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Orchestrating risk-adjusted performance management

Identify and address risk events better and faster

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Orchestrating risk-adjusted performance management

Identify and address risk events better and faster

By Steve Rogers, Spencer Lin and Robert Torok

There's no denying the prevalence of new opportunities and risks in today's global environment. Yet, most enterprises are failing to put risk into the context of overall performance. By treating risk and performance management (sometimes referred to as corporate, enterprise or business performance management) as separate disciplines, they miss opportunities to limit surprises and/or capitalize on the upside of risk. CFOs are well-positioned to encourage a more holistic and cross-silo view of risk. Integrating risk into planning, budgeting, reporting and forecasting can lead to better decisions through risk-adjusted plans and budgets.

In the IBM CFO Study 2008 of over 1,200 CFOs and senior Finance professionals, two out of three (62 percent) enterprises with revenues over US$5 billion encountered material risk events in the last three years.[1] Of those, nearly half (42 percent) admitted to not being well prepared for it. The situation at smaller enterprises was better, but not by much. Of enterprises with revenues under US$5 billion, 46 percent experienced a major risk event and 39 percent were not well prepared.

Risk comes in many flavors besides financial. The IBM CFO Study 2008 found that 87 percent of risk types were non-financial in nature, that is, *strategic, operational, geopolitical, environmental / health and legal / compliance risks.* Of the risk event types, the most frequently mentioned were s*trategic risks* involving decisions about markets, customers, products, M&A activity and other top-line business decisions. *Geopolitical* and *environmental / health* risks were the next most prevalent.

However, for publicly traded companies, it seems all risks come home to roost in the stock price. Therefore, virtually all risks ultimately have a financial impact. Another study found roughly the same magnitude of non-financial risks (85 percent) led to companies' market capitalization decline of 30 percent or greater relative to their peer group.[2]

Astoundingly, most organizations don't plan for risk. Despite the preponderance of risks, only about half (52 percent) of all surveyed acknowledge having any sort of *formalized program to manage risk*. Fewer categorize their organization as being *effective at risk management* (45 percent). Moreover, only 29 percent of enterprises conduct *risk-adjusted forecasting and planning*.

While most enterprises are not in the business to manage risks but instead to drive performance, does effective risk management correlate with better enterprise performance? In a word, yes. The IBM CFO Study 2008 found that increased effectiveness at supporting / managing / mitigating enterprise risk characterizes financial outperformers.[3]

CFOs are uniquely positioned to determine and guide the overall enterprise risk profile – largely due to the CFO's influential role both at the strategic and tactical levels, expertise in the organization's operations, support of data and measurement programs, and ultimate accountability to shareholders (and regulators).

Successful enterprises are starting to take a broader view of risks and leveraging performance management tools to manage risk. The IBM CFO Study 2008 findings suggest two types of CFO actions to help businesses understand the trade-offs among revenue, profit and risk:

Develop a more holistic view of risk. Facing a wide range of risks requires enterprises to broaden their risk apertures and focus on those risks with the greatest potential impact and occurrence.

Integrate risk into planning, budgeting, reporting, and forecasting. Factoring risk into four main areas of performance management positions the enterprise to better limit surprises and capitalize on upside opportunities.

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Approaching risks today

Robust risk management improves an enterprise's ability to take calculated and fully-informed risks by analyzing the enterprise-level implications of decisions. Meanwhile, risk management has evolved to include taking deliberate actions to increase the odds of good outcomes and reduce the likelihood of bad outcomes.

Managing risk, especially an extended risk portfolio that includes factors beyond Finance, compliance, and accounting procedures, may at first seem to be beyond the CFO's scope. However, the IBM CFO Study 2008 suggests that enterprises are looking to the CFO for leadership in this area. Sixty-one percent of respondents view the CFO as the owner of enterprise risk management. That said, it is clear that the risk discipline is a "team sport" and collaboration across the enterprise is necessary.

In publicly traded companies, CFOs are the only C-suite members called upon quarterly to provide an aggregate picture of the enterprise. As an increasing number of jurisdictions require certification of financial statements with the CFO's signature, they are also personally vested in knowing where risk resides and if it is being properly managed. Moreover, CFOs understand that reward is intrinsically tied to risk but are also generally led by a conservative nature.

