CHARTERED PROFESSIONAL ACCOUNTANTS CANADA

A Framework for Board Oversight of Enterprise Risk

Chartered Professional Accountants Canada

Preface

The Corporate Oversight and Governance Board (COGB) of the Chartered Professional Accountants of Canada (CPA Canada) has commissioned this framework to assist boards of directors to fulfill their responsibility for the oversight of risk.

Our discussion of risk oversight issues features a nine-step process to assist directors to:

- better identify and address critical risks
- understand how risks are interconnected
- recognize the potential compounding of risks should unfavourable events occur at the same time

While boards should not be involved in day-to-day risk management, recent events highlight the need for more proactive and direct engagement over and above traditional oversight of risk management processes.

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Introduction

Board oversight of enterprise risk continues to be a topical issue for board deliberation and for most boards, it remains as one of the top priorities.

What is the role of the board in enterprise risk management? Traditional governance models support the notion that boards cannot and should not be involved in day-to-day risk management. Rather, in their risk oversight role, directors should be able to satisfy themselves that effective risk management processes are in place and functioning effectively. The risk management system should allow management to bring to the board's attention the company's material risks and assist the board to understand and evaluate how these risks interrelate, how they may impact the enterprise, and how these risks are being managed. To meaningfully assess those risks, directors require experience, training and knowledge of the business.

In our view, boards must take a more active and direct role in risk assessment well beyond traditional oversight of typical risk management processes. In particular, risks associated with leadership and strategy are prime examples of areas where a board must assert itself more directly since management cannot be expected to objectively assess from a risk perspective its own performance, capabilities and strategy. Unlike other embedded responsibilities of boards and committees, such as the oversight of financial reporting and disclosure, there are no standards for risk oversight and few, if any, authoritative sources on which boards may rely.

The number of well publicized distressed situations or even bankruptcies each year — both unforeseen and anticipated - shows that over-reliance on or absence of effective, management-led enterprise risk processes and models can have unexpected or even catastrophic results. These high-profile disasters are often cited as extreme examples of failure of enterprise risk management systems and board oversight.

The reality is that it is unlikely for most enterprises to encounter significant distress. So why should management and boards focus attention on risk? Because the consequences of ineffective risk management and related board oversight are underperformance and destruction of asset or shareholder and stakeholder value. It is in this context that this document is written.

Effective risk management and board oversight should not be premised on risk avoidance. Every corporation is exposed to and takes risks daily. What is important is to manage the balance of risk and reward and to identify and minimize the consequences of a negative occurrence to the extent possible.

This document is not intended to advise directors on how to create an enterprise risk management system or a technical management-led risk process; these are more suited to development by management. Our intent is to provide a practical approach to risk oversight designed specifically for boards of directors, including a framework, methodology and tool sets.

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1. Oversight

What is the board's role in the context of risk oversight? Typically, boards of directors are tasked with providing oversight on identifying, assessing and to the extent possible mitigating enterprise risk. It is the general view that boards are expected to provide an oversight role of the risk management systems and processes as well as continuously reviewing both the planning and outcomes of such processes.

This implies that oversight is somewhat passive and involves significant reliance on management. But there are valid circumstances in which boards must take a leadership role in assessing risk. For example, a primary risk might be an ill-advised strategy or a failure to execute strategy. How does management critically evaluate the very strategy it developed or objectively assess its ability to execute? Similarly, the quality and effectiveness of anenterprise's leadership, including the chief executive officer can pose a major risk. How is it possible for management to assess itself?

Questions for directors to ask

1. Does the board clearly understand its oversight mandate and role and how it contrasts with management?
2. Is the board sufficiently active in fulfilling this part of its mandate?
3. Do the directors share a common, practical understanding of their responsibility for risk oversight? Is this view the same as that of the CEO and executive team?

2. Directors' individual knowledge and understanding of risk

If directors were asked whether they understand business risk, we believe most would say they do. Yet time after time, enterprises find themselves in distressed situations and even bankruptcy, which invariably prompts the question, "Where were the directors?"

Questions for directors to ask

1. Do board members have an adequate, up-to-date appreciation of the nature, types and sources of risks faced by the organization?

2. Does the board truly understand the interdependencies and how events or conditions occurring simultaneously can cause major value destruction?

3. Are seemingly unthinkable business risks ignored because their occurrence is thought to be unlikely?

4. Does the board have the necessary blend of business and industry knowledge and experience to assess risk?

3. Board's primary objectives for enterprise risk management

By conventional thinking, the primary underlying objectives of board oversight of risk are to preserve the viability of the enterprise and avoid shareholder value destruction. In reality, the likelihood of total failure for most businesses is remote.

Questions for directors to ask

1. Beyond the obvious objective of preserving the corporation's viability, do board members understand that the most likely outcome of ineffective risk management is underperformance and the destruction of shareholder value?

2. Conversely, does the board recognize that a key objective of a robust enterprise risk oversight process should be to enhance performance and improve shareholder value?

4. Determining a corporation's tolerance and appetite for risk

Whether advertently or not, every corporation faces risk constantly. In fact, an ongoing management responsibility is evaluating and adequately balancing risk with reward.

Questions for directors to ask

1. Does the board periodically consider and quantify the corporation's capability to take on and manage risk?

2. Does the board understand the differences between risk tolerance and risk appetite?

3. Does the board consciously assess risk and reward when considering major strategic or tactical initiatives?

4. Does the board have a framework within which to make meaningful judgments around risk tolerance and risk appetite?

5. Board organization and structure for addressing risk

Various models of board organization are currently used for the oversight of risk. In many cases, risk assessment is delegated to one or more board committees. In other cases, the board as a whole take on the responsibility. In some cases, boards simply fail to assign this responsibility at all.

Questions for directors to ask

1. Is the assignment of risk oversight clearly mandated?

2. Are the chair of the board and CEO committed to a dynamic and robust risk management environment?

3. If risk oversight is delegated to one or more committees, are the committees capable of overseeing risk in its broadest form?

4. Is sufficient time set aside to carry out this responsibility?

5. Do the board's agendas promote integration of risk issues with other agenda items such as strategy, organization and finance?

6. Management approach to enterprise risk

Management approach to risk can vary widely. At one extreme are highly structured enterprise risk management processes with dedicated organizational resources. At the other extreme are more unsophisticated and passive approaches that address risk as an afterthought, usually regarding major expenditures, or through a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis.

Questions for directors to ask

1. Does management have a robust framework and comprehension process to assess risk? Does the board accept management's assessment of risk too readily even when it appears superficial?

2. Are risk management processes or systems well designed such that risk is managed holistically and not in silos?

3. Does the enterprise have adequate systems and processes in place to monitor the effectiveness of risk management?

4. Do the board and management learn from and act on instances where risk management strategies and systems have been ineffective?

5. Can management adequately and objectively assess risk when it is the architect of the risk management framework?

6. Does management have the openness and humility to recognize its shortcomings and the courage to recognize flawed strategy and change course?

7. Interrelationships and compounding effect of risks

Company failures, much like air disasters, usually result from many factors occurring simultaneously. In hindsight, the origins of these unfortunate and often disastrous events are painfully apparent.

Questions for directors to ask

1. Does management understand the interconnectivity and interdependencies of risks?

2. Does the board recognize that the enterprise may have several embedded exposures such that even relatively minor risks can produce significant unfavorable consequences?

3. Are risk interrelationships ignored because the likelihood of a negative occurrence is deemed remote?

4. Does the board have an adequate framework to understand the interrelationships, interdependencies and compounding effect of risks?

8. Strategic risk

Strategic plans are developed to map future direction, delineate the basis of a corporation's competitive advantage and set out specific plans to achieve financial and other objectives. Since strategy ultimately involves choices, risks are inherent in virtually every strategic plan .

Questions for directors to ask

1. Does the board understand and discuss the linkages between strategy and risk?

2. Does the board assess strategic plans in terms of formulation flaws and capability to execute?

3. Does the board integrate assessment of risk and choices about risk into strategic plans?

4. Does the board have a framework and toolsets, such as competitive analysis and stress test modelling, to assist it to understand the consequences of strategic risk?

9. Adequacy and timeliness of relevant information

Boards of directors and board committees typically receive substantial information on quarterly performance, annual and longer-term plans, together with committee-specific information.

Questions for directors to ask

1. Beyond risk-related strategic plan supplements and financial reporting data, do boards receive comprehensive reports on risk?

2. Is this information sufficient to make well-reasoned judgments about risk and risk management?

10. External advice

Typically, boards of directors have access to expert advice related to areas such as legal, accounting, compensation, financing, and mergers and acquisitions.

Questions for directors to ask

1. Are there reputable experts to advise the board on various risk matters?

2. Does the board regularly engage such experts?

11. Executive performance evaluation and compensation

Boards evaluate executives using a variety of metrics and other criteria. Compensation philosophy and evaluation criteria are typically designed to align the executives' objectives with the corporation's goals.

Questions for directors to ask

1. Does the board include risk management as a criterion for executive evaluation?

2. Are current compensation practices aligned or at odds with prudent risk management?

12. Risk disclosure

Publicly listed companies are required to disclose the primary risks of the business at least annually.

Questions for directors to ask

1. Does the board review risk disclosure in public documents in contrast with the prioritized and interconnected risks identified through the use of an oversight framework?

2. Does the enterprise's risk disclosure over emphasize external risk and minimize the potential for self-inflicted exposures?

A Board Risk Oversight Framework

A common concern among boards of directors is the lack of a comprehensive framework and toolsets to assist boards to structure an effective, robust enterprise risk oversight process. The board's responsibility for risk oversight and management's responsibility for enterprise risk management should be clearly delineated.

This document defines a framework and a systematic approach incorporating elements of a traditional enterprise risk management process but is tailored to the board's oversight role. Before reviewing this framework, it may be helpful to contrast enterprise risk from management's perspective versus the board's oversight role.

Enterprise risk management

Enterprise risk management (ERM) is a management tool that encompasses the methods and processes used by organizations to manage risks related to the achievement of their objectives and protection of value. A typical ERM framework guides management on how to:

- identify particular adverse events or circumstances relevant to the organization's per formance and assets
- assess the magnitude and likelihood of impact
- determine a mitigation or response strategy
- monitor exposures.

By identifying and proactively addressing risks, enterprises can improve performance and protect and create value for stakeholders.

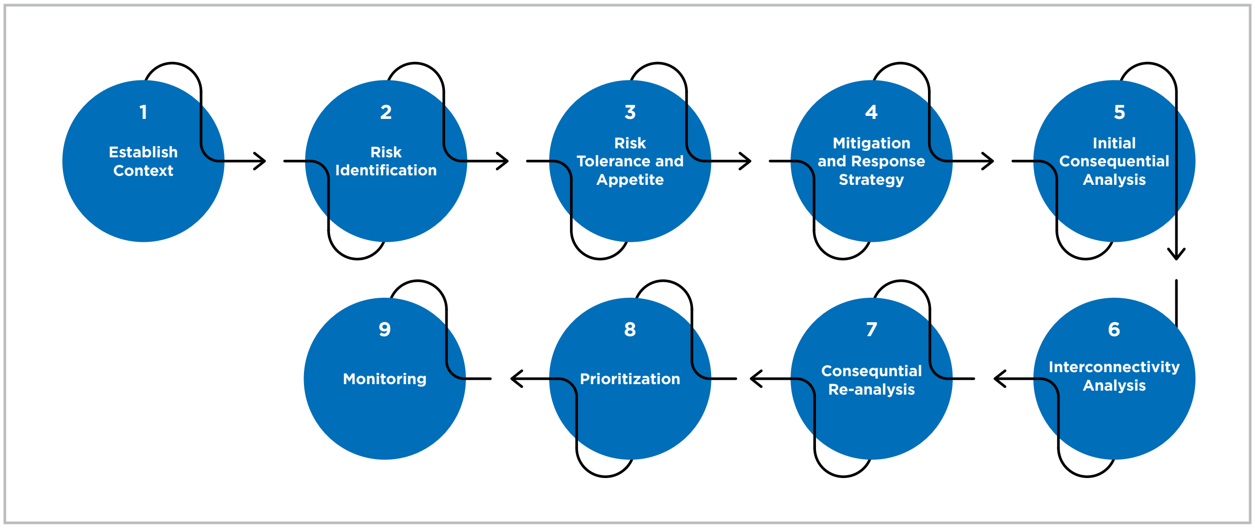
ERM may also be described as a risk-based approach to managing an enterprise that integrates strategic planning, operational, organizational and financial management, and internal control. ERM is evolving to address the needs of various stakeholders who want to understand the broad spectrum of risks facing complex organizations and how those risks are appropriately managed.

Board oversight of risk

The board's role in risk oversight is similar in some ways to the role of the audit committee. The audit committee does not prepare financial statements, draft disclosures, or maintain the system of internal control. Rather, the audit committee bears responsibility for overseeing the financial reporting and related internal control processes.

Similarly, boards of directors are not expected to unilaterally identify, analyze, mitigate and monitor enterprise risk. Rather, boards must oversee the risk management systems and processes and continuously review the associated outcomes and planning. However, as stated earlier in this document (and worthy of repetition), the oversight role should not be passive or, too reliant on management. Successful board risk oversight processes require board confidence in management, access to relevant and reliable information and effective functioning of a board overall.

MODEL FOR BOARD INVOLVEMENT IN RISK OVERSIGHT



The participants who contribute to this model's effective functioning may vary among organizations. In larger organizations, this group usually includes:

- the board of directors
- the executive organization
- operational and functional staff
- risk and compliance management, including internal audit and legal counsel
- external advisers, such as external audit, legal firms, and consultants
- other stakeholders, such as lenders and investors, in certain cases

In smaller organizations, many activities could be combined and assigned to executives and senior managers or outsourced.

Clearly, the executive organization led by the chief executive officer bears overall accountability for managing enterprise risk. The board of directors has responsibility for oversight and is ultimately accountable for the corporation's overall performance and the safeguarding of its assets. Within the risk management framework, the board also would be expected to provide varying degrees of input and counsel into risk identification, analysis and validation, prioritization, risk tolerance and risk appetite, mitigation and response strategies and monitoring activities.

As referenced earlier, boards should take a more active role in overseeing certain specific types of risk. Depending on the degree of the risk, the degree of board involvement would be at one of the three levels.

Three levels of risk

Level 1 risks

Level 1 risks include customary operational type risks, such as health, safety and environment and facility or system disruption, and other risks where the potential adverse effect on the business is moderate or has been offloaded such as through an insurance program or other means.

Provided the board is satisfied with the efficacy of the risk management systems and processes, board oversight for Level 1 Risks would involve customary questioning, review of periodic reporting, counselling and monitoring.

Level 2 risks

Board involvement in risk oversight would be heightened for Level 2 Risks, which fall into two categories:

- high-impact risks that cannot be adequately mitigated
- risks involving the presence of management bias

For high-impact Level 2 Risks, the board would work closely with the executive organization to understand, quantify, prioritize, mitigate and monitor such risks. For example, financing risk falls within this category where the enterprise has significant liquidity exposure by virtue of its business model, its capital structure, or the potential balance sheet impact of another adverse occurrence.

For Level 2 Risks involving potential management bias, board involvement would expand to fully understanding the underlying facts and assumptions and how the risk might be quantified, validated, monitored and stress-tested through financial modelling. For example, strategic risk would fall into this category since

management developed and was committed to execute the strategy and would have difficulty objectively assessing its viability and associated risks.

Increasing board involvement does not imply that the board takes the lead at the exclusion of management. Rather, this should be a highly collaborative effort between the board, the CEO and the executive organization.

Level 3 risks

Level 3 Risks include instances where management is clearly conflicted or heavily biased, and so these risks should command the highest level of board involvement. The obvious and arguably most important example of Level 3 Risk lies in assessing the CEO's performance, capability and suitability. Clearly, this is a critical responsibility for which the board must take a leadership role.

There are times when boards must take a more active or leadership role in assessing risk . For instance, a primary risk might be an ill-advised strategy or a failure to execute strategy. How does management critically evaluate the very strategy it developed or objectively assess its ability to execute? Similarly, the quality and effectiveness of a corporation's leadership — including its chief executive officer — can pose a major risk. Is it fair or even possible for management to assess itself?

Preparing to Implement the Framework

Overview

Given the unique circumstances of each enterprise and its board of directors, there is no single implementation model. Each board must determine its own appropriate execution methodology.

The highest quality strategic plans are unlikely to succeed if they are not effectively implemented. Thus, the ultimate success or failure of employing this risk oversight framework may lie in its execution.

In its early stages, executing risk oversight may be unknown territory for many boards. Accordingly, they should be prepared to modify the model as the implementation unfolds. As with other important board processes, the full implementation of a comprehensive board oversight methodology may require several cycles over two or three years. Success will depend on committed leadership, planning and direct involvement by both the board and senior management.

1. Leadership

Unquestionably, the success of the board oversight of risk is directly tied to the leadership of the process. While it is tempting to assign the leadership of risk oversight to a committee chair, without the support and sponsorship of the board's chair and the chief executive officer, the process is unlikely to become broadly accepted or embedded in the board's annual agenda. It is equally important for the CEO to recognize and support the board in fulfilling its responsibility to assess organizational risk at the chief executive level and critically assess management's strategy from a risk perspective.

2. Direct board involvement

The board's risk oversight must be hands-on. It should be much less about reviewing management presentations and more about drawing on the full board's capabilities and experience through thoughtful discussion and interaction. The time commitment by both board and management will be significant. The board and CEO must show committed leadership to overcome management resistance to the process due to the amount of time required.

3. Board versus committee risk oversight

Each board must determine how it wishes to assign responsibility for overseeing enterprise risk. Some may wish to delegate all or part of the responsibility to one or more existing committees or to a new, separate committee. Certain risks clearly lend themselves to committee oversight such as financial and organizational risks. However, as with oversight of strategy, the entire board is ultimately responsible for overseeing risk and would benefit from drawing on the board's full resources. This is discussed more fully in section 16 — Implementation

4. Separate sessions

Because of importance and time requirements, most boards regularly schedule separate meetings to review the corporation's strategic plan. For the same reasons, boards should consider dedicated sessions to address enterprise risk, particularly in the first year or two to work through inevitable implementation issues. It is worthwhile to schedule risk sessions following the strategic plan meeting to allow board members to reflect on strategic risk while it is top of mind.

5. Session planning

The board and management may find it helpful to scope the risk sessions in advance and to understand the data and analytical requirements. This process likely will be iterative since risk oversight remains somewhat uncharted territory. The board and management may find it worthwhile to work through each of the nine process steps set out in this document to determine the desired outcome and input requirements. At the end of each session, the board should review any gaps in the data or process to better prepare for future meetings.

