regional and national universal banking, and insurance. We have advised large commercial banks, investment banks, insurance companies, and hedge funds on risk management issues related to the recent credit crisis.
  - Key PwC audit clients in the banking and capital markets sector are considered leaders in the risk management space.
  - Our firm's 34,000 financial services professionals in more than 150 countries have a long history of leveraging lessons learned and experience across borders.
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### **Expertise**

- PwC can provide you with an in-depth and up-to-date understanding of leading practices in risk management.
  - We can work with your leadership team to effectively apply these practices to help your business develop actionable recommendations and implementation plans.
  - Our work is grounded in our practical application of Enterprise Risk Management (ERM) principles to financial institutions.
  - We leverage our experienced professionals and PwC's proprietary diagnostic tool, which draws upon the practices of leading peers, industry guidelines, regulatory expectations, as well as our lessons learned from past reviews.
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### **Value**

- We provide relevant and practical knowledge, insight, and expertise.
  - We contribute an independent perspective and act as a neutral third party that provides transparency and objectivity.
  - We encourage discussion of sensitive and critical issues and help drive timely debate, resolution, and action.
  - We bridge organizational divides and take an end-to-end view of risk management.
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## *How PwC can help*

### Core competencies related to risk management

#### **PwC core competencies in the area of risk management for financial services firms include:**

##### ***Review of risk management capabilities for executive management or the board:***

- At the diagnostic stage, PwC can work for your senior leadership team or board to conduct an independent review of your institution's risk management capabilities, drawing upon our experienced core team and using our proprietary diagnostic tool.
- Ideally, such a review should consider governance and organization, culture and incentives, risk management processes, as well as resources and infrastructure; however, the scope can be tailored to meet more targeted needs.
- In practical terms, our engagement is often managed through the corporate risk or internal audit functions, or performed under the direction of counsel.
- We provide executive management and the board with an independent assessment of the institution's capabilities and an actionable roadmap of recommended improvement opportunities.

##### ***Technical assistance with the execution and management of improvement initiatives:***

- We draw upon a deep pool of resources to assist you in the detailed planning, execution, and management of implementation initiatives.
- We have assisted clients in areas such as corporate governance, reporting to executive leadership and the board, risk-adjusted performance measures, stress testing, and risk systems.
- We have extensive experience in the management and communication challenges of large-scale or strategic transformation projects executed at all levels of the organization.
- We typically work directly with initiative owners in risk and control functions, infrastructure and support groups, and the business.

##### ***Periodic reevaluation of risk management capabilities in light of changes in the business architecture:***

- A well-designed, well-executed, and regular review program will be a key contributor to maintaining a clean bill of health, and it will provide the board with comfort that the institution's risk management capabilities remain aligned with the demands of its business architecture, even as that architecture evolves over time.
- We can work with your corporate risk function to conduct regular refresher reviews of all or parts of the risk management framework.
- We also can assist your internal audit function to set up and keep up to date an Enterprise Risk Management (ERM) audit program that leverages the detailed organizational knowledge of internal audit functions and our understanding of leading practices.

## How PwC can help

### Thorough diagnostic approach

PwC thorough diagnostic approach			
<b>Objective</b>	To develop actionable recommendations to enhance risk management practices and capabilities.		
<b>Approach</b>	<b>Baseline</b> <ul style="list-style-type: none"> <li>▪ Meetings and working sessions <ul style="list-style-type: none"> <li>- Board of directors</li> <li>- Senior management</li> <li>- Businesses</li> <li>- Risk, Finance, and key support functions</li> </ul> </li> <li>▪ Review of risk policies, reports, etc.</li> <li>▪ Business unit risk reviews</li> </ul>	<b>Structured evaluation</b> <ul style="list-style-type: none"> <li>▪ Consideration of current environment in light of: <ul style="list-style-type: none"> <li>- Industry leading practices</li> <li>- Lessons learned</li> <li>- Firm-specific challenges and opportunities</li> </ul> </li> </ul>	<b>Action recommendations</b> <ul style="list-style-type: none"> <li>▪ Preliminary recommendations</li> <li>▪ High-level implementation roadmap</li> <li>▪ Key success factors</li> </ul>
<b>Scope</b>	<p>We view risk as “federal”—not just a department. As a result, our reviews include all key areas of the firm that participate in the risk management framework. Areas of focus include:</p> <p><b>Strategy</b>—Setting and communicating business strategy and risk appetite at the firm and at line-of-business levels.</p> <p><b>Execution</b>—Effectiveness of risk governance throughout the organization.</p> <p><b>Accountability</b>—Gaps and overlaps among key individuals, groups, and departments in the end-to-end risk management framework.</p> <p><b>Reporting</b>—The firm's ability to effectively identify, represent, and communicate risk and business performance to management and the board.</p> <p><b>Oversight</b>—Role and charter of the board, board committees, and management committees.</p>		