The simple reality is that risk is a real part of the performance of an enterprise, regardless whether it is planned for, managed formally or wholesale ignored. Presently, enterprises face a wider range of risks than they actively manage. Moreover, traditional performance management falls short of explicitly identifying and tracking risk.

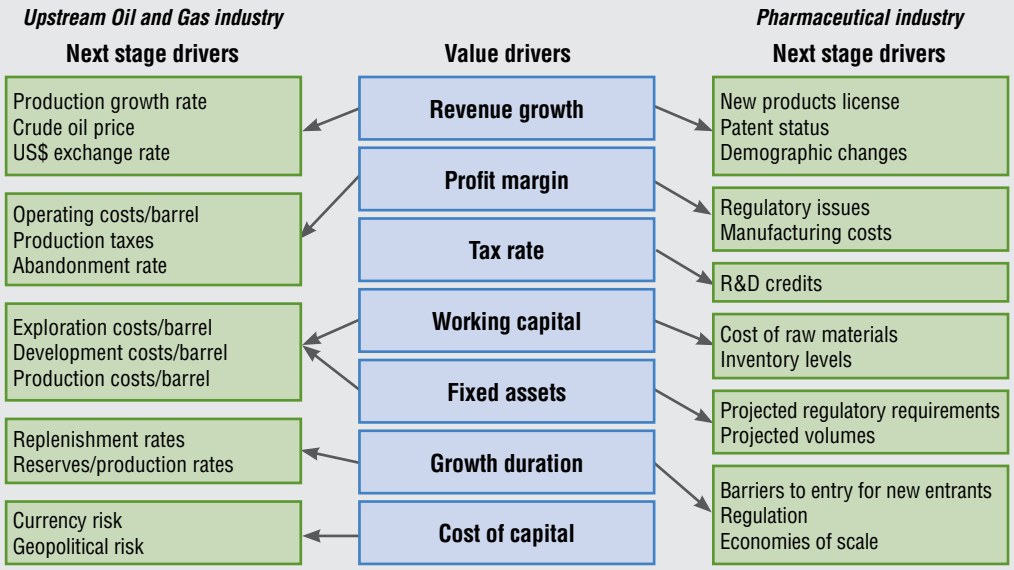
Enterprises face a wide range of risks

Since upwards of 85 percent of risks are non-financial, effective risk management means going beyond the obvious financial risks. In the IBM 2008 CFO Study, enterprises that self-reported being *highly effective at risk management* are three times more likely to have Finance fully contributing to management of reputational risk, supply chain disruptions, market risk and/or episodic / catastrophic risk. They are also more likely to fully contribute to managing market risk.

While a focus on a wider range of risks is a positive development, enterprises should resist the urge to look at all potential risks no matter how small. Without a filter, one could foresee an endless list of potential risks. Instead, as with performance management, impact on the enterprise's value drivers can help scope the materiality of potential risks. Naturally, the value drivers will differ by industry just as potential risks will vary (see Figure 1).

Enterprises face a wide range of risks, 85 percent of which are non-financial in nature – they need to be able to filter out risks that are relatively inconsequential or seemingly unlikely, as well as the ability to avoid or mitigate the potential compound effect of individual risks.

FIGURE 1.
Example value drivers for the Oil and Gas and Pharmaceutical industries.



Source: IBM Global Business Services.

Risk begetting risk: The snowball effect

Imagine the impact to a Canadian-based bottled water manufacturer if a series of non-traditional and traditional risk events occurred, to devastating compound effect (a sharp share price decline, see Figure 2).

Most organizations could – and likely would – consider the risk implications of any of these risks individually. For example, foreign exchange risks would be managed through formal hedging programs and/or matching of some expenses against revenue flows, while

FIGURE 2.
Example of compounding effect of risks at a major food manufacturer.

Event	Effect
Foreign currency strengthens…	Since bulk of revenue is in U.S. dollars while reported results are in Canadian dollars, the stronger foreign currency resulted in a lower revenue figure on the income statement, while costs remained relatively flat
Canadian government restricts water exports…	The restricted water exports damage the supply of raw materials and increase the cost to the organization while sales opportunities are lost, which in turn leads to pricing pressures and volume difficulties
Weak results cause goodwill write-off…	Due to weaker results, goodwill (for accounting purposes) no longer has economic value and is therefore written off
Debt covenants are violated…	This, in turn, affects the debt-equity ratio and causes the violation of certain debt covenants
Dividends are suspended…	The violation of debt covenants requires a suspension of dividends

Source: IBM Institute for Business Value analysis.

the risk of water export restrictions would be managed by identifying multiple sources of water, especially U.S.-based sources.