6. Role and use of advisers and stakeholders

In this document, we often refer to the role of external advisers and consultants, largely in providing specific expertise or unbiased analysis and advice. For small and mid-sized companies, extensive use of advisers may be unaffordable. Boards of such companies are encouraged to explore creative ways to obtain expert advice within cost constraints.

In some instances, gathering input from stakeholders is highly advisable. Specifically, in examining the enterprise's capital structure from a risk perspective, it might be useful to obtain the views of the company's lenders and investment bank. Similarly, in determining risk tolerance and risk appetite as discussed in section 12, it would be useful to understand shareholder sentiment and related investment thesis in connection with risk.

7. Role of management

The chief executive officer's support is critical to implementing the risk oversight framework. The staff members involved in risk management (such as risk officers and internal auditors) are equally important, and their knowledge, expertise, independence and resources can be invaluable in assisting the board in developing objective analysis and providing useful insights.

8. Risk parameters

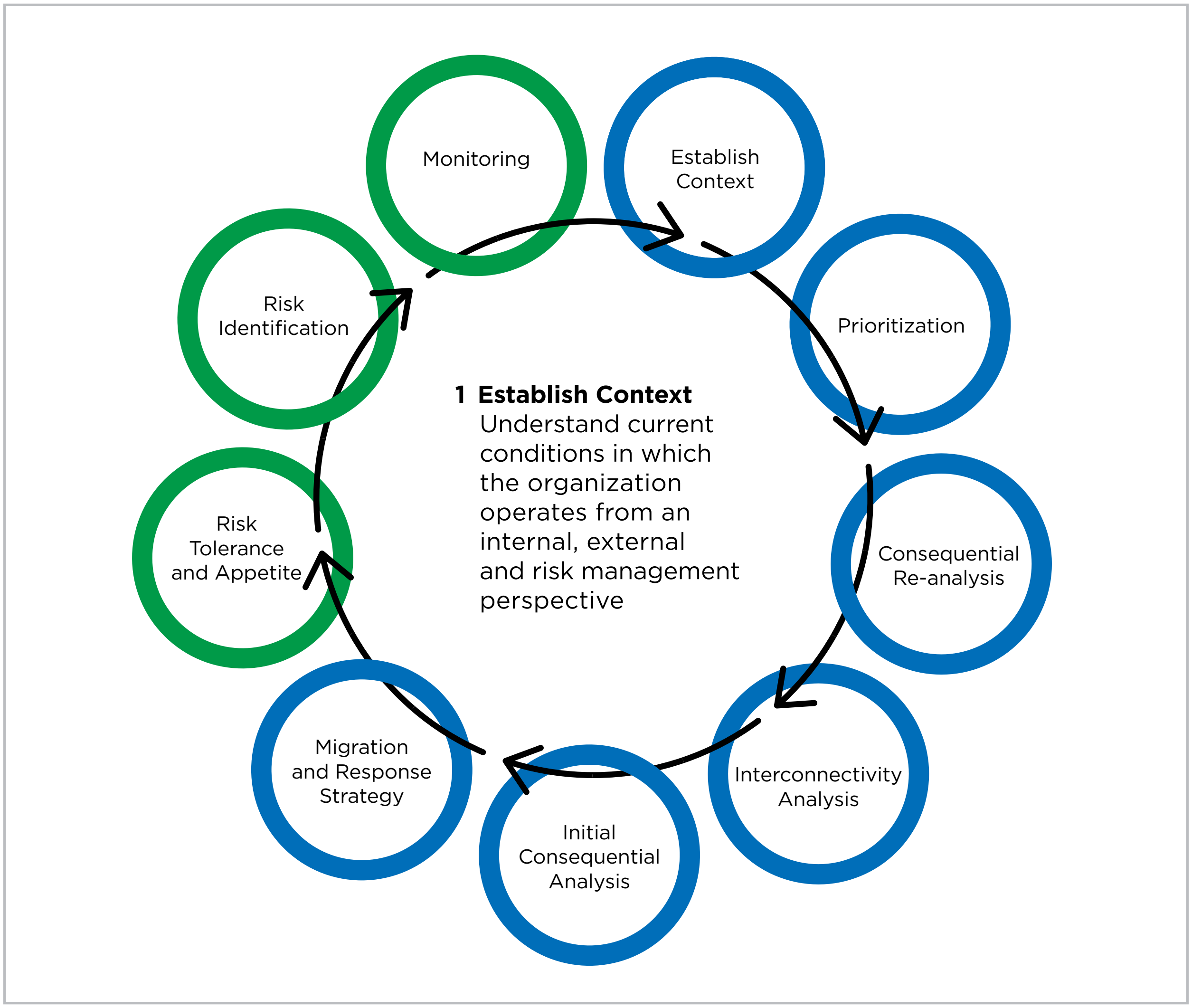
In light of much-publicized bankruptcies or near-bankruptcies, when boards consider enterprise risk, they commonly focus on catastrophic risks that could threaten the corporation's viability. This focus is clearly warranted. However, most businesses do survive and for corporations that have strong balance sheets and solid track records, boards may be tempted to reduce their emphasis on risk oversight. We assert that risk parameters should go beyond identifying risks that endanger the corporation's sustainability. The risk parameters should include any event or condition that could materially affect long-term performance or cause material destruction of asset or shareholder value.

The combination of a robust board led risk oversight process and establishing appropriate risk parameters to include potential occurrences that could affect long term performance or the destruction of asset or shareholder value has the tangential benefit of improved company performance and board governance practices across the critical corporate functions.

The Framework

Below we set out a risk oversight framework that is specifically tailored for use by boards of directors. The nine-step process is designed to assist boards better identify, understand and address critical risks. Most importantly, the framework includes a process for understanding the interconnectivity of risks and the potential compounding effect of unfavorable events occurring simultaneously. The framework may also assist boards to better understand their enterprises' tolerance and appetite for risk in planned and unplanned activities and events and guide development of their response or mitigation strategy.

MODEL FOR BOARD INVOLVEMENT IN RISK OVERSIGHT



1. Establish context

Examine current conditions

Fundamental to gaining a broad understanding of the risk environment is examining the current conditions in which the enterprise operates. At a minimum, this includes an appreciation of the:

- macroeconomic environment
- geopolitical risks
- size, nature and unique characteristics of the industry, geographic markets and customers
- fragmentation, relative size and strengths of competitors
- basis of competition.

It is helpful for the board to receive from management comprehensive industry analyses that provide current industry-specific data and detailed competitive information, especially data related to the business's key drivers. Boards also should recognize that subtle changes in the industry or competitive environment might signal the emergence of important trends that can create significant risk.

Generally, boards of directors gain a contextual understanding of the conditions in which the corporation operates through their ongoing oversight activities. However, in rapidly changing industries, up-to-date and thorough market and competitive analyses should not be underestimated.

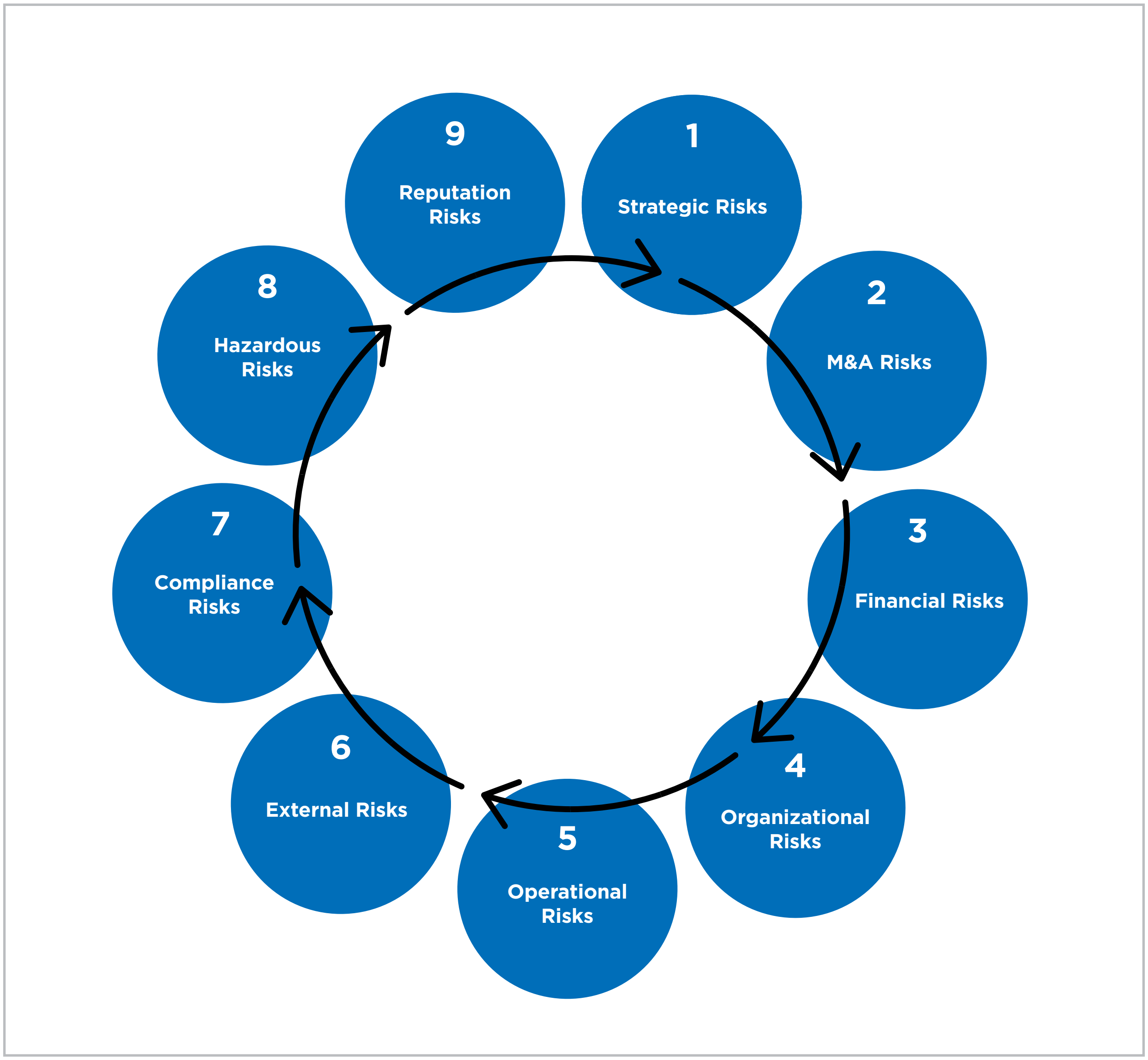
2. Identify and Categorize Risks

Examine current conditions

Identifying and categorizing risks that may materially affect the enterprise's performance, asset values or viability often requires extensive input from both management and boards of directors.

A framework to assist boards of directors in the identification process may be useful. The framework below shows seven risk categories.

RISK IDENTIFICATION FRAMEWORK



Too often the risk identification process focuses on external risks such as natural disasters, potential actions of competition and environmental issues. Ironically, the most significant risks frequently lie internally. Internal risk identification requires an alert, unbiased board and to the degree possible, an objective executive team.

Risk Examples:

Strategic Risks

- Unpredictable market trends and performance
- Invalid assumptions
- Selection of ineffective strategies
- Inability to execute
- Acquisitions

Financial Risks

- Liquidity
- Capital availability
- Capital structure

Organizational Risks

- Leadership depth and quality
- Talent retention
- Cultural alignment

Operational Risks

- Customer dissatisfaction
- Product failure
- Service quality
- Capacity constraints
- Vendor and distribution dependencies
- Input quality and pricing
- IT disruption

External Risks

- Competitive actions
- Macroeconomic volatility
- Industry structural change
- Industry cyclicality
- Interest rate increases

Hazardous Risks

- Liability torts
- Property damage
- Natural catastrophe
- Environmental

Compliance Risks

- Compliance with applicable laws and regulations

2.1 Strategic Risks

Overview: Board oversight of strategy

Strategic risk is any exposure associated with the formulation or execution of an enterprise strategy designed to achieve specific objectives.

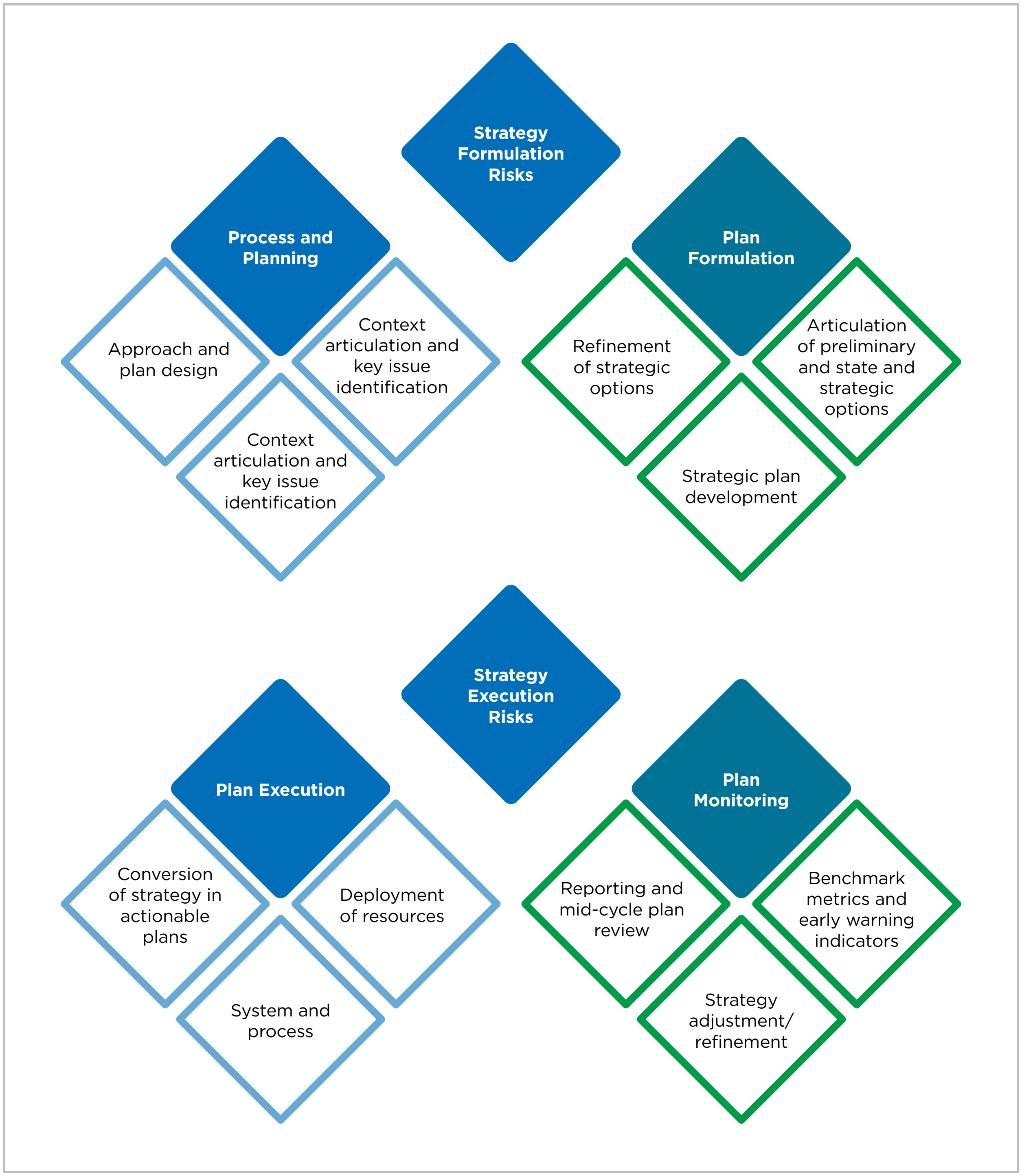
The primary risks associated with strategy stem from the selection of strategies that are inappropriate in the circumstances, the enterprise's inability to execute its strategy, and the timeliness of implementation. Poor strategy formulation or execution can at best, cause underperformance and, at worst, potentially threaten the viability of the enterprise.

Set out below are three typical strategic risks including those exposures caused by insufficient governance at the board level.

1. Strategy Formulation Risks	2. Strategy Execution Risks	3. Board Oversight Risks
• Flawed or incomplete process for strategy development • Incomplete fact base - data and analytics • Failure to examine trends, influencing factors • Failure to address key issues • Assumptions and assessments that are too favorable or unjustified • Not based on critical success factors • Failure to consider vulnerabilities • Poor plan design • Realism of end state and objectives • Lack of quantification of objectives • Incomplete or flawed strategy	• Incomplete initiatives to convert strategy into action • Too little talent in key areas • Ineffective leadership • Insufficient capital or assets • Failure to benchmark competition and establish relevant metrics • Measuring the wrong things • Failure to undertake root cause analysis • Failure to review plans for relevancy as performance or conditions change • Failure to timely modify plans	• Lack of involvement • Focus on formulation not on execution • Acceptance of flawed or incomplete plans • Failure to establish clear cascading accountabilities

CPA Canada's publication "Overseeing Strategy a Framework for Boards of Directors " contains a model for strategy development and execution. This model is shown below with an overlay showing areas of formulation and execution risk.

MODEL FOR STRATEGY DEVELOPMENT AND EXECUTION



Strategic formulation risk

Fundamentally a strategic plan is designed to create value to its stakeholders. For commercial enterprises, value creation is fairly simple to define – the increase in the value of the business most often tied to growth of revenue, earnings and cash flow.

Process and planning

Before the strategic planning process is undertaken, it is important that the board and management address three important areas:

1. What will be the overall approach to plan design?
2. What is the context in which the plan is being developed and what are the related key issues?
3. What information and analysis are required to form the underlying baseline for the plan?

Approach and Plan Design

At the outset, there are three items the board and management should consider in terms of plan design:

- What is the appropriate duration of the planning period?
- How is value creation defined?
- What should be the format and content of the strategic plan?

Typically, strategic plans have a duration of three or five years, with more recent trending moving towards three years. The most important factors in selecting the plan duration are the dynamics and predictability of the market and competitive landscape; the duration of commitments and the importance of long-range thinking. Plans with short durations can become too tactically focused – merely extensions of annual plans. For enterprises that require long-term investments that could span five or more years, then longer range plans are appropriate.

Fundamentally a strategic plan is designed to create value to its stakeholders. For commercial enterprises, value creation is fairly simple to define – the increase in the value of the business most often tied to growth of revenue, earnings and cash flow. For non-for-profit enterprises with multiple stakeholders often with different interests, defining value creation is much more complex and often involves making choices.

One important exposure arises if the fundamental design of the plan is flawed. At a very early stage, management and the board should agree on the format and the expected content of the plan document. It is incumbent on management to share with the board a draft of a plan outline for discussion and input. This avoids potential disconnects when the final plan is delivered. A suggested long-range plan format is in Section 2.1 Plan Formulation.