## *How PwC can help* **Thorough diagnostic approach**

Objective: To develop, in collaboration with the client, actionable recommendations to enhance risk management practices and capabilities.



# How PwC can help

## Top-down project approach

### Top-down project approach

#### Scope of review

##### Overall business

- Governance
- Front-office management structure and oversight
- Process
- Resources



##### Business-line specific controls

- Risk management
- Finance controls
- Operations and technology

##### Evaluate design of client controls

Strategic planning

Define/redefine strategy and risk appetite

Risk profile and boundaries

Align risk profile is to risk appetite

Performance evaluation

Evaluate performance on a risk-adjusted basis

#### Key areas of focus

- Organization and governance
- Policies and procedures, including high-level design of key controls for risk, finance, operations, and technology
- Budgeting, capital allocation, and performance measurement
- New business/product approval

##### Selected businesses to test control effectiveness


- Risk measures, analytics, limits, and reports
- IPV, valuation, and model controls
- Financial controls
- Operational controls
- Technology

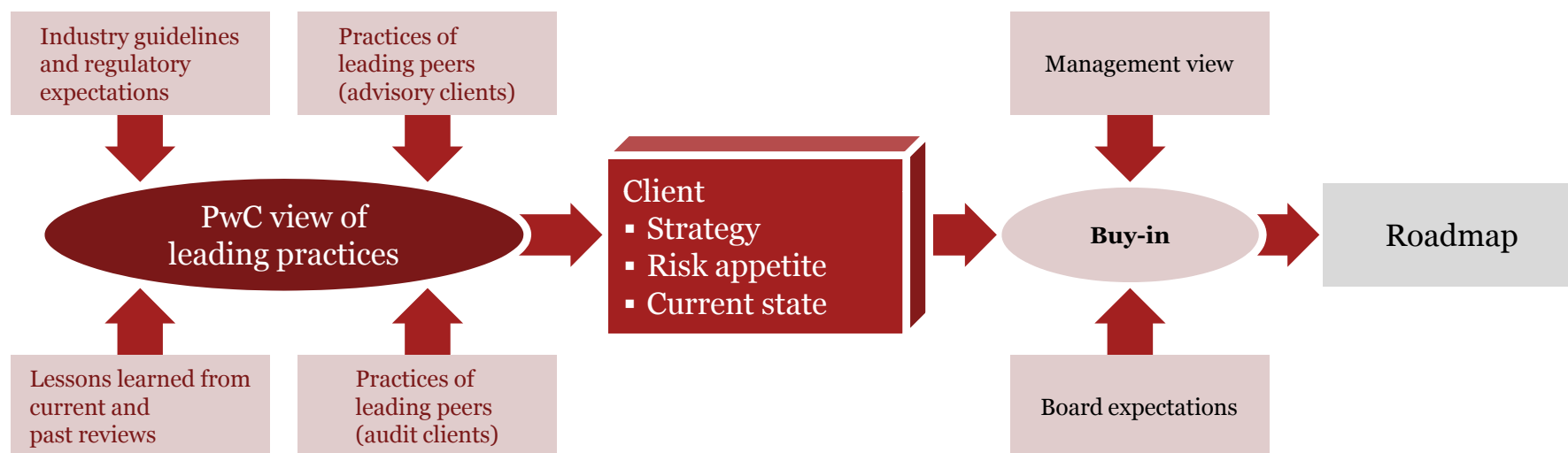
We employ a top-down approach that includes the following components:

- A high-level review of the overall framework for governance and controls over the client's platform and businesses against leading practices, including assessing adequate linkages between strategy, governance, risk profile, performance evaluation, and supporting infrastructure, as well as key controls/processes for risk management, finance, operations, and technology.
- High-level reviews of business-line and geography-based control environments, including control design, control effectiveness, and control consistency in the areas of risk management, finance, operations, and technology.