Very few enterprises consider the compound effect of two major economic risks (for example, currency and export restrictions) and the possible effect on results and ultimately, stock price. For example, to address the risks together, this company could have established financing structures that would account for simultaneous changes in both currency and physical goods supply, or by arranging a U.S. source of supply.

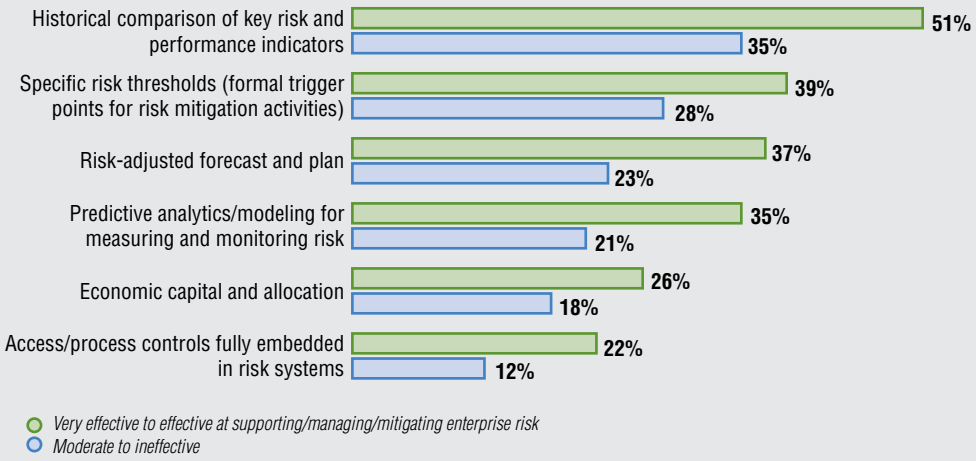
Understanding how each risk might interact with others allows decisions that can remedy (or prevent) the possible effects of an active and complex risk portfolio.

Extending performance management

Traditionally however, performance management does not explicitly track risk, whether only through a qualitative description of risks or performing further analysis to measure the likelihood and consequence of each risk, the resiliency or recovery capability of the organization to specific risks, or the interaction of related and/or seemingly unrelated events. Rather, the targets within performance management models usually reflect the net / aggregate effect, that is, the expected loss of all known risks that may arise, but not the possible impacts of the unexpected.[4]

In the IBM 2008 CFO Study, enterprises that self-reported being effective in risk management were nearly four times more likely to be *effective at measuring / monitoring business performance* (42 percent versus 11 percent for *moderate to ineffective*). The same organizations leverage performance management tools to manage risk (see Figure 3). Across the board, it is clear that these organizations engage in more formal risk management activities than *less effective* organizations, including the use of monitoring, reporting, historical

FIGURE 3.
Leveraging performance management tools to manage risk.



N = 1,229
Note: Executives were asked: Which of the following risk management activities does your company conduct enterprisewide? (Select all that apply).
Source: IBM Global Business Services, The Global CFO Study 2008.

The CFO's unique perspective can enable enterprises to mesh the complementary disciplines of risk management and performance management – aside from frequently sharing data sources, both disciplines aim to proactively guide organizations toward effective performance and achievement of key metrics.

comparisons, evaluation tools, predictive analytics, risk-adjusted forecasts and process controls.

While few currently consider risk as part of economic evaluations, study participants expect nearly half (49 percent) will employ it in the next three years. Similarly, the use of risk-adjusted forecasting and planning is expected to grow from 23 percent to 38 percent within the same time frame. This suggests that risk will increasingly be a part of the assessment and decision-making process.

"The business units own the actual risks. Finance helps them manage the risks."

– CFO, Major bank based in Europe[5]

Placing risk in the context of performance

Since risks are not likely to disappear of their own accord, enterprises should begin to move toward risk-adjusted performance management. Performance management's fact-driven processes to measuring performance, gaining insight on operations, and forming the basis for critical, forward-looking decisions are good complements to risk management.