Context and key issues

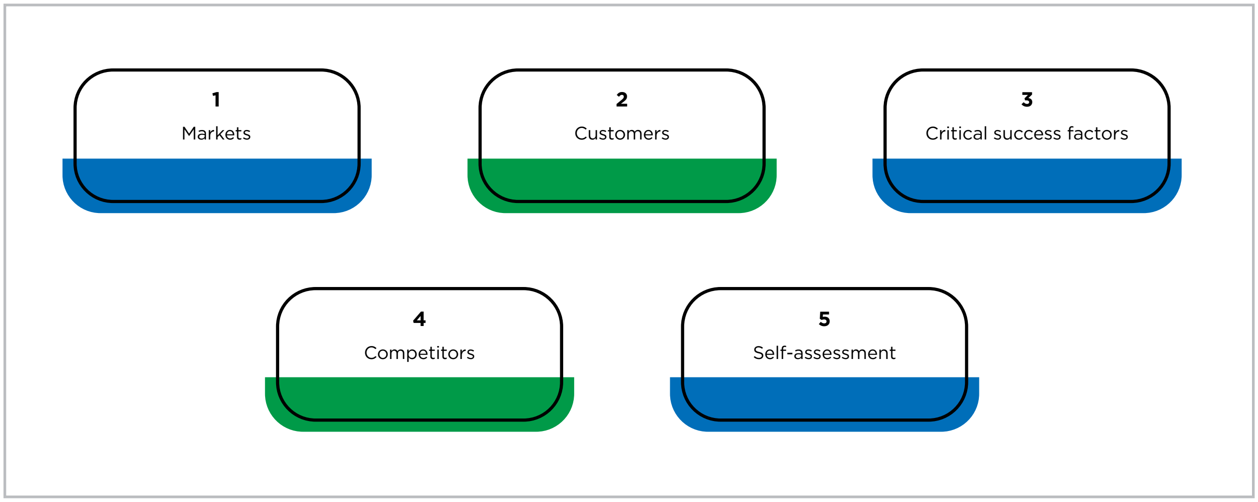
Contextually, it is important for the board to briefly examine the enterprise's past performance – what were the successes? What were the shortfalls? What were the trends and influencing factors on the enterprise and the industry it serves? Similarly, understanding the current environment is useful. What are the current macroeconomic and political/regulatory conditions? What is the state of the industry? How are the conditions likely to change?

Separately, the CEO should provide the board with the key issues facing the organization. These would include both internal and external concerns. All should be addressed one way or another in the strategic plan.

While the past may not be indicative of the future, board examination of historical performance is useful to calibrate the aggressiveness of proposed strategy and the underlying assumptions. The board should be well grounded on the baseline and facts upon which the plan is to be built.

Information and analyses

There are five groupings of information and analyses that should be developed as a base data set upon which the strategic plan is built.



As a minimum market data should include market size, market segmentation, addressable and non-addressable segments, market trajectory, influencing factors and barriers to entry.

The single most important piece of customer information is to determine what customers actually want in rank order of importance. Its value can hardly be over-estimated. As simple as this may sound, it is surprising how many organizations do not have reliable data on this subject. In fact, many rely on anecdotal information usually gathered by the sales organization.

Perhaps the most important informational requirements relate to critical success factors. They are the drivers of the business – fundamental activities than an enterprise must excel at to deliver superior performance. There are seldom more than ten factors. If improperly developed, this could create strategy formulation risk. Such factors are not capabilities or resources. Those will be covered later under execution risk.

The fundamental questions to answer are: "If a new competitor was formed today, what would it have to do better than anyone else to be successful in the industry? And, if we are to be competitively better on each factor, would we be the top performer?" If the answer to the second question is not resoundingly affirmative, the critical success factor list would be incomplete. As an example, a critically important factor for success in the advanced technology sector is to maintain market-driven technology leadership through developing and consistently executing on leading product and technology road maps.

The critical success factors should form the basis of strategy. That is, for each success factor the strategic plan should contain a strategy.

Competitor background information is very important. This would include: relative size; market position and share; performance against critical success factors competitive advantages, capabilities and resources, vulnerabilities and relative valuation.

The same captions set out above for the competition should be used for self-assessment information. Directors should be aware of bias: underestimating competitor performance and capabilities, and overestimating its own self-assessment.

Many organizations use SWOT analyses. Such analysis has little value unless directly related to the critical success factors and is as objective as is practical.

Governance considerations

Contrasting typical board oversight of risk relating to financial reporting versus oversight of risk inherent in strategy highlights the need for increased board focus on assessing strategic risk. While accurate financial reporting is crucial for the proper functioning of capital markets, the importance of strategy to create shareholder value is undeniable. Yet the contrast between the oversight of financial reporting versus strategy is astounding.

Virtually all public companies maintain substantial systems, processes, professionally trained resources, regulations, validation and oversight to ensure their financial reporting is accurate. Financial reporting has well-defined rules and parameters, often known as generally accepted accounting principles. Those principles are interpreted and modified by extensive resources within the public accounting profession along with regulatory bodies such as the securities commissions.

Stock exchanges require annual financial statements to be audited by qualified, independent accounting firms and securities regulators. Some stock exchanges also require the independent audit of the systems of internal control. Companies employ professionally trained finance and accounting staff to prepare financial statements. Internal control systems are constantly being assessed and validated by internal audit groups that report directly to the board's audit committee.

Audit committees are mandated to have qualified independent directors who appoint and supervise external and internal audit, review annual and quarterly financial statements and reports relating to internal control systems. All these resources, prescribed rules, regulations and internal systems are designed to minimize the risk of a material error in financial reporting.

In contrast, there are no rules or regulations governing how strategy should be developed and presented. There are no professional standards or qualifications for those developing strategy. There are limited, if any, independent validation procedures. There are no mandated board processes to oversee strategy. Most boards need better processes and tools to assist in the oversight of strategy, particularly the area of strategic risk.

At the risk of being controversial and overly general, we assert that few companies produce comprehensive, fact-based strategic plans. Most are riddled with anecdotal data that cannot be verified. Many contain bold statements about leadership and level of competitiveness without hard facts to back up such claims.

Strategy development is not an exact science by any means. Nevertheless, it is undeniable that having relevant facts to formulate strategy is critically important. There are however instances when strategy itself may be counter-intuitive, innovative or even speculative. For example, would the vast array of products developed by Apple be conceived if the leaders of that company had focused only known customer preferences? Even still, it is undeniable that having relevant facts to formulate strategy is critical.

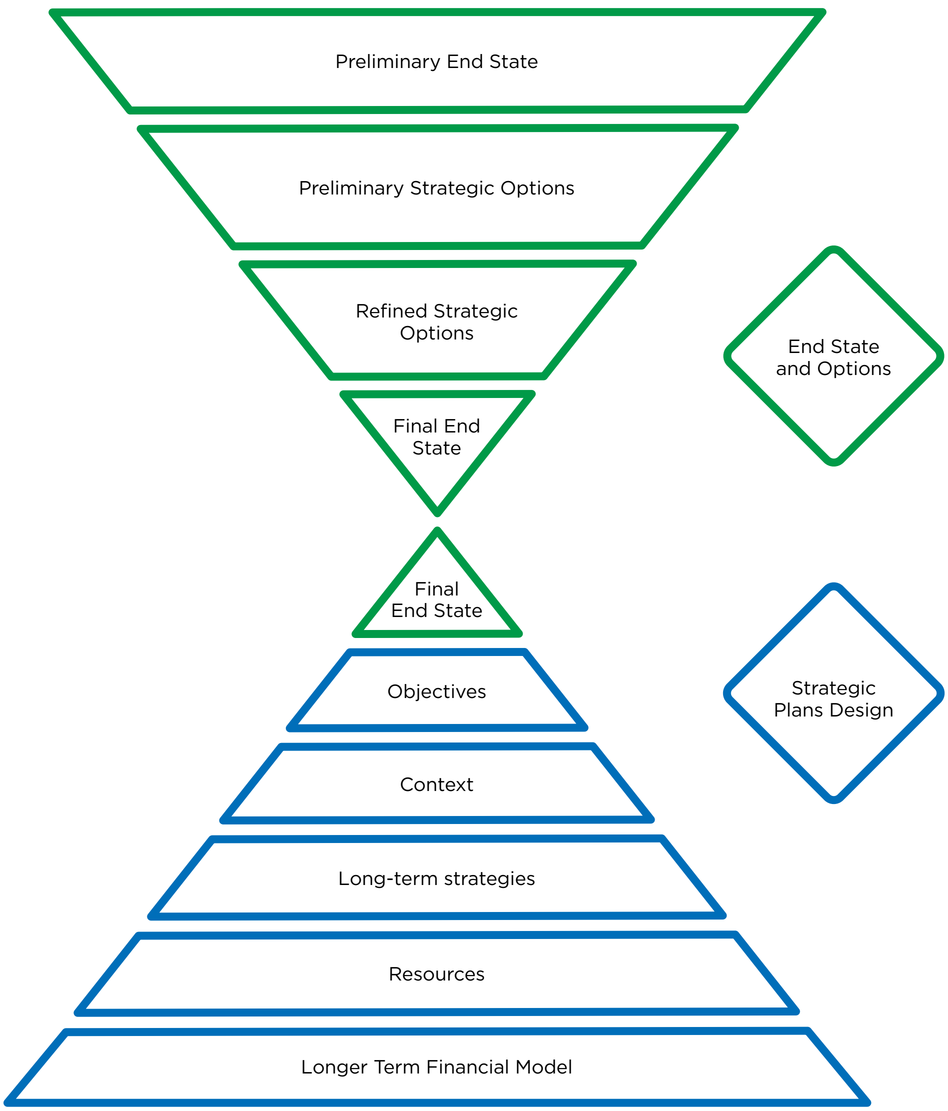
Plan formulation

One of the major strategic risks is one of omission. That is, flawed strategy is the likely outcome of failure to adopt a comprehensive model for strategic planning.

Because there are no standard formats or content, boards generally receive plans designed by the executive organization, often with significant gaps in organization and content.

Set out below is a model for strategic plan development. Please refer to "Overseeing Strategy a Framework for Boards of Directors" for more detail.

MODEL FOR STRATEGIC PLAN DEVELOPMENT



Preliminary end state and strategic options

The end state should be a clear description of what the enterprise should look like at the end of the planning period. Some organizations typically include vision, mission core value statements. Our preference is for a more tangible and realistic view of the enterprise at end of the planning period. Where enterprises have alternative paths to consider (such as making a major acquisition) it is helpful at the outset to consider strategic options and examine alternative end states.

Strategic plan (design) development

The strategic plan framework as shown above is designed to address these eight sets of questions:

1. What should the enterprise look like at the end of the planning period (final end state)? this end state realistic?

2. How does that end state compare with the current situation (the difference forms the objectives)?

3. In what context is the enterprise likely to be operating in during the planning period?

4. Are the underlying assumptions reasonable?

5. What does the enterprise need to do to achieve the end state (strategies)? Do such strategies fully address the critical success factors? How do they leverage the enterprise's resources? Are they designed to minimize the enterprise's vulnerabilities? How are the overarching strategies integrated into each functional area?

6. What resources (people, assets, capital) will be required? What does the enterprise currently have? What resources are required? What is the plan to obtain the additional required resources?

7. What specific initiatives are required to convert strategy into actions? How are they be measured and monitored?

8. What is the expected longer-term financial performance?

The board can play an important role in determining that the objectives are sufficiently long-term, realistic and will deliver value. It must be satisfied that the strategies are sound, will achieve the objectives and are within the corporation's tolerance for risk.

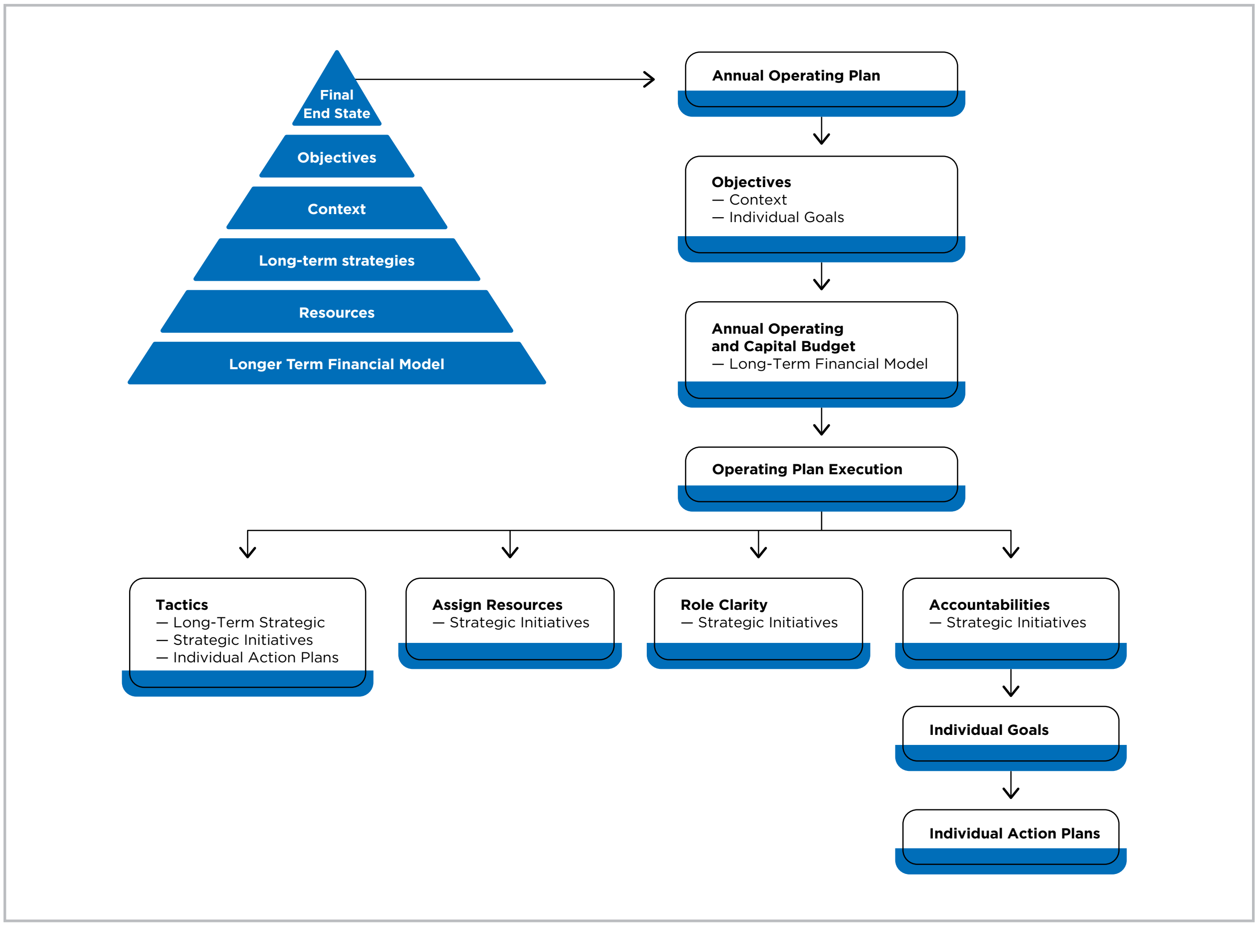
Strategic execution risk

Plan Execution

Conversion of strategy in actionable plans

The conversion of strategy into action is where the rubber meets the road. Failure to utilize an effective execution model as set out below poses serious risk.

STRATEGY EXECUTION MODEL



The model shown above has direct linkage from the strategic plan to the annual operating plan. The longer-term objectives are converted into annual objectives and strategies are turned into annual tactics and initiatives. Those objectives and tactics are then converted into individual goals and action plans for which each employee is held accountable.

> While planning is crucial, execution is all about people — how they are organized and coordinated, how roles and accountabilities are assigned, how information flows and how systems, tools and other resources are put to use.

Deployment of resources

Deployment of resources relates to people, capital and assets. Insufficient resources or failure to deploy effectively creates executional risk.

Sufficiency of people entails quantity and quality of leadership, competencies, talent depth as well as an effective organizational structure, defined accountabilities, culture and alignment and at an affordable cost.

Sufficiency of capital is the quantum, structure and cost of debt and equity as well as the sources and availability of additional capital.

Sufficiency of assets relates to both physical assets such as land, buildings and equipment and intangible assets such as intellectual property, know how, brands, image and reputation.

Systems and processes

Inadequate systems and processes required for effective strategy execution can be a significant risk. Such systems generally include measurement and reporting, project management, performance management and compensation/recognition. Such systems must be aligned and integrated so that initiatives can be properly defined, staffed and performance measured. Similarly, individual accountabilities, measurement and reward systems must be defined, aligned and effective.

No battle plan survives contact with the enemy

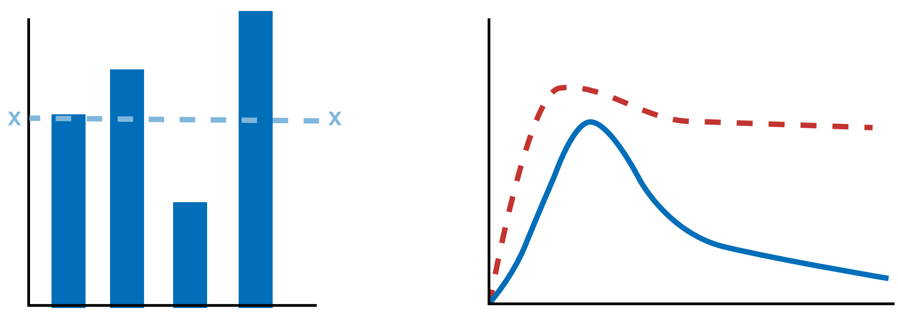
Execution risk is difficult to assess in advance of implementation because there are so many uncontrollable variables that inevitably occur when strategy is implemented. Close monitoring post implementation and performance analytics are key to assessing execution success.

Plan monitoring

Benchmark metrics and early warning indicators

Failure to properly monitor and analyze results poses serious execution risk.

Monitoring involves both conventional passive measurements including financial data as well as a set of early waring indicators often tied to strategic initiative milestone achievement and executive performance against their annual objectives. However, reviewing performance against indicators and metrics without appropriate root cause analysis is tantamount to running medical tests without a diagnosis. Comprehensive root cause analysis of variances from performance targets done well should be able to pinpoint and differentiate amongst flawed strategy, invalid assumptions, too aggressive targets, ineffective execution or changed external conditions including competitor actions for more detail, see section 9. Monitoring.