## How PwC can help

### How PwC develops a roadmap

The figure below illustrates how PwC develops roadmaps and, ultimately, recommendations. We leverage our knowledge of industry practices in the areas of governance, risk management, finance, operations, and technology controls gained from recent similar reviews. We also have access to a number of industry practices performed by our audit clients involved in capital markets activities. This unique and independent perspective provides clients with access, on an anonymous, no-attribution basis, to the approaches being pursued by a client's direct competitors and other leading institutions. Our insight on industry practices is shared with the management team to validate the applicability, relevance, and business impact of those practices.



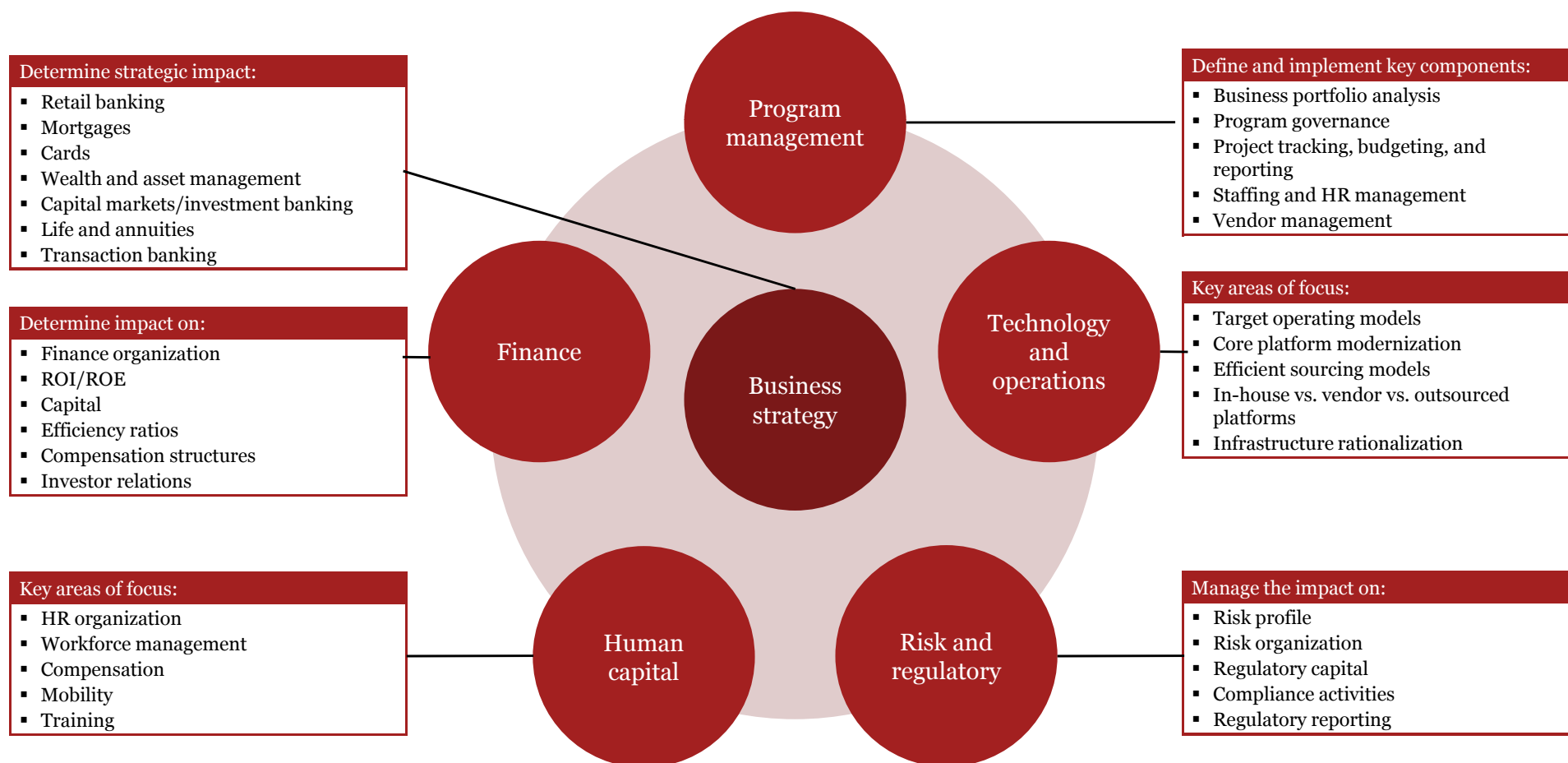
## *How PwC can help*

### Examples of deliverables

Step	Deliverables
<b>Project launch and preliminary review</b>	<ul style="list-style-type: none"><li>▪ Detailed project plan</li><li>▪ Communications and stakeholder management plan</li><li>▪ Interview list and outline of key questions</li><li>▪ Documented interviews and documented review observations</li><li>▪ Preliminary list of issues and gaps identified</li></ul>
<b>Business-line and geographic functional reviews</b>	<ul style="list-style-type: none"><li>▪ Risk profiling analysis (by business-line and geography)</li><li>▪ Draft results of selected business-line reviews summarized by business-line and by geography</li></ul>
<b>Findings and assessment</b>	<ul style="list-style-type: none"><li>▪ Draft report of high-level findings and recommendations</li><li>▪ Preliminary list of open issues</li></ul>
<b>Roadmap and next steps</b>	<ul style="list-style-type: none"><li>▪ Phase 1 final report</li><li>▪ Roadmap</li><li>▪ Next steps</li></ul>

## How PwC can help PwC's market-tested approach

A structured approach is required to model business changes and apply these changes to the business.



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## *How PwC can help*

### Our Financial Services practice

PwC is an advisor to 44 of the world's top 50 banks and 46 of the world's top 50 insurance companies, and is the leading service provider to investment managers, pension funds, and hedge funds around the world. This diverse client base provides us with unique access to develop peer insights and to understand from direct experience what works in specific client circumstances. In the United States alone, we are able to call upon our 800-person Financial Services Advisory practice and more than 3,000 financial services professionals.