Both performance and risk management seek to create the proactive capability to guide an organization, influencing decision making to steer the organization toward effective performance and the achievement of key metrics. In this way, performance and risk management are two sides of the same coin, both with the same objective, but one dealing with the known universe, tracking past events, and the other dealing with uncertainty.

The discipline required for performance management is well suited to risk management (see Figure 4). On the operational side, performance and risk management share many core functional components, such as the role of data collection, analysis tools and dashboards. In most enterprises, performance and risk management even share data sources.

FIGURE 4.
Aligning risk and performance management characteristics.

	Risk management characteristic	Performance management characteristic	Expected benefits
Maturity	Emerging approaches seek more formal and comprehensive structure within the enterprise's operations	Established and growing formalized discipline with specific, dedicated resources, procedures and technology	Integrating disciplines brings formal, programmatic qualities to risk management while improving the comprehensiveness of performance management
Use of data and metrics	Seeking a greater data and metrics-focused approach to non-traditional and/or non-financial risks	A data and metrics-focused approach	Incorporating risk into performance management's fact-driven approach improves the robustness of both disciplines
Timing and impact	Often a post-mortem process, where risk events are understood and managed after they occur	External and internal historical and cross-enterprise analyses are aimed at forecasting future events	Data collection and analyses of both disciplines can enhance the accuracy of forecasts and predictive analytics
Output	Creating intelligent, informed decision criteria	Driving intelligent, informed business decisions	Providing a greater foundation for intelligent, informed decisions

Source: IBM Institute for Business Value.

"Improving risk management within finance is important, but integrating it with operational performance is critical."

– CFO, Healthcare payer based in North America[6]

CFOs are in an ideal position to help place risk in the context of performance. How does a CFO get started? The first step requires developing a more holistic view of the enterprise's risk profile, identifying material risks, both financial and non-financial, that may have been previously overlooked.

The second step requires integrating risks into the performance management processes of planning, budgeting, reporting and forecasting. By driving risk management in a formal and purposeful way, enterprises are more likely to identify potential risks faster, respond to them quicker and prepare for them better.

Develop a more holistic view of risk

Facing a wide range of risks, enterprises must broaden their risk apertures to focus on risks with the greatest potential impact and occurrence. To operate with a more holistic view of risk, enterprises will need to:

- Identify and properly define the most important risks
- Assess internal and external risks across silos.

Identify and define the most important risks

Within the context of its industry environment, each enterprise must concentrate on the major risks with the greatest impact and likelihood of occurrence. Central focus should be on threats to the enterprise's value drivers, such as drivers of revenues, margin advantage(s) and returns on invested capital, and how they might impinge on improved sources of growth, operational improvements and desired business model changes. After taking account of current controls and management actions, the enterprise can then gauge if the exposure is at an acceptable level; if not, it can explore additional actions.

Enterprises also must take care to properly define their risks. For example, a hurricane is not a business risk for a railroad company. Instead, the risk is a service disruption brought on by the hurricane. Therefore, emphasis on identifying real business risks can bring about contingency planning that works through the root causes (treating some of them agnostically) to better define risk management actions. The goal is to keep a line of sight from actions to root causes to the real business risks.

Assess internal and external risks across silos

Additionally, enterprises tend to focus on external risks – such as capital availability, competitors, shifting customer needs, economic downturns, legal or regulatory actions, shareholder relationships, disruptive technologies and political unrest – but it may be helpful to examine risks both outside-in and inside-out. Internal risks, broadly speaking, are strategic and operational, such as process, management information, human capital, integrity and technology, as well as financial.

Moreover, it helps to consider alternative views of looking at risk, such as a value driver-based approach. For example, a company recently

decided to look at its supply chain processes in terms of the revenue at risk versus solely in terms of cost basis. The company's analysis revealed a dependency on a sole second-tier supplier that made an inexpensive part needed in nearly 80 percent of its products. To eliminate that risk, the company engaged product designers to remove that particular component from the final products.

Successful execution depends on collaboration across the enterprise dimensions (for example, countries, business units and functions) to avoid silos of risks and to better understand their risk interactions. The same cross-enterprise collaboration is needed for successful performance. Risk management is about orchestration from the Board level to middle management. The CFO is uniquely placed to lead that dialogue.

Integrate risk into planning, budgeting, reporting and forecasting

Governance and a management system are important to managing risk. At any point in time, three activities should be going on:

- Assessing a set of risks
- Implementing risk management plans from prior risk assessments
- Monitoring the effectiveness of risk management plans already implemented.