Mid-cycle plan reviews and plan modification

Typically, strategic plans have a short self-life so an ingrained, formal periodic mid-cycle review and modification process can maintain strategy relevance. Depending upon the industry and enterprise dynamics, such reviews should be carried out every eighteen months or even annually. The outcome of such review should not only assess performance but also whether the plan needs changing or if a new plan should be developed. Typically, reviews would include the original plan overview, assessment of assumptions, competition updates, strategic initiative and financial performance.

The consequences of not rewriting a strategic plan when required is worse than having no plan at all because following an outdated strategy is self-fulfilling. Conversely, requesting management to do a complete rewrite, when only an update is required, can be a major distraction and divert management time away from more pressing items.

Tools and processes to help boards oversee strategic risk

Several tools are set out in this document to assist boards in carrying out their oversight role. These toolsets are not intended to be used by boards at the exclusion of management. In cases where external expertise is engaged, the board always should have full access to reports and in person presentations.

Questions to consider

1. Has the enterprise adopted a robust and practical model for strategy formulation?

2. Have the assumptions been adequately considered and stress tested?

3. Has the enterprise adequately assessed and benchmarked its capabilities, assets and capital, performance and strategy against relevant benchmark organizations?

4. Has the enterprise developed an end state description?

5. Have objectives been quantified and represent the difference between the end state and current situation?

6. Have key success factors been articulated?

7. Are strategies directly linked to key success factors? Have they adequately considered strengths and vulnerabilities?

8. Are the strategies realistic?

9. If executed effectively will they achieve the objectives?

10. Does the stress tested long term financial model confirm positive cash flow through the planning period?

11. Does the enterprise have a robust model for strategy execution?

12. Does the enterprise have the leadership, depth of talent, required competencies, assets and capital available to execute the strategy within the plan period?

13. Does the enterprise have the right organizational structure, leadership, management, staff and accountability model and systems and to successfully execute the strategic initiatives?

14. Has the enterprise have an adequate set of metrics that measures strategic performance including leading indicators?

15. Does the enterprise perform a periodic analysis of results to identify formulation versus execution flaws?

16. Does the enterprise's reporting include corrective actions when there is a shortfall to plan?

17. Does the enterprise modify its plan when conditions or performance change?

Validation of product/service differentiation - independent customer interviews

Achieving competitive advantage through product or service differentiation is a critical component of any organic growth strategy. In any industry, competitors inevitably lay claim to superior product or service attributes. How does a board understand and validate a company's customer value proposition? How can the board know when the enterprise is losing competitive advantage and when changes are required?

A useful way to assess strategy (and associated risk) is to engage an external firm to conduct periodic customer interviews. While many companies have institutionalized customer satisfaction surveys, such surveys tend to provide inconclusive information for several reasons, including the design of the questions, response bias, the number and type of respondents, and lack of competitive comparisons.

For example, a superior customer insight model could involve the use of an outside firm (usually a strategy consulting firm) to assist in designing the survey, select respondents, conduct the survey, and analyze the results. In designing the survey, it is important to ask the right questions about strategy. For example, to understand the customer's value proposition, the survey might ask, "In rank order of importance, what are the five characteristics of a product (or service) that are most important to you?" To assess competitiveness, the follow-up question might ask, "In considering the five important characteristics, how do each of the major companies in this sector compare?

Respondents should include current, former and competitor customers to properly calibrate not only the views of loyal customers but also those that no longer use the product or service as well as customers of competitors. To obtain objective data, interviewers ideally should not identify the company, but disclosure is often required to gain access to key customers. Better results are usually achieved by face-to-face interviews conducted by an interviewer with the background and experience to ask probing questions and accurately characterize answers. In situations where the customer base is relatively small, it may be appropriate to interview several different individuals at the same customer. Survey results require detailed analysis and interpretation, and often include verbatim customer comment.

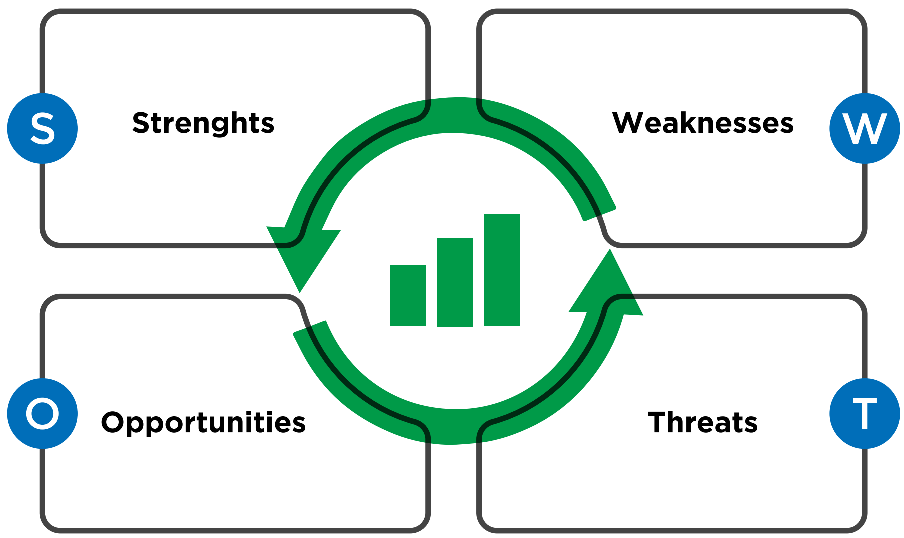
Management teams often discount the need for customer interviews, citing their intimate knowledge of the customer base. Seldom does management apply rigor in canvassing former or competitor customers from which discerning information can be gained. In fact, the results of a comprehensive customer interview process are often both surprising and insightful.

The board does not necessarily need to be involved in engaging the external firm to develop and complete customer interviews. However, the board should be privy to the results and have the opportunity to meet directly with the consultants.

Competitive analysis and business model benchmarking

Almost unfailingly, strategic plans provide limited competitive information. Most are in the form of so-called SWOT analysis. However, SWOT analyses have some significant limitations.

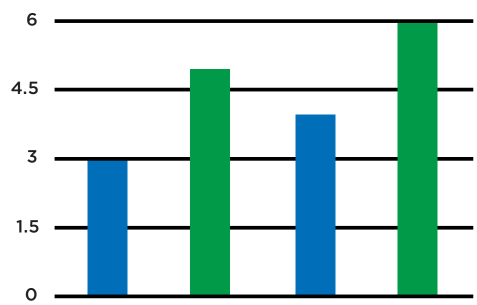
SWOT analysis may not get at the heart of strategy because it generally fails to comprehensively address how the enterprise stacks up against the competition on the key strategic success factors (such as market position, product differentiation, cost structure, and channel delivery). The identified strengths and weaknesses are often less relevant to the enterprise's success. Consequently, they may not address the heart of strategy. Additionally, most SWOT analyses lack fact-based analysis to back up their assertions and such analyses assume competitors remain static and are unable to take action or change course.



Management has a built-in bias to overestimate its performance and capabilities and underestimate competition. How many board members have reviewed strategic plans that claim the enterprise is the leader in technology or customer service or is the low-cost producer? How does a board become comfortable that these propositions are true? Do board members ever ask management to provide hard data to back up such claims?

The heart of effective competitive analysis lies in three primary concepts:

1. The analysis should measure competitiveness against the critical success factors.
2. The analysis should be data-driven and fact-based.
3. The interpretation should be as objective and unbiased as possible.



Vast sources of competitive information are available, both inside an enterprise and externally. Customers and vendors are excellent sources. Search engines also can produce a surprising amount of competitive data, and public filings are also valuable sources of information. This data can be supplemented with external consultants who have relevant industry access and experience and extensive databases. In certain cases, it may be useful to engage specialized expertise (for example, to assess technological competitiveness).

As part of competitive analysis, insight can be through financial comparison of business models. Such analysis would benchmark competition against not only traditional financial results (such as earnings, revenue growth, return of capital, and total return to shareholders) but also margin levels and line item costs, such as general and administrative expenses.

The analysis should not stop there. The real value in competitive benchmarking is in understanding why the differences arise. For example, why does a competitor produce consistently higher margins? Factors could include superior products, breadth of product lines, cost structure, and pricing strategy.

Strategy process audit

Often boards of directors do not have insight into the processes by which management develops strategy. What tools are used? What are the sources of information? How fact-based and rigorous is the analysis? Are the conclusions based on objective data? Is the format and structure of the plan comprehensive?

To answer such questions, a board could engage strategy consultants not to work specifically on company strategy, but rather to assess the current processes used by management to create strategy. This assessment would examine such areas as the analytical rigor used to develop fact-based strategy, the validity and importance of underlying assumptions, the bases for determining objectives, and the sources of information used to assess industry and competitive data.

To make the engagement more management-friendly, it could be characterized as a best-in-class benchmarking exercise. Again, either the board or management could engage the consulting firm, provided the board has unfettered access to the consultants' verbal and written reports.

Major strategic initiatives

In the life of every corporation, major strategic initiatives are undertaken for either offensive or defensive reasons. This diagram may assist boards in understanding the riskiness of a strategic initiative and determine the appropriate level of board involvement. Initiatives in the diagram's centre carry lower risk, while those at the perimeter are higher risk.

Strategies such as product line extensions and geographic expansion into known territories are typically lower risk; if unsuccessful, the consequences are reasonably predictable. Depending on the circumstances and nature of the business, new product development strategy and major capital projects might fall into the medium risk category.

In higher risk situations, such as entry into new markets (in which the corporation has limited experience) or developing new technologies, the board may wish to engage external expert advice to better understand and validate the strategy. Again, the board need not engage advisers directly but should have access to adviser reports and in-person meetings with the advisers as required.

External strategy validation

Corporations often engage consulting firms to assist management in strategy development. Top-tier strategy consulting firms bring industry-specific and subject matter expertise, deep analytical skills, and a robust strategy development process. Where a transformational strategy is required, such firms often lead strategy development. However, in most cases, the executive organization has the capability and accountability to develop and execute the strategy. In those situations, a strategic consulting firm could be engaged to validate management's strategic plan. While validation processes vary, these firms fundamentally provide objective, fact-based analysis, particularly around industry dynamics, key drivers and competition. The board does not need to engage the firm directly. The validation is usually a collaboration of the board, management and the consulting firm.

Stress testing through financial modelling

Virtually every larger company maintains a long-term financial forecast with a time horizon typically three to five years. Such forecasts are used to calibrate longer-term strategic plans and longer-term projects and capital expenditures, and to develop scenarios (i.e., “best case”, “worse case”, and “most likely case”).

Financial modelling is an important tool for boards to use in calibrating and stress testing risk and is referred to in several areas throughout this document.

Strategic plans presented to boards rarely show downward trends in competitive or financial performance, yet in reality such trends can occur frequently. Underperformance takes place for a variety of reasons, including misjudgments in assumptions, unplanned external events, under-estimation of competitive strengths and actions, and overestimation of the company’s capabilities or competitive advantages. Accordingly, a worse case analysis may not truly analyze the worst case. Use of multi-scenario stress testing will assist the board to understand the financial implications of downside scenarios. It is useful for the board to work with management to develop stress test parameters including variations in key assumptions that underpin the base plan.

Input into output

A valuable board process is to ask management well in advance to provide an outline of the proposed final strategy document, its sources and the approach to data gathering and analysis, and key assumption requirements. Aligning planned output with board expectations ensures there are no surprises for management or the board on the day of presentation.

There is an old axiom that says management receives the labour union it deserves. The same can be said for boards of directors and strategy. How often have boards received strategy documents that are incomplete, yet failed to insist that management go back to the drawing board? Poor strategy often results from a board’s failure to set expectations well in advance and its lack of conviction to reject an unsatisfactory plan.

Constructive feedback and actions

Even with the best intentions, strategic plans often fall short of the board's expectations. In these cases, it is helpful to employ a formal post-mortem process following the strategy presentation but before approval. Through this process, board members can identify areas where further analysis or clarification is required, where strategies may be misaligned with goals, or underlying assumptions appear to be too optimistic, pessimistic or invalid. Feedback to management on the plan shortcomings is critical, but ineffective unless management is asked to modify or redo strategy until the board is satisfied.

Post-strategy presentation risk assessment

The final section in a strategic document is frequently a risk assessment, often focusing on the potential variability of critical underlying assumptions. Time set aside for discussion on this section is often insufficient. Rather than pay lip service to an incomplete risk section in a strategy document, some boards prefer to separate the strategy presentation from a risk discussion and allow time for a more comprehensive discussion about strategic risk. It is helpful to schedule a risk review session within a month or so following the strategy presentation so boards and management can reflect on strategy solely from a risk perspective and set aside sufficient time for discussion.

Board oversight processes

Effective board oversight processes set aside sufficient time at and between meetings for reflection and the gathering of additional information. Boards commonly hold several meetings on strategic risk oversight as follows:

- Initial session with management to review approach, sources of data, assumptions and outline of strategy document (see "Input to output" above)
- Initial strategy presentation by management
- One or more follow-up sessions to discuss open issues, additional analyses or other information
- Formal post-strategy meeting exclusively on risk in strategy (see
- "Post-strategy presentation risk assessment" above)
- Each of these board meetings should be video recorded

2.2 Merger and Acquisition Risks

Overview

There should be little debate that major acquisitions pose risk. Without attempting to quote statistics, it is fair to say that a substantial number of acquisitions fail to meet expectations and often create little or no value for shareholders. Acquisitions are inherently risky because of uncertainties, complexities, and abundant moving parts. Outright failures or underperforming acquisitions occur for reasons such as misalignment with a corporation's overall strategy, insufficient due diligence, leadership and cultural differences, over-valuation, imprudent financing, or ineffective post-acquisition integration.

The degree of board involvement in acquisitions should vary depending on several factors, including size, strategic importance, complexity and management capabilities. Please refer to"Overseeing Mergers and Acquisitions - a Framework for Boards of Directors."

Key M&A risks

Flawed strategic rationale

An organization's M&A strategy, if executed effectively, should ultimately create value for shareholders. Determining how M&A is likely to create value also helps assess the potential opportunity and risks and dictates the criteria for screening possible targets. Risks inherent in the strategy will guide the company's choice of targets or merger partners.

The enterprise needs to be clear about its strategic rationale for making an acquisition:

1. Why it is pursuing the acquisition?

2. What gaps does if fulfil in the current organic strategy?

3. How will the M&A target add value to the enterprise?

4. What minimum risk-adjusted returns are expected?

5. What will the end state look like and what competitive advantages will be gained?

Ineffective due diligence

Due diligence is an important step for confirming the acquisition rationale, valuation assessment and identifying risks and gaining a thorough understanding of the seller's business. It should also confirm the validity and value of any expected synergies.

Due diligence errors often occur when the timeframe is compressed, the due diligence scope is inadequate and if there is a lack of expertise.

Leadership

When the intent is to leave the M&A target leadership team in place after the acquisition, there is heightened risk because of limited exposure to team though the M&A process, a management bias not to surface issues after closing and preservation of a culture when cultural change is warranted.

Cultural differences

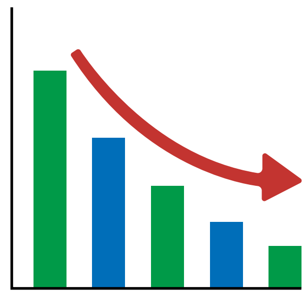
One of the most common issues with M&A is failure to understand the differences in cultures between the buyer and target organizations and the time it takes to integrate and align cultures.

Financing

There are risks associated with acquisitions that require short-term bridge financing with the expectation that permanent financing will be put in place subsequently. Such permanent financing may not be available when required due to the state of debt and equity markets or the performance of the combined entity.

Valuation

Simply put, the risk is over-paying for an acquisition. This often occurs when market values are unusually high, when there is competition to purchase the target company (and negative consequences if it is not acquired) and when the target performance results in failure to deliver the expected value.



Poorly executed implementation

Implementation risks can occur when there is inadequate transition and implementation planning and project management, underestimating the complexity of the integration, the pace of change, insufficient measurement and reporting and lack of executive oversight.

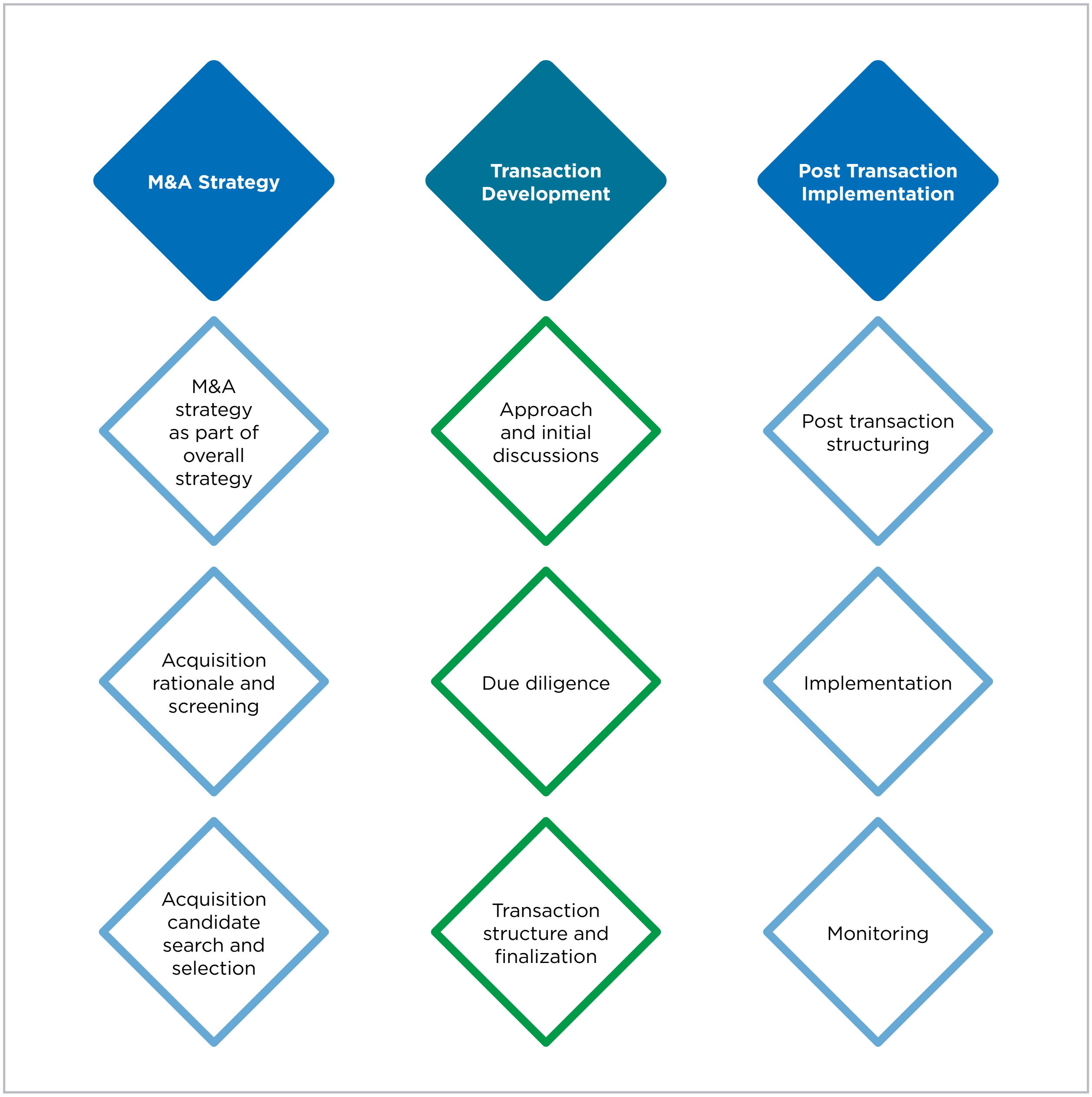
Acquisition strategy can be inherently risky due to the many unknown or unpredictable factors that can come into play. Boards need to be extensively involved in any major acquisition strategy, including its assessment, planning, implementation and financing.