#### **Accountability and cost effectiveness**

Our comprehensive approach to serving our clients provides them with a single point of accountability, which creates an efficient and effective day-to-day working arrangement and, most importantly, best positions our clients for success. We have significant experience in helping to drive complex programs and feel strongly that we can work successfully in a cost-effective manner to meet your organization's needs and objectives.

#### **Trusted brand**

We offer a truly independent view, without prejudice or favor regarding specific vendors, solutions, or approaches. We approach each situation and develop the most appropriate solutions depending upon the client's individual circumstances.

#### **Global footprint**

PwC works with our clients in a globally integrated manner. This benefits our clients in terms of consistent service delivery and quality by taking advantages of the best ideas, resources and solutions from around the world.



## How PwC can help

### PwC Advisory

We look across the entire organization—focusing on strategy, structure, people, process, and technology—to help our clients improve business processes, transform organizations, and implement technologies needed to run the business.

Client needs	Issues we help clients address
Manage risk and regulation	<ul style="list-style-type: none"> <li>▪ Building a risk resilient organization</li> <li>▪ Managing ERP investment and project execution risk</li> <li>▪ Safeguarding the currency of business; keeping sensitive data out of the wrong hands</li> <li>▪ Promoting capital project governance and accountability</li> <li>▪ Assessing and mitigating corruption risk in your global business operations</li> </ul>
Build effective organizations	<ul style="list-style-type: none"> <li>▪ Establishing effective strategic sourcing and procurement</li> <li>▪ Realizing competitive advantage through effective sales operations inventory planning</li> <li>▪ Transforming the close and consolidation process to work for you rather than against you</li> </ul>
Reduce costs	<ul style="list-style-type: none"> <li>▪ Driving efficiency through shared services</li> <li>▪ Redesigning finance to realize efficiency and competitive advantage</li> <li>▪ Taking control of cost through effective spend management and cash forecasting practices</li> </ul>
Leverage talent	<ul style="list-style-type: none"> <li>▪ Defining and implementing an effective HR organization</li> <li>▪ Rethinking pivotal talent</li> </ul>
Innovate and grow profitably	<ul style="list-style-type: none"> <li>▪ Reshaping the IT function into a source of innovation</li> <li>▪ Transforming business information to drive insight and fact-based decision making</li> <li>▪ Evaluating acquisition and divestiture strategies to position for the future</li> <li>▪ Realizing deal synergy and value</li> <li>▪ Developing sustainability programs that add value</li> </ul>