While it is important to verify that planned actions are implemented, it is also important to gauge their effectiveness in reducing the likelihood and/or impact of a given risk. Since changing external factors may influence risk, it is important not to be lulled into complacency that, once addressed, a risk need not be re-evaluated.

CFOs can exploit their knowledge of planning, budgeting, reporting and forecasting to help set the risk management strategy. Key risk indicators (KRIs) can be presented alongside key performance indicators (KPIs) to monitor their material impact on value drivers. Therefore, factoring risk into the four main areas of performance management presents an opportunity (see Figure 5).

Enhancing strategic and operational planning

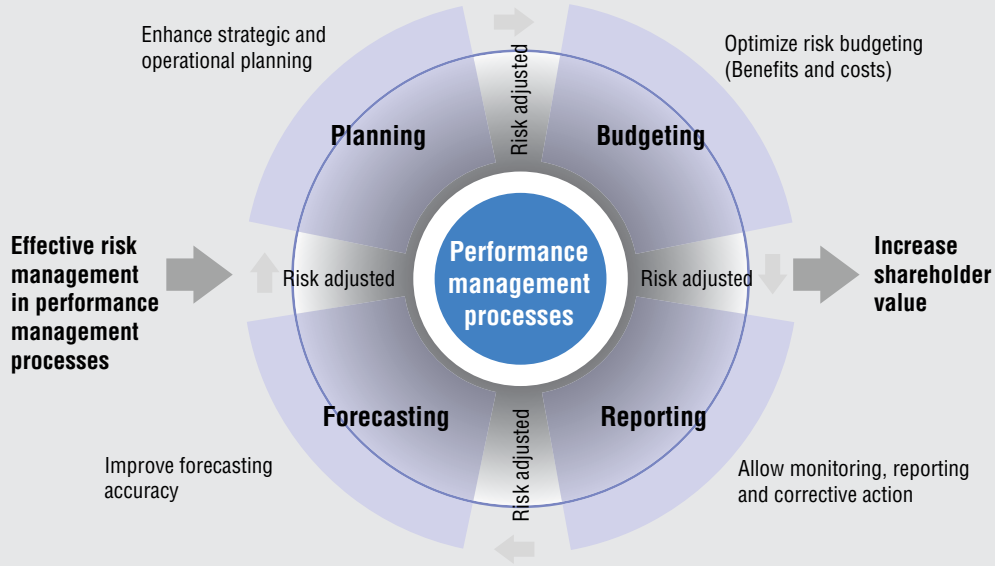
While performance and risk management operate in a continuous cycle, the logical starting point is planning. As our earlier Figure 3 suggests, e*ffective risk management* organizations are more likely to employ risk-adjusted planning. These same organizations are three times more likely to report having more accurate business plans (31 percent versus 10 percent) and to capitalize on enhanced risk/reward opportunities (33 percent versus 11 percent).

Enterprises looking to incorporate risk into planning should consider the following actions:

- Prioritize risks based on greatest impact and likelihood of occurrence.
- Create a line of sight working backward from the identified risks and their root causes.
- Correlate risks within and across silos.
- Adjust for the compounding effects of seemingly independent risk events.
- Plan for different scenarios.

To integrate risk into planning, budgeting, reporting and forecasting will require the monitoring of key risk indicators (KRIs) along with the measurement of key performance indicators (KPIs).

FIGURE 5.
Integrating risk into performance management processes of planning, budgeting, reporting and forecasting.



Source: IBM Institute for Business Value.

Organizations need to ask "what if" a variety of possible events or conditions arise.[7] The organization must then play out its initial risk response and assess whether that action has unintended or other negative consequences, and whether those consequences are severe enough to cause a re-assessment of the initial risk response. For example, a common response to decline in demand for goods or services is to reduce direct labor costs; but that action might – as was the case for a major utility – result in the loss of substantial corporate knowledge and experience, to the extent of endangering future operations. Now that consequence, or risk, must be "subtracted" from the expected cost savings, and so on.

The identification of risk scenarios enables the organization to develop risk response plans applicable to many possible events, not just the specific scenario developed. For example, a toy company might create a scenario whereby a product is found to have dangerous parts for young children; the response to this scenario – say, advertising the dangers and promoting a product recall – might be equally applicable in the case of defective products, products with dangerous chemicals or products promoting inappropriate / dangerous behavior.