Tools to assist boards oversee mergers and acquisition risk

Model for M&A

Following a prescribed model for M&A oversight lends itself to thorough reviews at each step of the M&A process and opportunities to constructively challenge management as the acquisition timeline unfolds. Set out below is a framework extracted from CPA Canada's publication "Overseeing Acquisitions – A Framework for Boards of Directors." This publication is particularly useful for enterprises that make acquisitions infrequently.

MODEL FOR M&A FRAMEWORK



Advance clarity on acquisition criteria

It is helpful for boards and management to reach a common understanding of the criteria for prospective acquisitions. Mutual understanding of the criteria can help ensure alignment with overall strategy and objectively measure and rank acquisition opportunities in advance of discussions with prospective targets. Such criteria might include:

- strategic importance (such as product or geographic expansion, market share consolidation, capability or technology acquisition)
- competitive advantage gain
- the target company's value, size, breadth, quality of products and services, customers, tangible assets, historical financial performance, and synergies

In addition, the dimensions of potential downside risk should be compared with risk appetite and risk tolerance.

Comprehensive fit analysis against the acquisition criteria

Boards should insist on reviewing fit analysis against acquisition criteria in two stages. At the early stage (typically before or after preliminary discussions with targets), management should present its comparison of the characteristics of the target versus the acquisition criteria in rank order of importance. Depending on complexity, the board may wish to have the comparative fit analysis updated after due diligence is complete and before final negotiations begin. The updated analysis would provide a second look at the acquisition with the benefit of due diligence information.

Negotiation and valuation

Size and complexity may necessitate the board's direct involvement in negotiations. They may also determine whether independent expert advice is required for valuation, negotiation, and structuring purposes. On the prospective sale of the entire or major part of the business, an independent committee of the board typically is often formed to oversee and participate in critical parts of the sale process.

Insistence on advance board approval of parameters on price and other key terms can provide important discipline in the negotiation process (without undermining management) and allows the opportunity for reflection and informed decision-making.

There are no shortages of valuation methodologies and experts to advise the board on M&A values. The board is often the last line of defense on valuation particularly when management is highly motivated to make an acquisition. Common sense should prevail. This simple question is often worth asking: "When do we get our money back?"

Due diligence and integration planning

It is common for boards to delegate due diligence to management and advisers and, only after the acquisition, become aware of unexpected issues that should have been identified in the due diligence process. Boards may wish to insist on reviewing in advance the scope of due diligence and the outline of the planned report on completion. The due diligence plan should be comprehensive, covering all material operations, functions, assets and liabilities. The plan should also clearly identify and address the key enterprise risks.

Often the seller is interested in compressing due diligence periods for various reasons, such as to preserve confidentiality and to limit the depth of due diligence activities. Boards should resist acquisition opportunities where time compression results in limited or superficial due diligence.

Where feasible, boards may find it helpful to have due diligence team members perform post-acquisition integration activities because of their familiarity with critical issues. The board should periodically review the status of integration plans against specific milestones and expected results.

Strategic validation

Conventional due diligence checklists are frequently overburdened with financial, legal and operational due diligence, with little if any emphasis on strategic validation. Similar to validation of a company's strategy discussed earlier, independent comprehensive customer interviews can provide valuable insight into the robustness of a target company's competitive advantage, customer value proposition and customer loyalty. In-depth interviews should be carried out with current, former and competitor customers. In major stand-alone acquisitions, strategy consulting firms are often engaged to form part of the diligence team to validate the target company's strategy.

Leadership due diligence

In many cases, the management of target acquisitions remains in place after the acquisition, but little detailed due diligence is carried out on key team members. By contrast, hiring an executive to join the organization usually involves multiple interviews (and sometimes independent testing and assessments) and reference checks. In reviewing due diligence procedures, boards should insist that leadership undergoes the same standard of due diligence that the organization applies when hiring new executives.

Stress test through financial modeling

Similar to stress testing strategy, dynamic financial modelling should be used to stress test major acquisitions against a status quo scenario both for downside risk and upside potential, with particular focus on liquidity and capital structure (see “Financing” below).

Financing

Where an acquisition requires external financing, boards should be mindful of the debt structure and the complexities and volatility of debt markets. Investors tend not to support companies that raise debt or equity to build a fund for future unidentified acquisitions, preferring to invest when acquisitions are known. This tendency can create a need for short-term bridge financing to initially fund acquisitions.

Following the capital structure axiom of matching long-term investments with long-term capital (in the form of term debt or equity) requires that short-term acquisition debt be refinanced with either longer-term debt or new equity. Often this forms part of the overall acquisition strategy. The difficulty with this approach is that debt and equity markets may not be available when refinancing is required, potentially causing liquidity issues.

In examining an acquisition strategy that involves bridge financing, boards should ensure that:

- management has a clear refinancing strategy
- capital markets appear stable and receptive to refinancing
- the state of the relationship with current lenders
- financial stress testing show that a liquidity issue is unlikely in the event refinancing is un-available

Financial staffing

In stand-alone acquisitions, the acquiring company is often comfortable with the target company's management organization and prefers to keep it intact. In those cases, boards should insist that senior company financial staff be appointed to the acquisition management organization, at least for a period of time. Having reliable financial information and insider insight into the business, at least during integration, can provide early warning of potential issues. As a side benefit, this can also accelerate financial reporting and systems conversions.

External advice

On major acquisitions, engaging experts for advice on specific areas may be advisable. Management usually should engage the advisers, provided the board has direct access to such experts. It is important for the organization to establish clear mandates and deliverables for each advisory engagement as well as direct oversight by the board or its committees in conjunction with senior management. In M&A activities, typical engagements and the service providers are as follows.

M&A Advisory Services	Service Firms
• Review and validation of specific acquisition target strategy • Negotiation and valuation • Leadership and organizational due diligence • Financial due diligence • Financing • Environmental due diligence, legal • Compensation and pension due diligence and planning • Legal services	• Strategy consulting firms, industry- specific boutique firms • Investment banks, transactional advisory services in public accounting firms • Organizational advisers, managerial assessment firms, executive recruitment firms • Transactional advisory services in public accounting firms • Strategic advisory firms, investment banks • Environmental consulting services firms • Compensation and pension advisory firms • Legal firms

In M&A transactions, certain advisers typically are paid based on success of closure. Boards should be cautious when taking advice from advisers whose fees are contingent on completion of a transaction, since there is an obvious bias toward the outcome.

2.3 Financial Risks

Overview

Financial risk generally falls into three broad and interrelated categories:

1. liquidity
2. capital available
3. capital structure

Liquidity risk occurs when corporations are unable to generate sufficient internal cash flow to sustain operations. Liquidity issues often arise when a corporation has sustained losses, is undergoing major capital expenditures, when large unplanned expenditures are required, such as those arising from unfavorable litigation or if lenders are unwilling to renew debt facilities.

Capital availability often interrelates with liquidity concerns. Capital markets for debt or equity are subject to volatility; availability may be constrained from time to time or even non-existent. Ironically, such capital markets become inaccessible often at the very time when difficult economic conditions exist and corporations face liquidity issues.

The corporation's capital structure may pose risks, particularly those associated with the absolute level of indebtedness, the mismatching of short and long-term debt, and the timing and quantum of debt repayments.

Additional financial-related risks may arise from movements in foreign exchange, interest rates and hedging/derivative strategy.

In M&A transactions, certain advisers typically are paid based on success of closure. Boards should be cautious when taking advice from advisers whose fees are contingent on completion of a transaction, since there is an obvious bias toward the outcome.

Key financial risks

Failure to manage for cash and liquidity

We would assert that management and boards focus primarily on revenue, earnings, EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization), working capital and debt and spend little time on cash flows. EBITDA is widely used as a financial measure, supposedly to synthetically represent cash flow. Nothing could be further from the truth. The only seemingly redeeming benefits of EBITDA are ease of calculation and allowing company comparisons by eliminating the effect of differing capital and taxation structures.

This difference between EBITDA and cash flow can be enormous since EBITDA does not include cash outflow for interest payments, a portion of taxes that are paid in cash as well as changes in working capital, capital expenditures, investments, dividends and the repayment of debt.

Look no further than organizations in financial distress to understand the importance of true positive cash flow and the availability of cash.

Failure to understand the true level of financial obligations

Understandably, organizations pay attention to debt obligations including monitoring covenant compliance and periodic testing through ratios, benchmarking and liquidity analysis. Often ignored are debt like obligations such as leases, future pension and benefit payments and capital expenditures on major projects where there is limited ability to suspend project completion.

Bias for greater leverage

Investors can be critical of management in organizations that have “lazy” balance sheets (that is large cash balances and limited debt). They also are often negatively vocal about having their investment diluted when the enterprise is considering raising additional capital through a new equity issue, preferring cash to be used for share buybacks and higher dividends even if this means taking on additional debt. Executives can fall prone to over-reacting to investor interests and take on more debt than warranted often during strong economic periods only to face solvency or debt service issues in down cycles.Of course, when business conditions change those same investors can liquidate their investment whereas the corporation has no such luxury.

Excessive debt

No individual is comfortable with excessive debt, yet many corporations find themselves with far too much debt often the result of financing acquisitions or major projects. While at the time, the debt levels may have appeared manageable, when business conditions change such debt can become an albatross, impacting on earnings, cashflow and potentially putting the enterprise at risk of loan default or even insolvency.

Mismatch of short and long-term debt

Currently, interest rates on term debt are relatively low and rates on short term debt are even lower. While this latter type of financing instrument is attractive, it has one major drawback – it requires periodic renewal. And therein lies the risk. When there is an alignment of solid corporate performance and buoyant credit markets, roll-over of short-term debt is uneventful. But when one or both turn down, corporations can easily find themselves in an unpleasant credit situation.

Failure to timely refinance and when financing is available

A common financial management error is to delay timely debt refinancing because of expectations of a more favorable future financing climate only to find debt markets are either more expensive or unavailable when debt principal repayments come due creating an unnecessary and sometimes painful liquidity crisis.

Failure to plan effectively for capital needs

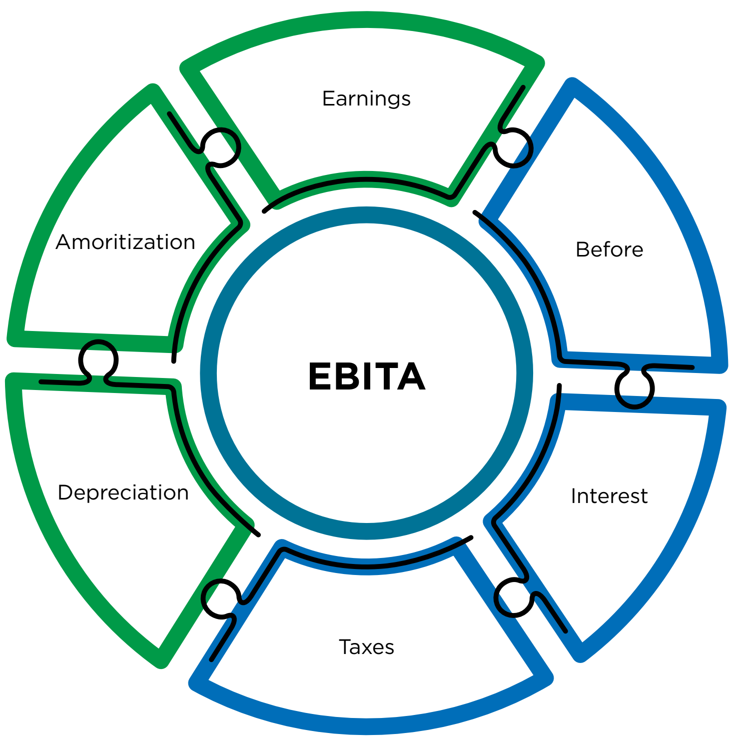
Well-run enterprises seldom have growth plans constrained by lack of capital. Financial planning involves understanding future capital requirements in the context of the enterprise's strategy and buffer capital in the event of a downturn as well as developing an appropriate capital structure that prudently balances leverage with financial stability.

Tools to help boards oversee financial risks

Liquidity stress testing

As witnessed in past financial crises, when businesses are distressed, their focus shifts rapidly from earnings to cash flow. When examining overall risk and the enterprise's ability to withstand a downturn, stress testing the balance sheet and cash generation capability is very important. In working with management, boards should prudently vary assumptions in business plans (often well beyond management's worst-case scenario) to understand the limits of cash generation capability and debt capacity. Interestingly, cash availability can be an issue not only when a business is contracting but also when it is rapidly expanding due to working capital and capital expenditure requirements.

Many companies use EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) as a measure of cash flow. Directors should be mindful that this metric could be misleading because it ignores several important categories that involve cash, including working capital requirements, capital expenditures and debt repayment. To examine liquidity, boards should focus more on the capability of the enterprise to generate cash after all required investments in working capital, long-life assets, and future cash obligations, including debt repayments.



Duration analysis

In periods of tightening credit markets, many corporations' indebtedness may show an imbalance in structure and duration of debt instruments. For example, short-term credit facilities, usually used to fund variations in working capital, may be a source of funding for longer-term investments. Over-reliance on short facilities can pose serious liquidity issues if renewals are at risk. Similarly, longer-term debt that is coming due may be difficult to refinance because of volatile credit markets and poor company performance through recessionary periods. Duration analysis shows each period when debt is due for repayment, projected internal cash flows over the same periods and the gap, if any requiring refinancing. Boards should be kept abreast of pending debt renewal dates and undertake refinancing discussions one or even two years before term expiry.

Defining the capital structure

In understanding the corporation's capital structure on a going-concern basis generally accepted accounting principles may be too limiting. Beyond interest-bearing debt and other conventional liabilities, other off-balance sheet liabilities or obligations should be considered in assessing the strength or gaps in a corporation's capital structure. Examples include pension funding and post-retirement benefit obligations, long-term leases, and obligations for large capital projects.

Liabilities for pensions and other post-retirement benefits can be significant. Their funding can be subject to volatility depending on investment performance, other underlying assumptions, and regulatory requirements. Although not typically categorized as part of the corporation's capital structure, financial obligations, particularly for pensions and benefits, are still liabilities that must be funded and should be considered as part of the firm's debt obligations when assessing financial risk.

Capital-intensive businesses often have large multi-year projects involving significant capital expenditure obligations. Uncommitted capital expenditures technically are not legal obligations; however, in the absence of a liquidity crisis, such expenditures are highly likely to occur and require funding. While capital commitments should be included in a liquidity analysis, it also may be useful to quantify and include such obligations in the capital structure analysis to understand the full breadth of a corporation's liabilities and ongoing commitments.

External review of capital structure

To assist the board to understand the limitations of the corporation's capital structure, it is helpful to periodically engage external advisers to perform a detailed review. This review should pay close attention to the nature and structure of indebtedness. For example, an examination of short-term credit facilities often reveals a borrowing base limitation based on working capital levels that may limit borrowings well below the facility's stated size.

Advisers can provide helpful input regarding the timing of renewals, the state and receptiveness of debt and equity markets, and the characterization of specific lender strategies in volatile or stressed situations. Some strategy consulting firms offer this service at a modest fee. Investment banks also can provide advice, although boards should keep in mind that such firms may have a vested interest in recommending capital-raising initiatives.

For larger corporations, reports from rating agencies may offer another source of objective data on capital structure.

Finally, boards should be mindful that debt and equity markets may not be available at times when term debt comes due or when new equity is required. It is prudent to take advantage of buoyant markets to access capital or renew debt well in advance of due dates.

Capital availability review

While external advisers can help assess debt and equity markets for renewals and additional capital, capital and debt markets can close rapidly in times of volatility. In such times, sources of capital may be limited to monetizing assets through outright sale or sale-leaseback, by stretching vendor payments, and by reducing current assets through various means. Boards should periodically assess cash availability under various scenarios and combinations to determine risk thresholds.

Boards of directors should be wary of industry capital structure benchmarking data and should take cold comfort in knowing the corporation's capital structure is in line with competitors—many of them may be over-levered. Instead, the board should examine the capital structure in the context of capital requirements, variability in results, and industry dynamics.

2.4 Organizational Risks

Overview

Organizational risks are exposures created or not addressed by ineffective management resulting in value destruction or underperformance; exposures related to the insufficiency of competencies and deployment of staff to execute strategy and to perform day to day operational activities; and exposures related to failure to attract, motivate, train, develop, retain, engage and deploy talent including cultural considerations.

Key organizational risks

Leadership

Ineffective leadership may pose the greatest organizational risk to the corporation. Within the corporate context, leadership typically encompasses the chief executive officer (CEO) and other officers of the corporation.

In addition to overall ineffective performance, there are at least five other areas of leadership risk:

1. mismatch of leadership requirements and incumbent capabilities;
2. lack of strategic capability;
3. ineffective succession planning;
4. leadership bias on growth not downside protection, and;
5. influence of incentives.

Organizations never remain static. As a result, leadership requirements often change. For example, enterprises in growth mode require a certain set of leadership capabilities – usually outward facing, aggressive market and customer centric and investment focused.

Conversely, enterprises facing downturns require a different skill set – focused on cost containment, cash preservation and divestment of non-core or underperforming assets. Leadership risk often occurs when requirements change and are unaligned with the CEOs strengths.

The CEO is the enterprise's chief strategist but not all CEOs have the depth of strategic capability that is required. When this is recognized, organizations often bring in supplemental support either by hiring senior level strategists or engaging strategy consultants.

There are only sources of CEO candidates for succession – internal and external executives. Absent a transformative leadership need, the selection of an internal candidate universally is viewed as the lowest risk alternative because of their experience with the enterprise and first-hand exposure to the board. But often this option fails because of either the inability to produce qualified candidates or selecting an internal candidate who ultimately underperforms. Both scenarios frequently result from flawed CEO succession planning. Poor successor development, changing leadership requirements and incumbent CEO bias and timeline are often the root cause.