## *How PwC can help*

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## ***Section 5***

Select qualifications

## *Select qualifications*

### Assessment of risk management practices—Global investment bank

<b>Issues</b>	Amid credit market-related setbacks, the Board of Directors' Audit Committee of a global investment bank engaged PwC to assess the firms' risk management practices and provide recommendations for improvement. The review was a constructive, forward-looking effort to assist the firm in enhancing its competitive positioning, operating performance, and risk management capabilities.
<b>Approach</b>	PwC deployed a team of industry and risk management specialists in the United States and the United Kingdom to assess the firm's end-to-end risk management model against leading industry practices globally. Areas of focus included the risk organizational model, governance structure, measures, limits, analytics, reporting flows, and infrastructure. These areas were analyzed at both the corporate and major business-line level. PwC then provided the board with recommendations for improving these capabilities, and made suggestions to management regarding how to develop prioritized implementation initiatives.
<b>Benefits</b>	As a result of this work, the Board of Directors' Audit Committee, working on behalf of shareholders, gained an independent perspective on the risk management capabilities of the firm, enabling the committee to formulate a view of required improvement priorities. Management gained a prioritized roadmap of initiatives that were (1) deemed critical to improve capabilities in key areas, and (2) designed to help mitigate the risk of further setbacks.

## *Select qualifications*

### Risk management remediation project—Major global bank

<b>Issues</b>	A major global bank engaged PwC to assist with a multi-year risk management remediation project. In a related project, we were engaged to help establish a remediation program to address concerns of the UK FSA regarding the effectiveness of the client's key financial and market risk controls as well as its governance model.
<b>Approach</b>	<p>To date, PwC has assisted in the following areas:</p> <ul style="list-style-type: none"><li>▪ Provided support to the recently formed dedicated Board of Directors' Risk Committee, advising on the potential role and activities of the committee.</li><li>▪ Advised on the broader relevant aspects of risk governance, such as risk appetite and the end-to-end risk management framework for which the committee will be responsible.</li><li>▪ Provided advice on redesigning the bank's risk reporting structure to improve its clarity and effectiveness.</li><li>▪ Provided execution support to the recently initiated group-wide project to remediate risk control and the company's risk management framework.</li><li>▪ Worked with the bank's project team to help the client develop a credible remediation action plan for presentation to its lead regulator.</li><li>▪ Prepared a report detailing our understanding of the FSA's view of the principles of solid regional governance and qualitative comments on the ways in which other similar market participants address these requirements. The report included guidance and recommendations on gaps between market/leading practices and those of the organization.</li></ul>
<b>Benefits</b>	Management gained independent advice on the broader risk management and control remediation agenda, looking beyond the development of the remediation action plan to its execution.

## *Select qualifications*

### Review of risk management practices, governance, compliance, and controls—Canadian bank

<b>Issues</b>	For the capital markets division of a major Canadian bank, PwC conducted an end-to-end review of risk management practices, governance, compliance, and controls.
<b>Approach</b>	We organized workstreams to focus on overall governance and compliance, front office, middle office, back office, finance, market risk management, credit risk management, internal audit and technology. We also conducted structured interviews and focused reviews of documentation covering areas such as policies, operating procedures, process, and control documentation, exception reporting, risk reporting, P&L reporting, and risk dashboards. PwC completed a thorough review of each area across three major locations and three additional mid-size trading locations. The resulting report incorporated a detailed summary of operations and a detailed analysis of each workstream area.
<b>Benefits</b>	Management received a final report that encompassed more than 200 recommendations, based on leading practices. Each finding was fully supported by substantiating evidence, gap impact analysis, and specific recommendations for improvement. The report and recommendations are now being utilized by management as the foundation for a significant transformation program.