The output of risk-adjusted planning is a set of strategic and/or operational actions with risks explicitly identified, and reflecting the expected and possible economic impacts. This output has implications for risk-adjusted budgeting – detailed budgets must reflect the impact of possible risk events, associated mitigation actions and the follow-on "ripple" effects.

Optimizing budgeting (addressing risk and benefits)

The budgeting process takes each of the outcomes or actions from the planning process and aligns revenues and expenses against them. To create risk-adjusted budgets, the range of possible revenues and costs of each action should be incorporated into the budget at the appropriate organizational level.

Enterprises should consider the following factors when looking to risk-adjust the budgeting process:

- *Adapt budgets*: For potential high-impact risk events, enterprises need to identify probability, consequence and resiliency, and adjust budgets as knowledge changes over time, factoring in potential risk mitigation costs.
- *Balance central versus local responsibility:* Through budgeting, there is a balance between central and local / unit level responsibility when incorporating risks. Typically, the decision to mitigate and the extent thereof are central decisions, while risk identification and the execution of mitigation plans is local.
- *Incorporate risk in business cases:* Business cases routinely present the financial results of a plan, rarely acknowledging risks that might impair the success of the initiative. Just as operating and capital budgets should reflect the impact of risks, so should business cases. A useful example was presented in a 2006 Management Accounting Guideline, published jointly by the AICPA and CMA Canada.[8]

A risk-adjusted budget is one that responds to changing circumstances, providing the financial capability to react to events in a planned, proactive manner. Risk event response and consequence are thus not budget variances to be explained for two years running (for example, they should not be used to explain why this period is initially worse than the prior one and later, why the next period is better than the one prior), but rather built into expected results at a corporate level.

Enhancing monitoring, reporting and corrective action

Risk-adjusted reporting becomes the sensor and alarm for risk events. The better that reporting can help sense risk and alert appropriate managers within the organization, the faster the organization can respond to and manage the risk event to reduce its negative effects.

Currently, only 50 percent of enterprises' management reporting systems (such as heat maps, dashboards, scorecards and the like) routinely include risk factors. Only 26 percent of organizations have formal performance monitoring that incorporates risk indicators. Enterprises seeking to risk-adjust their reporting activities should consider the following actions:

- Incorporate risk into KPIs to identify problems / near misses, make quick corrective decisions and base forward-looking actions.
- Develop, implement and incorporate new KPIs for risk – KRIs – into the "performance and risk dashboard."

- Perform KRI trend analyses to enable identification of process deficiencies or other trends before they reach critical levels.
- Monitor KRIs, in turn, to help gauge the effectiveness of mitigation strategies to reduce the likelihood and/or impact of a given risk.

"In the future, CFOs will be acting as initial detectors of risk within the organization. They will be positive agents, creating solutions and proposing different scenarios. The role will become increasingly important to risk management."
– CFO, Global industrial company based in Europe[9]

Improving forecast accuracy

Adjusting forecasts for risk may be the most useful, but most difficult, aspect of an effective risk management program. This may explain why, on average, only 29 percent of enterprises do risk-adjusted forecasting. Yet, 45 percent of self-reported *highly effective risk management* organizations employ it. Moreover, analysis suggests the use of predictive analytics for risk management is highly correlated with outperformers.

Enterprises seeking to adjust forecasts for risks should consider the following actions:

- Create *rolling risk forecasts* for those risks whose probability, consequence, and/or resiliency change over time.
- Shift the foundation of *risk and operating forecasts* from "gut feel" or heuristics to the iterative use of predictive analytics to refine forecasts.
- Develop *risk-adjusted forecasts* for the true drivers of your business such as revenues, volumes, profits.

The output of risk-adjusted forecasts should be *fewer surprises*. Forecast output becomes a key input into planning and can help to revise the overall risk mitigation strategy.

Pinpointing capabilities

It's true that many enterprises feel uncertain about how to approach risk management in today's fast-paced globalizing marketplace. Even though the risks are accompanied by new windows of opportunity, you'll want to take stock of the current state before determining which capabilities deserve highest priority in your situation. Answering the following questions can help you begin this self-assessment.