Effective CEO's excel at balancing returns with risk. But in today's world, there is no shortage of pressure on CEO's to produce growth. This can result in an imbalance a bias for growth not commensurate with risk.

Incentive plan designs and target setting can result in unintended results particularly if they are unbalanced or overly incent for specific results. For example, overweighting incentives for earnings may result in sub-optimizing revenue growth opportunities. Similarly, long term incentive plans tied solely to stock price may result a bias to under-invest for longer term growth.

Talent

- Talent risks fall into several categories:
- inadvertent competency gaps;
- preoccupation with succession planning versus talent quality and depth;
- insufficient emphasis on upgrading middle management talent;
- failure to create opportunities for top performers to excel;
- underpaying top performers;
- lumping training and development together;
- over-emphasis of external sources for staff development; and,
- failure to timely address under-performers.

Inadvertent competency gaps can arise when organizations fail to allocate expenses in accordance with key drivers in the business. For example, what we call “G&A creep” can occur when enterprises over allocate resources to administrative functions rather than its core activities such as sales and marketing in consumer products businesses or R&D in technology companies. This can create insufficient depth of talent in critical areas.

While it is indisputable that succession planning is important, often organizations overemphasize succession rather focusing on talent quality and depth. Having sufficient talent will usually solve most succession issues whereas all the succession planning in the world will be unsuccessful without a robust talent pool.

Understandably, boards focus attention on the senior management ranks. Yet well-run organizations put particular emphasis on strengthening the middle management layer. This is the group usually plays a key role in strategy execution and is a critical source of competitive advantage.

Top performers are critical in any organization. Such individuals are usually driven by the incessant need for greater challenge, recognition and rewards. Failure to create new opportunities and challenges for top performers can be a major reason for retention issues. Similarly, compensation systems that do not pay proportionally more for top versus average performers can cause top performers to seek employment elsewhere.

Training and development are often lumped together yet they are entirely different. Training usually focuses on understanding and improving job functions whereas development is individual based — expanding skills and experience. Typical development plans contain identified educational programs yet often lack the two most important development tools - expanded responsibilities and mentorship.

Finally, talent performance attraction and retention can be negatively influenced if poor performers are allowed to remain within the organization.

Culture

The risk areas related to culture include: failure to embrace cultural evolvement as times change; failure for global organizations to balance desired corporate culture with geographic norms; and, failure to recognize the difficulty and time involved in cultural integration following an M&A transaction.

Successful enterprises recognize that organizational culture cannot remain static and must continue to evolve. Not only is cultural shift necessitated as priorities and conditions change within the enterprise but often it is generational. For example, culture in which the baby boomers were comfortable and excelled in is completely different than a progressive culture required for generation X and the millennials.

It is not uncommon for the international enterprises to attempt to impose a common culture across the entire organization in every geography. This can be both unrealistic and detrimental to the success of the business. Cultural norms in each geography cannot be ignored. Rather, such norms should be embraced and form part of enterprise's culture within the region.

One of the important tasks following the closing of and acquisition is to modify the culture of the acquired organization to align it with the acquirer. Typically, the plan timeline is about two years. The reality in most instances is that cultural change will take much longer to affect and cannot be accomplished without significant management changes.

Changing labor dynamics

In a global market in which low labour costs are an important competitive differentiator, corporations are realigning compensation and work practices in higher-cost jurisdictions and shifting skilled and semi-skilled labour to lower-cost regions, either by establishing operations in developing economies or through outsourcing. Failure to keep pace with changing labour dynamics may pose substantial competitive risk.

Governance considerations

In addressing leadership risk, the board's usual oversight role is altered. Here the board has direct responsibility for selecting and assessing the performance and capability of the CEO and, to a certain degree, other corporate officers.

Assessing the capability of management to develop and execute the vision and strategy for the corporation and operate its daily business goes well beyond quantitative measures such as financial performance and operational metrics. Boards must assess executives' performance on qualitative measures and competencies including strategic capability, talent acquisition and retention, the ability to motivate and align staff with a positive culture, and exercise of good judgment, particularly in risk/reward situations.

Tools to assist boards oversee organizational risk

Leadership assessment

The chief executive officer's capability and performance is critical to the success of any enterprise and also poses significant risk. Most boards undertake an annual review of the CEO's performance. However, such reviews typically focus on and assess periodic results of the business and the CEO's performance against specific annual objectives.

Boards may find it useful to periodically review the CEO against other measures including capability, suitability and scalability. In evaluating these qualities, it is important to establish appropriate criteria, including the criteria that the board would use to hire for that position at that point in time. This would involve first understanding the critical requirements and challenges of the position. In that context, the board would then assess relevant skills and capabilities such as leadership, talent attraction, team building, vision and strategy, internal and external communications, track record, judgment, foresight and risk management.

The review of a CEO's suitability should assess his or her strengths in terms of the business's future prospects and related leadership requirements. Businesses often cycle through periods of growth, stagnation and even contraction. Not all leaders are well suited to manage in all scenarios. For example, in periods of contraction, growth-oriented CEOs are often slow to address cost issues, preferring to retain capability and attempt to grow out of the situation rather than scaling the business within realistic revenue parameters. Conversely, CEOs who manage well in a turbulent environment may be ill suited to lead an organization in accelerated growth.

Scalability refers to the capability to handle a greater level of complexity which may or may not relate to changes in size.

Given that the board's exposure to the CEO through the year is limited primarily to a boardroom environment, developing a comprehensive assessment of the skills and competencies can pose a challenge. An important source is input from the chair of the board or lead director, who typically would have more interaction with the CEO between meetings. Other sources of information can come from the chair of the audit committee through his or her interaction with the chief financial officer, shareholders and industry analysts. Obtaining information about the CEO from direct reports and stakeholders must be handled with extreme care so as not to undermine reporting and other relationships.

Boards of directors should continuously assess the performance of the executive organization, particularly the chief executive officer, and to go further to evaluate his or her skills, capabilities and suitability in light of changing market and competitive dynamics and the trajectory of the corporation's performance.

Compensation bias

Traditional executive compensation with high variability and a significant equity component is designed to align executives with shareholders' interests. By its nature, this also encourages executives to take risks. This is not necessarily negative since businesses take risks all the time.

The art in establishing executive compensation is to drive intended behavior, which includes prudently matching reward with risk. In public companies, investors are increasingly vocal about creating short-term shareholder value, placing significant pressure on CEOs to deliver improved results quarter after quarter. The combination of investor pressure for improved results, significant equity-based compensation, and lucrative termination arrangements can lead to unintended excessive risk-taking. Boards should ensure that such compensation practices are not so heavily skewed that undue risk-taking could result.

The criteria and structure of compensation arrangements for the chief financial officer could differ from the CEO's arrangement to reward for financial prudence. Independent advice on the at-risk component of executive compensation can be useful.

Tone at the top

The term "tone at the top" is often used in connection with the internal control environment. It equally can be applied to assess the leadership team's tolerance and prudence in managing risk. A board may ask itself if the corporation's executives are appropriately balancing risk with reward and acting prudently in higher-risk situations or in significant transactions.

Capability of risk management staff and ERM systems

The board should periodically assess the strengths, depth and independence of staff involved in managing day-to-day risks and the maturity and robustness of the risk management systems and processes. Resource limitations, ad hoc risk management systems, and absence of defined accountabilities should heighten board concerns.

Talent review versus succession planning

Most boards conduct periodic succession planning reviews to assess management continuity issues at the executive level. Most succession planning analysis identifies potential successors in terms of capability and timeline for readiness to move into more senior positions. For some corporations, succession planning is regarded as more of an academic and required exercise than a useful tool to map and prepare for future organizational changes. Boards rarely look back at previous succession plans to determine their validity and effectiveness.

Boards may also undertake a talent review to address the depth of talent in the organization and its scalability. Boards could ask questions such as:

- What are the higher-impact management positions that most directly affect results?
- What are the performance ratings of the incumbents currently in those positions?
- Are those individuals capable of managing should the business expand by 30%, 50%, or 100%?

While succession planning is an important board function, it has little value if the enterprise's talent pool is insufficient. A robust talent assessment in all key disciplines will assist boards evaluate the succession plan's effectiveness.

CEO planned retirement

Corporations may be fortunate to have an orderly CEO succession plan in which the CEO retires and his or her replacement has been identified. In many cases, the timing of the CEO's retirement is determined by a personal agenda. Boards should be aware that an orderly CEO succession could create a lame duck situation or leadership stagnation. Soon-to-retire CEOs could be less likely to drive forward towards

a longer-term vision, and they could become more risk-averse. While delicate, in situations where a CEO successor is in place and ready to assume the top position, the board may wish to accelerate the timing of the incumbent's retirement, with appropriate treatment for an earlier-than-planned departure.

CEO/chair succession

In certain instances, often in a planned succession situation, when a CEO steps down from the position, he or she may be considered to take on the role of chair of the board. While the CEO brings extensive company experience and knowledge, it is not uncommon for the CEO to be overly supportive or lack objectivity in assessing their successor's performance. Additionally, with today's fast-changing pace of business, previous CEOs may become out-of-date but remain unduly influential at the board. Either situation can create risk. Additionally, current securities regulations related to independence limit the direct involvement of former CEOs in certain board matters.

Boards should exercise extreme caution in considering the former CEO for the role of chair of the board. While retaining his or her experience and knowledge is tempting, the benefit must be weighed against the risk of lack of independence and objectivity.

2.5 Operational Risks

Overview

Operational risks are typically broad and often unique to each corporation. Operational risks are generally defined as the exposures related to the day-to-day running of the business.

Key operational risks

Benchmark metrics with root cause analysis

Failure to utilize internal and external operational metrics with root cause analysis can result in uncompetitive performance and customer dissatisfaction.

Operational metrics should contain internal and competitive benchmark data and incorporate leading and lagging indicators. Examples of customary lagging indicators would include actual sales data and sales and marketing expenses compared with plan. Typical quarterly explanations around unfavorable variances might involve the state of the overall market, the timing of product launches and related expenditures on sales and marketing. These lagging indicators are easily measurable are backward focused and output oriented. On the other hand, leading indicators are predictive measures and focus more on the underlying reasons for target shortfalls. Leading indicators for example related to the success of new products would include initial customer satisfaction data, repeat customer orders and sales returns — all indicative of future sales performance.

Having relevant benchmark data can be very insightful. This information would include both lagging and leading indicators and be internally and externally focused. For example, internal benchmark data might include comparative revenue by region, identifying the most to least successful results by region as well as leading indicators such as regional lead generation information and customer awareness. Competitors never sit idly by and their actions are often unpredictable, so tracking competitor activities is important. In the example, valuable benchmark data might include competitive product performance comparisons, competitor customer awareness and satisfaction information.

Armed with leading, lagging and benchmark data, while interesting has little value without insightful root cause analytics. There are various methodologies to conduct root cause analysis but generally the distinction must be clearly made between the symptom and the disease by continuing to probe the issue using a series of “why” questions.

Customer dissatisfaction

Failure to meet customer expectations has strategic and operational implications. Tracking customer satisfaction using objective data can be useful in pinpointing areas requiring operational attention such as product quality and delivery performance.

Technological competitiveness

In an era when technology is creating enormous opportunities for disruption, virtually every organization has to either embrace technology advancement or be left by the wayside. This is both a strategic and operational risk. Benchmarking technological competitiveness has its challenges particularly understanding the potential of new entrants armed with new technologies.

Operational disruption

Operational disruption can take many forms. It could be interruption at a key facility, the loss or disruption of computer-based systems and networks or unanticipated labor dispute. All our operational exposures with potentially significant consequences.

Cybersecurity

In recent years cybersecurity has been at the forefront of the board's interest in risk — for good reason. Failure to protect sensitive, confidential data and to maintain the efficacy and reliable of internal computer-based systems are critical and often highly publicized exposures.

Capacity constraints and optimization

Capacity constraints whether it be in manufacturing or service-related industries poses risk around customer service and satisfaction as well as having serious economic consequences as does the failure to optimize capacity particularly in periods of economic downturn.

Vendor and distribution dependencies

Third-party dependencies always pose risk particularly with limited alternative sources of supply. Such exposures tend to be difficult to mitigate because of switchover time and cost.

Determiningwhichoperationalrisksarecriticalrequiresmapping the strategic drivers of the business and key competitive differentiators. For example, technology leadership may be critical in an advanced electronics business but less so in food distribution. Operational risk often involves strategy execution such that boards of directors should focus risk assessment on those operational elements that represent strategic and operational concerns that are critical to the success of the enterprise.

Tools to assist boards oversee operational risk

Customer satisfaction - independent customer interviews

As discussed in section 2.1 Validation of Product/Service Differentiation, comprehensive customer interviews can provide excellent insight into the effectiveness of a corporation's strategy and pinpoint operational issues, including product reliability and functionality, service quality, perceived value for money, delivery performance. These interviews can also yield useful competitive benchmarking information. Reviewing trend information from periodic web-based customer surveys also can highlight degrading operational performance.

Product and service failure analysis

Where product quality is a major risk or the board has concerns with product quality, analyzing product failures before shipment (as identified through quality assurance) and the amount and nature of products returned from customers can help pinpoint underlying operational flaws.

Capacity constraint analysis

Where corporations face capacity limitations that could create a performance risk, it is helpful for boards to review capacity utilization and constraint analyses to identify capacity limitations at various volume levels, the reason for capacity constraints (such as buildings, equipment and labour and staffing for service organizations) and the requirements and timeline for alleviating such constraints.

Competitive margin analysis

When a corporation consistently earns higher margins (gross, operating and pre-tax margins) than its competitors, this usually stems from some form of competitive advantage. Differentiating factors could include scale, products, technology, product mix, manufacturing cost, distribution, sales and marketing and administrative efficiencies.

Detailed benchmarking of a corporation's margins against leading competitors may provide useful insight into strategy, business models and operational performance.

External cybersecurity reviews

At the risk of stating the obvious, utilizing external sources to assess and test information systems security is vitally important as is using outside expertise to design appropriate controls and detection systems. In depth board updates, at least annually are warranted.

Vendor dependencies

Reliance on one (or very few) vendors and distributors can create significant operational risk. Boards should understand the critical areas of dependencies and periodically review vendor financial health, capacity breadth and limitations (such as single versus multiple facilities), business relationships, competitor positions with the vendors (such as preferential treatment in periods of capacity constraints), and alternative sources of supply.

2.6 External Risks

Overview

External risk is any exposure related to potential events or occurrences beyond the direct control of the enterprise.

Interestingly, the majority of risks listed by public companies are threats outside of their control (and there is no shortage of these) yet in examining a comprehensive risk universe some of the most important risks are self-inflicted.

Key external risks

Competition

Competition is usually an enterprise's greatest threat. Yet, ironically, management and board rigor around competitive analysis is often perfunctory at best. Quarterly board packages frequently contain cursory information on competitor activities. Even strategic plans fall woefully short of competitive assessments, often limiting the analysis to comparative strengths and weaknesses and incomplete benchmarking data.

Common flaws for boards and management in understanding and addressing competitive risk includes underestimating the effectiveness of competitors' strategy and resources while at the same time overestimating their own. Assuming competitors are frozen in time is another shortcoming. These failings inevitably lead to failure to develop a truly competitive, executable strategy and ultimately, underperformance.

Macroeconomic environment

Although often largely anticipated, variations in global and national economies is a well-known exposure. However, unforeseen macroeconomic volatility can pose substantial risk to an enterprise, ranging from reduced market demand to changing competitive behaviour to limitations on liquidity and capital availability. The challenge under either scenario comes from estimating the extent and duration of both negative and positive changes.

Geo-political arena

Changes in the geo-political environment Including changes in public policies, laws and regulations can impact an enterprise negatively and in rare circumstances it could be beneficial.

Commodity prices

Depending upon the industry sector changes in commodity prices can directly or tangentially impact the enterprise.

Foreign exchange

For international enterprises foreign exchange rate fluctuations can affect their economics as well as financial reporting.

Interest rates

Organizations with variable rate debt are at risk for rising interest rates.

Industry structural change

In the current era, the amount of industry structural change has been unprecedented, largely due to the advent of new technologies. Obvious examples include the retail, taxi and hotel industries as firms such as Amazon, Uber and Airbnb have gained considerable traction in those spaces.

Structural or cyclical changes within the industry sectors in which the enterprise participates can create high-risk situations. Boards of directors must be constantly vigilant in early identification of changes in the external environment. They also must be aware of transformative technological, macroeconomic or industry-specific forces that could significantly alter the enterprise's performance, trajectory, or competitive position.

Tools to assist boards oversee external risk

Macroeconomic volatility

As historical events have shown, corporations will face periodic economic downturns that are often difficult to foresee. Predicting the duration and depth of a downturn is equally difficult. Given the major risks that unforeseen and uncontrollable external events can cause for corporations, boards should address a corporation's capability to withstand economic shock through the use of tools such as stress testing of
capital structure/liquidity and assessment of ability to rapidly reduce costs in anticipation of reduced revenue.

Industry cyclicality

Many industries are subject to cyclicality that arises from macroeconomic factors or industry specific competitive forces or behaviours (such as chronic capacity expansion). In cyclical situations, boards should understand competitive dynamics in periods of contraction (such as pricing and capacity management) and obtain clarity on the corporation's strategy to sustain itself through tough periods.

This strategy should address management's capability and ability to foresee a cyclical downturn, its proactive plan to reduce capacity and costs (without impairing its customer value proposition), and its capital structure/financing strategy.

Industry structural change

Structural change within an industry often may seem to be part of conventional cyclicality, and it is not always easy to detect. The 2008 recessionary effect on the North American auto industry is obvious. However, the industry and its supply base underwent a major wave of structural change due to foreign ownership, offshoring of production and research and development functions, restructuring of dealership networks, and refinancing activities. The competitive landscape for this industry has irrevocably changed. The second wave of structural change occurred several years later with the advent of viable electrical powered cars and trucks. Autonomous vehicles no doubt will be the next catalyst for structural change in the auto sector.

As industries undergo macroeconomic shocks or industry-specific transformational events (such as digitization or competitor consolidation), boards should be cognizant that the strategic drivers and competitive dynamics may require a significant change in fundamental strategy.

Black swans

In Nassim Nicholas Taleb's 2007 book The Black Swan, Taleb regards almost all major historical events, scientific discoveries and artistic accomplishments as "Black Swans": undirected and unpredicted. That is, the occurrence is not predictable, it has significant consequences, and, in retrospect, the event can be rationalized as if it had been expected. A startling example is the April 20, 2010, British Petroleum (BP) offshore oil rig explosion, killing eleven workers on the rig, spilling tens of thousands of barrels of crude oil into the Gulf of Mexico, and necessitating billions of dollars in clean-up and restitution costs. It is also a painful example of how multiple events or conditions occurring simultaneously contribute to a devastating outcome.