## *Select qualifications*

### Organizational governance improvement program—Large financial institution

<b>Issues</b>	A large financial institution engaged PwC to provide recommendations to the board on improving organizational governance. Within this institution, several business lines operated within one of the capital markets sectors facing a market crisis.
<b>Approach</b>	<p>PwC's work included a review of governance and monitoring functions including risk management, compliance, legal, internal audit, and management committees. The goal was to gain an understanding of how those groups provided oversight to the relevant business areas under review.</p> <p>We assisted in the following areas:</p> <ul style="list-style-type: none"><li>▪ Interviewed senior management across market-facing lines of business.</li><li>▪ Reviewed relevant transactions and records.</li><li>▪ Compared actual practices to established policies and procedures and benchmarked to practices at other institutions.</li></ul>
<b>Benefits</b>	<p>The board received recommendations related to:</p> <ul style="list-style-type: none"><li>▪ Mitigating reputational, litigation, and regulatory risk.</li><li>▪ Improving control structures, risk assessment, policies and procedures, and board oversight.</li></ul>

## *Select qualifications*

### Recovery and resolution planning assistance—Top-five US-based financial holding company

<b>Issues</b>	<p>As one of the five largest financial holding companies in the US, the client was required by its federal banking regulators to develop a “recovery plan” in a compressed timeframe of 12 weeks. The plan had to demonstrate how the client would accomplish the following during a hypothetical period of severe financial stress:</p> <ul style="list-style-type: none"><li>▪ Sustain core business activities.</li><li>▪ Enable the continuity of the client's critical financial services to consumers.</li><li>▪ Enable the continuity of systemically important functions to markets.</li></ul> <p>When developing the plan, the client had to consider certain risk management issues that arose from experiences associated with the bankruptcy of Lehman Brothers.</p>
<b>Approach</b>	<p>PwC worked with management to develop a detailed recovery plan. PwC assembled a global team specialized in the areas of governance, risk management, capital and liquidity contingency planning, recovery and resolution planning, business continuity planning, and the client’s key business areas, including retail/consumer banking, wholesale banking, and payments services. PwC:</p> <ul style="list-style-type: none"><li>▪ Assisted the company in developing a project management structure and project plan to guide the development of the recovery plan.</li><li>▪ Assisted in the analysis of the client’s global business activities and significant legal entities.</li><li>▪ Advised the client on how to enhance its governance process to facilitate recovery plan decision making.</li><li>▪ Advised on the establishment of a process to maintain the recovery plan on an ongoing basis.</li></ul>
<b>Benefits</b>	<p>PwC helped the company develop a detailed recovery plan that met the regulators’ initial expectations. The process enabled the client to identify enhancements in many core risk management processes and risk-related documentation. In addition, the project helped the client identify other areas for improvement and facilitated knowledge sharing within the company.</p>



## *Select qualifications*

### Large global banking institution—Asset guarantee transaction

<b>Issues</b>	A large global banking institution entered into an asset guarantee transaction to limit the amount of potential losses relating to those assets. In order to meet the terms of the guarantee agreement, the institution needed to demonstrate adequate governance and risk management over assets covered by the guarantee.
<b>Approach</b>	<p>PwC helped design and execute a program to assess the banking institution's management of risks relating to assets covered by the guarantee transaction:</p> <ul style="list-style-type: none"><li>▪ Reviewed the institution's governance and infrastructure plans for the guarantee agreement and provided recommendations that incorporated leading practices observed at other major financial institutions.</li><li>▪ Identified and documented key processes and controls for management and valuation of multiple asset classes covered under the agreement. Control gaps were identified and communicated to management. Provided recommendations incorporating leading practices observed at other major financial institutions.</li><li>▪ Performed testing of the institution's asset identification process and executed procedures to help validate accuracy of underlying systems.</li><li>▪ Helped assess procedures for ensuring compliance with asset eligibility criteria and performed detailed testing across multiple asset classes to validate the financial institution's confirmation process and results. Provided control recommendations to help facilitate ongoing compliance with asset eligibility requirements.</li></ul>
<b>Benefits</b>	The banking institution was able to demonstrate that adequate governance and risk management controls were in place to comply with the terms of the asset guarantee transaction. The asset guarantee transaction enabled the banking institution to limit exposure to potential losses in asset valuations.

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