Developing a more holistic view of risk

- What risks most threaten the drivers of your business?
- How will your enterprise determine if exposure is at an acceptable level? What actions are required to bring exposure to acceptable levels?
- How can your enterprise link contingency planning and risk management actions to the root causes of its major risk(s)?
- What are the impacts to your enterprise of internal and external threats across business units, functions and geographies?
- How will your enterprise develop a clear understanding of the enterprise risk profile and a stance on major risks?
- Has your enterprise begun to look at risks from a "revenue or profit at risk" perspective?

Integrating risk into planning, budgeting, reporting and forecasting

- How has your enterprise prioritized risks based on greatest impact and likelihood of occurrence? Have you performed a root cause analysis of the most important risks?
- How does your enterprise correlate risks within and across silos? What are the potential compounding effects of risks?
- What potential risk scenarios has your enterprise developed?
- How has your enterprise adapted budgets to reflect potential risks? Which of your enterprise's risk responsibilities should reside at corporate level versus business unit level?
- How do your enterprise's business cases adjust internal rate of return for risk?
- What benefits might you see from incorporating key risk indicators into your enterprise's management reporting?
- If your enterprise tracks risk, how has it improved your resiliency?
- How does your enterprise currently link risks to its operating forecasts?

The CFO as maestro

The risks enterprises face have the possibility to destroy or create value, and the successful mitigation of risk often defines who survives and who leads in the marketplace. We see a few recurring themes: risk is often defined too narrowly, managed too informally and too much is left to chance.

CFOs are uniquely qualified to help orchestrate risk-adjusted performance management. A highly effective way to embed risk management into the enterprise is to use the same techniques and disciplines used to measure performance. The first step requires developing a more holistic view of the enterprise's risk profile and the second consists of integrating risks into the performance management processes of planning, budgeting, reporting and forecasting.

Enterprises seeking to place risk in context with performance have a lot to gain. Those that do so quickly and successfully should find themselves better able to navigate today's challenges and recover quickly from the inevitable events they will face.

To learn more about this IBM Institute for Business Value study, please contact us at *ibv@us.ibm.com*. For a full catalog of our research, visit:

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About IBM Global Business Services

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[2] Corporate Executive Board. "Organizing for Risk Management: Key Decisions Guiding Risk Management Activities." 2005.

[3] In the IBM CFO Study 2008, the term *outperformer* refers to the study participant that scored at least one-half standard deviation above the mean for the selected financial metric. Therefore, the term outperformers refers to the study participants that are in the top 50 percent based on this competitive comparison, whereas underperformers are those that fall in the bottom 50 percent. The IBM CFO Study 2008 looked at a subset of the sample, where publicly reported financial information was available. By taking a five-year view, the IBM CFO Study 2008 was able to identify which companies outperformed and underperformed the average compound annual growth rate (CAGR) for revenue and stock price appreciation across the sample. For this subset, stock price growth rates were normalized by analyzing the difference between the company stock price and the relevant industry index.

[4] The sales forecast or budget reflects the "normal" loss and gain of customers, the "expected" product mix, the "normal" flow of goods through the supply chain, and so on. But what would happen if a supplier simply failed, such as due to a natural or self-inflicted disaster? Since business performance management (BPM) does not explicitly consider this, the ramifications – should the event occur – come as a shock to the organization.

[5] Rogers, Stephen, Stephen Lukens, Spencer Lin and Edwina Jon. "Balancing risk and performance with an Integrated Finance Organization: The Global CFO Study 2008. IBM Corporation. October 2007. http://www.ibm.com/gbs/cfostudy.

[6] Ibid.

[7] In the context of risk management, scenario planning does not suggest that one needs to identify all of the risks or their root causes; what it does suggest is that a broad definition of the risk be developed which captures multiple possible causes. For example, a risk for a given business unit could be "raw material supply chain failure," but the cause of that failure might be irrelevant for the purposes of developing mitigating action.

[8] Epstein, Marc J. and Tamara Bekefi. "Integrating Social and Political Risk into Management Decision Making." The American Institute of Certified Public Accountants and The Society of Management Accountants of Canada. 2006: 25-27.

[9] Rogers, Stephen, Stephen Lukens, Spencer Lin and Edwina Jon. "Balancing risk and performance with an Integrated Finance Organization: The Global CFO Study 2008. IBM Corporation. October 2007. http://www.ibm.com/gbs/cfostudy.

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