Regrettably, there are no obvious toolsets for boards to deal with such events. However, what is clear is that BP's survival through this incredible crisis is largely due to the strength of its balance sheet. While financing theory attempts to optimize the capital structure through appropriate debt leveraging, the consequences of lack of liquidity and debt capacity in a crisis situation can prove devastating, if not fatal. Boards must always be wary of Black Swan events and, to the extent practicable, maintain a conservative bias to debt financing.

"We don't know what we don't know" is a common phrase and an equally common concern among board members. Black Swan events occur infrequently but when they do, the results can be calamitous. Boards that bring a conservative bias to debt financing will never regret this decision in retrospect.

2.7 Compliance Risks

Compliance risk can be far-reaching, covering all of the enterprise's exposure to breach of laws, regulations and ethics/codes of conduct. The extent of such exposure can vary widely depending on the locations in which the enterprise operates, its industry sector and entity-specific characteristics.

For most public corporations, board oversight of compliance is well entrenched and often largely delegated to committees. For example, public reporting and disclosure requirements are handled under the mandate of the audit committee. Employment, compensation, pensions and related matters usually are the domain of the compensation committee. Compliance risk is discussed comprehensively in numerous other publications, and so we have limited our discussion of exposure to compliance risk to the few important observations below.

Heightened exposure to compliance risk can occur when companies operate in multiple jurisdictions that have unique domestic laws and regulations or where business practice and cultural norms may depart from rules governing the parent company. For example, the United States imposes a far-reaching Foreign Corrupt Practices Act (FCPA), which applies to all U.S.-based issuers. Many international companies have encountered compliance issues arising from lack of knowledge or lack of training in foreign jurisdictions where accepted practices violate FCPA provisions.

Pharmaceutical, energy and natural resource industries are examples of sectors that are subject to industry-specific regulations that can pose significant risk.

Code of conduct breaches or acts of fraud, particularly those involving senior executives, can expose the enterprise and individuals to well-publicized legal liability.

Broadly speaking, the consequences of a compliance failure fall into three categories.

1. specific penalties and other sanctions for violating specific laws and secondary regulations
2. direct or derivative claims from affected parties such as shareholders or other claimants seeking damage claims and potentially leading to costly litigation
3. damage or loss of reputation that can significantly affect shareholder value and create adverse consequences for customers, employees and/or other stakeholders

2.8 Hazardous Risks

Hazardous risks are highly diverse, covering a wide range of potential occurrences. The nature of hazardous exposure to an enterprise varies depending on its type of business and its locations.

Hazardous risks pose threats to property, environment or health. Hazardous risk by its nature is difficult to predict and may never occur. However, a hazardous incident can create an emergency situation with far-reaching financial impact and other implications.

Although hazardous risk may be segregated into numerous categories, for purposes of this discussion, we categorize these risks in three groups:

1. natural disasters
2. environmental risk
3. occupational health and safety

Natural disaster exposures are extremely broad, commonly covering: atmospheric hazards such as hurricanes, tornadoes, extreme temperatures; seismic hazards earthquakes, landslides; hydrologic hazards — flooding, soil erosion, and drought. Susceptibility to such hazards is location-specific. That is, certain locations may be more or less exposed to certain types of natural disasters. These largely unpredictable hazards can pose risks to property, the environment and health.

Environmental risks generally involve adverse effects on the environment arising from emissions, effluents, wastes and resource depletion. Unlike natural disasters, which cannot be prevented even where the cause is known, when considering environmental risks, it is important for the organization to examine the potential underlying causes. Typical causes include: transportation hazards such as incidents involving dangerous materials; infrastructure hazards such as gas line breaks; industrial hazards typically involving human error or negligence causing or involving air, soil and water pollution, hazardous material storage or processing, explosions and fire.

Common occupational health and safety hazards include: equipment operation and transportation accidents, workplace violence, communicable diseases, slips and falls, toxic exposure, particularly to chemical and gas, electrocution or explosion, repetitive motion and ergonomic injuries, and hearing loss.

The consequences of hazardous occurrences generally involve property loss or tangible asset value destruction, third party damages often involving litigation, regulator-imposed sanctions or penalties, and reputational damage.

2.9 Reputation

We assert that there is no such thing as reputational risk. Rather, reputational damage is the negative consequence arising from the occurrence of other exposures. That being said, a corporation's reputation is a valuable intangible asset that clearly falls within the board's broader responsibility for safeguarding the enterprise's assets. Clearly, loss of reputation can greatly affect shareholder value.

Simply put, reputation refers to the perception of the enterprise by various stakeholders. Typically, key stakeholder groups include investors, customers, employees, suppliers and governments. Perceptions may differ among stakeholders and could be at odds with how the entity views itself. For example, an enterprise that consistently delivers positive financial results is likely to have a positive reputation among investors, analysts and lenders. That same enterprise may be perceived negatively by its employees because of its high performance culture and demanding work environment.

Additionally, reputation is dynamic. Stakeholder perceptions may shift for various reasons including financial performance, specific adverse occurrences, unfavorable media coverage, and changes or actions of the corporation's leadership.

> "It takes 20 years to build a reputation and five minutes to lose it. If you think about that, you'll do things differently."
>
> \- Warren Buffett

While there is not a shortage of occurrences that can adversely affect an enterprise's reputation, broadly speaking, they include:

- product efficacy
- production processes and quality
- employee safety
- environmental practices
- compliance (including breach of ethics)
- unanticipated negative financial performance

These exposures have been captured as part of the risk identification process as set out in this document. The key issue for boards is whether the consequential analysis captures and accurately quantifies the impact of damage to the enterprise's reputation.

3. Risk Tolerance and Appetite

Overview

Every corporation faces risk. Appropriately balancing risk and reward to generate satisfactory returns to shareholders is fundamental to any business.

For purposes of the following discussion about the corporation's approach to risk, it is important to understand what is meant by the terms "risk tolerance" and "risk appetite." Perhaps the simplest way is to think about these two concepts as a hierarchy.

Risk tolerance reflects the limit of risk set by the organization that it would not willingly exceed. This limit can be expressed in quantifiable terms, such as level of invested capital, level of indebtedness, amount of allocated resources – both human and infrastructure. It could also be strategic. As an example, an enterprise may decide it has zero tolerance for doing business in a specific geography, it may also include other subjective limits related to reputational consequences.

Risk appetite is the level of risk that the enterprise is willing to accept in pursuit of its longer-term goals, provided there is a commensurate return.

The board and the senior leadership organization should be aligned in their understanding of these concepts and, most importantly, the resultant parameters of risk tolerance and risk appetite.

Risk tolerance

Without a real-time issue or potential transaction to address, board discussions about risk tolerance tend to be academic. However, these discussions should take place for several reasons. They provide an opportunity for board members and enterprise executives to align their determination of the maximum risk the enterprise is prepared to absorb. They also present management with important information and parameters for strategy development. For example, setting dilutive earnings limits for potential acquisitions and boundaries for capital investments should help management develop appropriate strategic and financial plans within those parameters.

Risk tolerance should be not be examined or quantified in isolation, nor should it be static. Risk tolerance should be determined in the context of the strength and stability of the enterprise and the industry in which it participates, the enterprise's maturity, and its positioning within its industry. Risk tolerance should also be considered in relation to strategy and related risks as well as other critical, identified risks. The quality of risk management systems, including the robustness of mitigation alternatives and the availability of viable response strategies, are also factors to consider. Additionally, stakeholder expectations concerning risk should not be ignored.

All these factors are known and to a greater or lesser degree can be quantified. The final factor boards should think about is the unknown—the so-called Black Swan and the compounding effect of simultaneous adverse occurrences as discussed in section 2.6 External Risk.

Shareholder and stakeholder expectations

Risk tolerance should be understood not only in the context of the industry in which the company participates and company performance it should also consider Shareholder and stakeholder expectations.

Consider the following, potentially counter-intuitive example. A well-financed industry leader in a mature, stable industry such as a utility should have a relatively high tolerance for risk. The consistency of its earnings and cash flow and strength of its balance sheet could support a relatively large higher risk undertaking while maintaining sufficient resources to sustain a significant adverse consequence. However, investor expectations regarding sustainability of growth and consistency of dividends may materially lower the board's risk tolerance parameters. Conversely, an early-stage technology or mining exploration company with limited resources may have a higher risk tolerance. Its business model is based on a high risk/ high return strategy, and its investors recognize the speculative nature of such investments.

Strategic and other critical identified and quantifiable risks

Conventional thinking views risk tolerance as the potential adverse consequences of strategic decisions. Progressive boards treat risk tolerance as a critical input to strategic and tactical decisions. However, the consequential analysis and prioritization modules set out in sections 5, 7 and 8 should assist the board to understand and quantify potential exposures to the enterprise in setting risk tolerance levels.

Culture, quality of risk management systems, mitigation alternatives, and response strategies

A robust risk management system, including early warning systems and an embedded culture that identifies and balances risk, are important factors in counterbalancing potential exposures. While assessing the quality of risk management systems is somewhat subjective, a fully resourced risk management organization with well-developed, mature systems and processes adds protection to the enterprise and provides boards with added comfort in setting tolerances for risk. In addition, understanding how risks may be effectively mitigated are also factors in quantifying risk tolerance.

In setting risk tolerance parameters, the board and management should be aligned in understanding the sustainability of the enterprise and the consequences of individual and interconnected risks.

Risk appetite

While determining risk tolerance is a passive exercise in setting limits, determining risk appetite is actionable and can be a driving force for growth for an enterprise. While risk tolerance is akin to limiting exposures, risk appetite is about optimizing the enterprise's risk/return profile.

Risk appetite is the level of risk that the enterprise is willing to accept in pursuit of its longer-term goals, provided there is a commensurate return.

As the example below shows, risk appetite parameters are similar to risk tolerance but with one clear distinctions. Risk appetite should also include a desired or expected rate of return or similar measure.

In setting risk appetite, board members should consider the same factors as they do in setting risk tolerance while overlaying expectations around returns. Some argue that the degree of risk appetite should vary depending on the nature of the decision - whether strategic or tactical. Others believe that risk appetite should be scaled against minimum returns. That is, the enterprise should set minimum return and investment guidelines but, for higher-than-minimum returns, risk appetite may increase. There is no right or wrong answer, but the question is certainly worthy of board-level discussion.

Business conditions and company performance change, and so risk appetite must be measurable, actionable and dynamic. In some cases, defining risk appetite may be straightforward, but defining expected returns may pose greater difficulty. For example, the board may set risk appetite for an acquisition at say $200 million with a minimum return of 15%.

Companies make acquisitions for a variety of reasons, generally to produce incremental returns. However, sometimes acquisitions are made for defensive reasons, for example, to protect a weakening market segment position. In these cases, returns must be measured in terms of income and cash flow preservation, rather than incremental returns.

Underpinning risk appetite is the board's confidence in the organization's capability to manage risks at this level and to produce the minimum expected return.

Example

Parameter	Risk Tolerance	Risk Appetite
Capital invested in a project or acquisition	$300 million	$200 million with a minimum internal rate of return of 17%
Total debt to EBITDA	3.0 × EBITDA	2.5 × EBITDA
Cumulative earnings dilution over three years	Breakeven for three Years	30% of current earnings per share provided ultimate return of not less than 30%
Organizational change	Loss of 20% of the executive team	Loss of 10% of the executive team
Marketing spending on new product introduction	$20 million	$15 million

4. Mitigation and Response Strategy

Overview

Enterprises face no shortages of risks every day that can arise from external sources as well as those self-inflicted. An effective enterprise risk management system has both mitigation and response strategies designed to lessen the impact of any material adverse exposure. Mitigation and response strategy are terms often used interchangeably, so it is important to make the distinction between the two. Mitigation strategy involves actions that are put in place prior to and occurrence that reduces or even eliminates the exposure's adverse effect whereas response strategy refers to actions taken after the event that reduces the impact.

Effective risk management systems employ many different types of mitigation and response actions depending upon the nature and the quantum of the exposure.

Mitigation

Risk avoidance

In the extreme, one mitigation strategy is to avoid the exposure all together. Risk avoidance should take place when the adverse consequence of an exposure exceeds the enterprise's risk tolerance level. That is, the limit of risk the enterprise would be unwilling to exceed. An example of risk avoidance is when an enterprise would not make an investment such as acquisition that resulted in taking on additional debt above a predetermined level. Risk tolerance and related avoidance also could be expressed in strategic terms such as stated unwillingness to enter certain high-risk geographic markets.

Reduce to predetermined limits

The next layer of mitigation strategy involves reducing the exposure within predetermined limits. Using the previous example, the enterprise would limit its investment in an acquisition such that the resultant increase in indebtedness fell under its tolerance level.

Managerial oversight

The most prevalent risk mitigation strategies involve offloading exposures and controlling risk through managerial oversight and intervention. They are not mutually exclusive. In fact, they often go hand-in-hand.

An obvious way to offload risk is through insurance programs typically designed to address certain types of exposures. These may relate to liabilities that could arise from actions taken (or failure to take action) such as for potential claims for defective products and for property damage arising from negligence of Acts of God.

Another way to reduce risk is through a joint risk sharing structure or programs. This involves partnering with a third party that is willing to accept part of the exposure in return for sharing in the upside. This may take the form of a joint venture or some other risk-sharing structure.

Risk mitigation through proactive managerial activities is the most prevalent. This can take many forms. Examples include product quality assurance programs and comprehensive loss prevention systems that can range from such things as employee safety to cybersecurity.

Mitigation strategy related to external, operational and financial risks are fairly straightforward. Mitigating strategic risk can be complex. For example, how can an organization lessen the exposure arising from failure to execute a critical strategy? Mitigation largely would be through managerial control with active board oversight. For example, the strategy would be broken down into detailed initiatives with specific assigned accountabilities, timelines, milestones and appropriate reporting, follow up and corrective action systems.

Response strategies

Response strategies are reactive and are designed to limit the damage to the enterprise following an adverse occurrence. A simple example would be an automotive product recall to repair a defective part.

Well-defined response strategies are critical when there is significant residual exposure after mitigation in financial and/or reputational terms and when the type of response can materially lessen the impact of an occurrence. These are typical crisis situations. They could arise from an external event such as a natural disaster or the loss of a major customer. They can also be self-inflicted such as a food company inadvertently distributing a tainted food product.

Alternative or contingency plans to lessen the exposure and speed recovery are vital in such high-risk situations. While such plans may sit on the shelf and may never be put into action, they will pay huge dividends if an adverse event occurs. The most important aspects of such plans are defining and assigning the authorities and specific tasks to the extent possible. However, it is almost impossible to anticipate the exact nature of a crisis, so in practical terms, decision-making authorities and resource planning are the most important.

Boards should look to management to provide response strategies for very high impact residual risks. Those strategies should then be extended to specific risk response plans that are regularly reviewed by senior management and the board.

The board is likely to identify several risks that are clearly beyond the corporation's control and unable to be fully mitigated. That is to be expected. In these cases, the board should pay particular attention to the ability of the corporation's capital structure to withstand shock. Companies with strong balance sheets often are able to survive critical unanticipated occurrences. Conversely, the bankruptcy courts are littered with companies without the capital structure to withstand unforeseen events.

Example

Exposure	Mitigation Strategy	Response Strategy
• Ineffective strategy development or execution	• Ongoing formal assessment of success using key performance indicators, external benchmarking, and other early warning tools (see Monitoring in section 9) • Focus on rapid corrective actions when objectives are not being met • Development of alternate strategies and formal contingency planning	• Formal contingency planning around critical strategies particularly those heavily impacted by variations in assumptions
• Loss of a major customer	• Executive-level attention to customer relationships, performance and satisfaction Independent customer surveys • Accelerated and extensive programs to solicit new customers • Expansion of critical services not easily replicated by competition • Strengthen capital structure to allow the corporation to sustain short-term losses and fund operational restructuring	• Cost reduction planning • Stakeholder communication plan — other customers, lenders, investors, employees, vendors

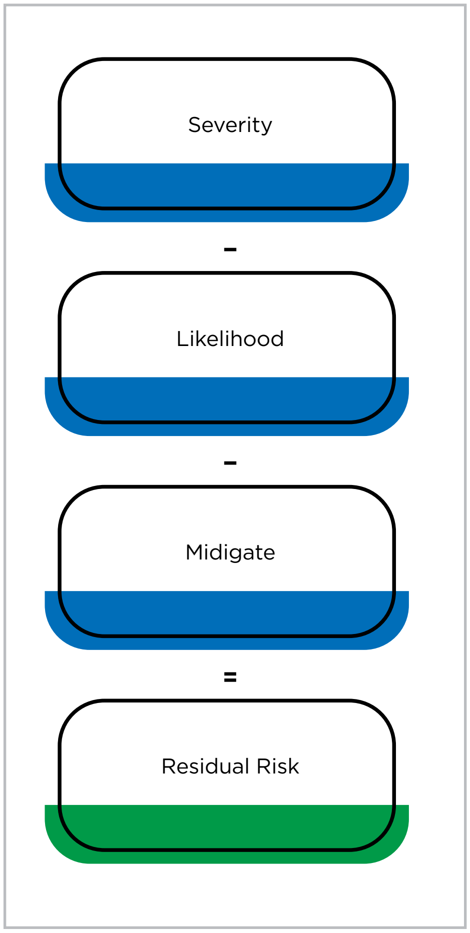
Exposure	Mitigation Strategy	Response Strategy
• Significant loan covenant violation	• Tight financial, working capital and operational management, focusing on near-term liquidity • Heightened executive-level communication with lenders, with early and transparent disclosure of potential risks to covenant compliance • Expansion of lender base, including off balance sheet financing • Contingency planning including possible asset divestitures Long-term capital raising	• Liquidity contingency planning • Stakeholder communication plan
• Unplanned leadership loss	• Continuous updating of unplanned executive succession plan • Accelerated executive development programs • Talent upgrade through selective recruitment (potentially displacing competent but limited potential executives and senior level managers)	• Identification of permanent or interim replacements
• Unforeseen production disruption	• Manufacturing capacity planning (including green-field sites or acquiring alternate facilities) • Inventory planning • Business interruption insurance programs Heightened attention to labour matters • Reciprocal competitor capacity arrangements in the event of certain occurrences (such as acts of God)	• Contingency planning shiftproduction; inventory management • Stakeholder communications

5. Analyze Consequences

Overview

In overseeing enterprise risk, an initial task in the process is to identify and log the major risks into various categories. The conventional three-stage approach is to determine the residual exposure for each risk by assessing and ranking each risk first across two dimensions - severity and likelihood of occurrence. The final step is to identify ways to mitigate the exposures of the higher-rated risks.

CONVENTIONAL CONSEQUENTIAL ANALYSIS



In our view, conventional consequential analysis has several flaws in both the sequencing and depth of analysis including:

- the analytical model quantifies material risks and assess the likelihood of their occurrence at the same time. When the probability of occurrence is low, such risks are often dismissed prematurely
- the model fails to account for risk arising from the time horizon between recognition of the presence of an adverse condition or event and the time available to respond
- risks are often addressed in silos rather through an understanding of the interconnectivities and the compounding effect of risks that occur simultaneously, as discussed in the next section
- severity analysis fails to fully consider the impact of reputation damage

We assert that the consequential analytical framework should be expanded to address these deficiencies and include a several new dimensions as shown in the next section.

New model for consequential analysis

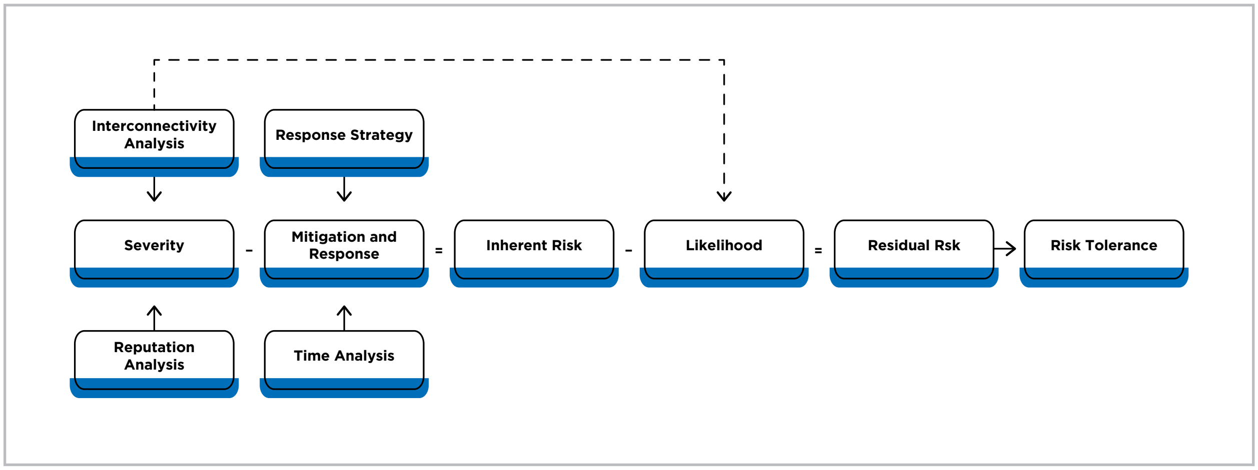
The multiple-stage model set out below is different from the conventional approach in three ways:

1. it adds new elements of analysis— interconnectivity and reputation impact, on the severity analysis and time analysis associated with mitigation
2. it re-sequences the process to determine inherent risk by considering mitigation before assessing likelihood of occurrence
3. it adds two additional process steps—considering response strategies as part of mitigation, and comparing residual risk with risk tolerance

The main goal in adding the additional elements of analysis is to ensure that the resulting analysis of residual risk produces a result that enables the board to focus its efforts on only those risks that:

- threaten viability of the enterprise
- destroy significant asset or shareholder values
- materially affect longer term performance
- are outside of the enterprise's risk tolerance parameters

NEW MODEL FOR CONSEQUENTIAL ANALYSIS



Severity of risk

Having identified various types of risk, the first step is to determine the potential materiality of each individual risk. It may be sufficient to classify such risks in categories such as:

- Very High - threatens the viability of the corporation
- High - results in a significant degradation in performance or reduced asset valuation
- Moderate - could affect results, performance or asset values but not severely
- Low - no material effect on the corporation

It is vitally important that boards of directors clearly separate the analysis of the severity of the exposure from the likelihood of occurrence. That is, the severity of risks should first be calibrated in rank order of impact without regard to possible occurrence, thus capturing material risks before discounting for probability. Rank ordering risks by severity without regard of the likelihood of occurrence helps ensure the board will not dismiss potential major risks prematurely.

Perhaps the most important issue for boards to consider in assessing the impact of an exposure is to consider reputational consequences arising from a specific occurrence. Reputational damage could have a much greater impact on shareholder value and long-lasting collateral damage than the occurrence itself. For example, the recall of a tainted food product by a food manufacturer can result in dramatic and punitive effect on market share, revenue and margins far greater that the cost of the product recall and subsequent litigation. Additionally, depending on the nature and size of the adverse occurrence, the level of effort and cost to rebuild a blemished reputation can be enormous.

A robust consequential analysis should include a broad understanding of the far-reaching impact of a damaged reputation arising from an unanticipated event. From a reputational oversight perspective, boards may wish to focus on four broad areas:

- identifying potential occurrences that could materially impact the enterprise's reputation
- quantifying the reputational impact of such occurrences (with particular attention on the interconnectivity analysis)
- oversight of response strategy, including crisis and related communication planning
- ongoing monitoring of potential triggering events and preventive measures and processes to address root causes

The severity level may be further adjusted following interconnectivity analysis set in section 6.

Interconnectivity analysis

One of the flaws in risk analysis is to examine each risk independent of other exposures. Interconnectivity analysis refers to considering the compounding effect of multiple, simultaneous occurrences that fall into three broad scenarios: the compounding effect of interrelated risks; the compounding effect of unrelated occurrences that arise simultaneously; and the impact of a single event combined with several higher risk conditions that have present for a considerable period. Interrelated risks refer to situations when one negative event arises, triggers one or more other adverse consequences. The compounding impact of several unconnected events occurring concurrently, often referred to the "perfect storm" is not uncommon. This will be discussed in more detail in section 6.

Mitigation and response strategy

The next step is to determine the degree to which an exposure could be lessened by taking proactive and reactive actions. Mitigation are proactive activities developed to minimize inherent risk prior to an occurrence. Response strategy are steps taken to lower the exposure after the event has occurred Mitigation and response strategy is discussed in more detail in section 4.

Time analysis

Time analysis examines response strategy in terms of the time required to identify and respond to an occurrence. We have chosen to refer the results of the time analysis as "clockspeed."

Risk clockspeed is a phrase coined by Keith Smith in a 2007 paper published by the Institute of Risk Management.

Risk clockspeed is defined as the rate at which the information necessary to understand and manage a risk becomes available.

Slow clockspeed risks occur with some reasonable forewarning and allow sufficient time to implement a contingency plan whereas fast clockspeed risks are those that tend to emerge unexpectedly with very limited time to react.

Smith argues that with globalization and technological advances, management and boards are called on to make more decisions more quickly, in situations with greater complexity at a less forgiving pace.

We introduce time analysis to assess detection and response time because available response mechanisms can be substantially different. For example, the unexpected and lengthy disruption such as a fire at a key facility can have a major impact on the enterprise and would require an immediate response. Conversely, a potential work stoppage arising from a labor strike can be foreseen and steps taken to maintain operations. The unanticipated loss of key executives, while concerning, may not require an immediate response and can be mitigated with interim appointments while a longer-term solution is sought.

Likelihood of occurrence

Once the inherent risk is determined, the risks should then be classified by the probability that the event of condition will materialize. Again, a High, Moderate or Low scale should suffice. There is no exact science for assessing likelihood of occurrence. Rather, the board and executives should apply judgment based on history, experience and knowledge of the industry and the enterprise.

It is critically important in assessing probabilities of occurrence, that improbable risks are separated from unpredictable exposures and the duration is considered. This is best illustrated by examples. A facility may be located in a geographic area that has a history of very infrequent hurricanes so the occurrence in the next two or even five years is highly improbable - although having severe consequences. That being said, the arrival of a hurricane is highly unpredictable — it could happen at any time. Conversely, a labor disruption arising from failing to complete a new collective agreement when the current agreement expires in three years is highly improbable in the next two years but that probability and predictability substantially increases in year three.

Importantly, the probability for each risk should be assessed against time parameters. That is what is the probability of an occurrence in the next two years. How would that probability differ over a five-year horizon?

Residual risk

Residual risk is the net exposure after considering mitigation and responses strategies and applying a discount for probability. This residual risk should be compared with the enterprise's risk tolerance. If the residual risk exceeds tolerance levels, then action must be taken to either lower or eliminate the exposure.

Heat mapping

A simple but useful tool to pictorially prioritize risk along the lines of severity, likelihood, clockspeed and ability to mitigate is a heat map. This color-coded model allows boards to focus on critical areas of risk. Obviously, categorizing and ranking risks is not an exact science, it requires subjectivity and judgment. Ranking the top dozen risks in a particular order of importance is not as critical as ensuring they are identified and addressed.

The chart below sets out a heat map example for external, strategic and financial risk in a manufacturing company.

HEAT MAP

Risk Category	Severity	Inability to Mitigate	Time Analysis	Inherent Risk	Likelihood	Residual Risk
External Risk						
Competitors lower price	High	High	Fast	High	Moderate	High
Strategic Risk						
Failure to execute on a new product development road map	High	Moderate	Relatively Slow	High	Low	Moderate
Failure to execute on a critical marketing plan	High	Moderate	Slow	Moderate	Low	Low
Possible opportunistic takeover bid at a depressed value	High	High	Very Fast	Very High	Low	Moderate
Financial Risk						
Failure to attain bank covenant level performance	Very High	Moderate	Relatively Slow	High	Moderate	High
Limited debt capacity and inability to access capital markets	Very High	High	Relatively Slow	High	High	High

6. Analyze Interconnectivities

Overview

We assert that when enterprises experience major value destruction or significant underperformance, it is almost never due to a single event. Rather, it is the compounding effect of multiple simultaneous occurrences that fall into three broad scenarios:

- the compounding effect of interconnected risks
- the compounding effect of unrelated occurrences that arise at the same time
- the effect of a single event combined with several higher-risk conditions that have been present for a considerable period

Unquestionably, the most difficult and important element of the oversight of risk is evaluating the interconnectivity of risks and the compounding exposure when two or more occurrences take place simultaneously.

While board members from time to time may lay awake thinking about a so called "Black Swan" event that could cause catastrophic damage to the enterprise on which they serve as directors, we would assert that far fewer directors share sleepless nights over concerns about underperformance relative to peers and to under-deliver on shareholder value. Whether caused by external factors or self-inflicted, occasionally disastrous events do occur that drive companies into distress or even bankruptcy.

Risk interconnectivity

Risk interconnectivity relates to effect when one negative event arises, triggers one or more other adverse consequences. To illustrate this phenomenon, consider the BP offshore oil rig explosion. The occurrence of the spill triggered other consequential events including the downgrading of its debt; forced a swift liquidation of strategic assets to provide additional liquidity; a change in leadership; and a severe loss of reputation.

Compounding unrelated risks

The compounding impact of several unconnected events occurring concurrently, often referred to the "perfect storm" is not uncommon. Consider the airline industry.

It is notorious for encountering the confluence of seemingly unrelated events and conditions such as slowing global economies, rising fuel prices, labor dissatisfaction and disruption, poor weather conditions and competitive upheaval caused by new entrants into the industry.

Finally, we have witnessed many corporate failures triggered by several higher risk conditions have been present for years and the occurrence of a single major event constitutes the final blow.

Embedded vulnerabilities

Often, several higher risk conditions have been present for years and the occurrence of a single major event constitutes the final blow. This phenomenon may be best illustrated by an extreme example.

The North American auto industry has a long history of failing to adjust strategy in the face of a number of threats: these include newer competition, an uncompetitive product and dealership cost structure, ineffective leadership, balance sheets over-burdened with debt, and higher labour costs with inflexible collective agreements.

However, it was the global economic downturn in 2008, combined with the long list of adverse conditions, that sent two of the largest players into bankruptcy and left others in distress. Ironically, these businesses had blue-chip boards of directors and these risks were spelled out in public documents year after year in excruciating detail. On reflection, the demise of the North American auto industry began decades ago.

Company failures, much like air disasters, usually result from a combination of many factors occurring simultaneously. Through a backward facing lens, the origins of these unfortunate and often disastrous events are painfully apparent.

Governance considerations

While there are an enormous number of permutations in potential risk interrelationships, boards may wish to focus on the combined effect of individual risks already identified as High or Very High.

Failure to understand and evaluate the interconnectivity and compounding effect of risks is a major flaw in the way many boards oversee enterprise risk. Is very typical for boards to assess risks on individual or case-by-case basis determining impact, the capability of the enterprise to mitigate or satisfactorily respond to an unfavorable occurrence and likelihood of occurrence. Many boards fail to assess the linkages of risks or the compounding effect of multiple simultaneous occurrences and existing vulnerabilities.

Although the concept of thinking through the multiple permutations of risk may appear somewhat daunting, there are several practical perspectives and processes that may be useful for board members to consider. First, be vigilant in examining and understanding the interrelationships and compounding effect of multiple risks and occurrences. Second, objectively assess embedded vulnerabilities. Third, to avoid dismissing risks because of the perception of remote likelihood of occurrence, first develop the complete list of material risks without regard to probability of incidence. Then complete the re-consequential analysis including compounding effects as set out in the next section. Only then should these risks be assessed for likelihood of occurrence. Finally, use financial modeling to stress test the balance sheet in terms of liquidity and financing capacity in light of multiple adverse events.

Tools to assist boards analyze interconnectivities

Risk universe

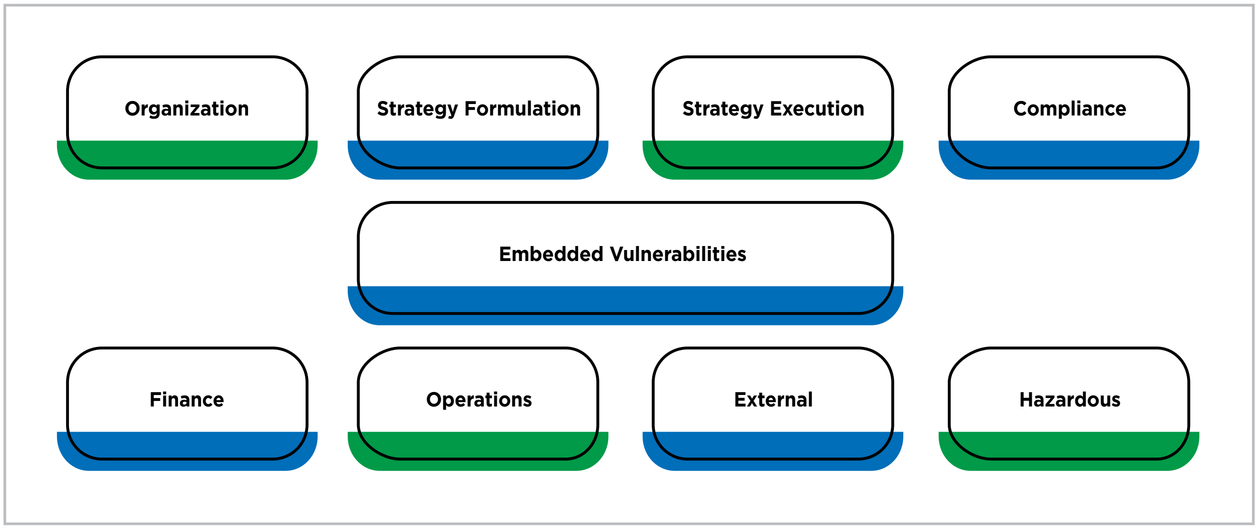
Enterprise risk is an entangled subject with no shortage of complexities. And many risk management systems have evolved unwittingly into mind-numbing risk register spreadsheets, stoplight charts that would rival any rush hour Manhattan street and obligatory mitigation plans with more form than actionable substance. In light of this, how does a board of directors cut through the morass to fulfill its risk oversight responsibilities effectively and importantly, to effect meaningful change to lower exposures and drive better enterprise performance?

The answer is simplicity, use common sense and a bias for action.

The starting point is to use simple frameworks and tools to identify and display the meaningful risks on a single sheet of paper. The document would show up to seven categories of risks and a separate classification of embedded vulnerabilities. The seven sets of risks would be comprised of strategic, financial, operational, organizational, external, hazardous and compliance risk.

Strategic risks could be separated into two categories - exposures arising from inadequate or ineffective strategy formulation and the risk of ineffective execution. It is also important to identify embedded vulnerabilities—conditions that are already present within or outside of the enterprises' control that increases the severity and/or likelihood of adverse consequences from the occurrence of a risk. An uncompetitive cost position or an over-levered balance sheet are examples of such vulnerabilities.

RISK UNIVERSE MODEL



From these categorized risks, each exposure should be subjected to the analytical model set out in section 5. Initial Consequential Analysis.

For those exposures that fall below the board's threshold, directors should be satisfied that management has dynamic systems in place to proactively manage and control those risks and vigilantly track changes in severity, mitigation effectiveness and likelihood.

Those risks warranting board attention along with embedded vulnerabilities should be set out and then subjected to interconnectivity analysis – that is whether one occurrence will trigger one or more further incidents that results in increasing consequences.

At this point, directors should have a multi-block list of risks and vulnerabilities condensed on a single page. However, the creation of this holistic material risk universe on its own should bring cold comfort to the board that it has somehow fulfilled its risk oversight responsibility. In fact, absent board action, the identified risk universe will be rendered only as an interesting, academic exercise.

Best practices have directors using this risk universe to help shape the board agenda and tasking management to develop and execute specific initiatives to simultaneously reduce exposures and improve performance. This might involve recasting strategic plans, acquisitions or divestitures, accelerating refinancings, effecting organizational change, implementing cost containment plans, to name a few.

Example of interconnectivity

This is the risk universe of a manufacturing company.

Organization
- Loss of execution
- Executive compensation
- Loss of key personnel
- Labour relations
- Leadership succession
- Key talent retention
- Loss of culture

Strategy Formulation
- Insufficient to create satisfactory shareholder value
- Consideration of growth alternatives including M&A
- Asset allocation

Strategy Execution
- Lack of capital
- Insufficient R&D and marketing competencies

Compliance
- Laws and regulations
- Internal control
- Bribery and corruption
- Financial reporting
- Fraud
- Environmental legislation
- Company policy violations

Embedded Vulnerabilities
- Profitability impacted by competitive pricing
- Dependency on one manufacturing facility
- Lack of organic growth opportunities
- Vulnerable to unsolicited takeover bid
- Debt laden balance sheet
- High cost producer

Finance
- Liquidity and working capital
- Limited additional debt capacity
- Asset impairment
- External guidance
- Capital structure
- Capital market access

Operations
- Production delays
- Input costs
- Vendor performance
- Labor disruption
- Information systems disruption

External
- Macro economic downturns
- Competition
- Opportunistic takeover bid
- Foreign exchange
- Interest rates
- Cyber security

Hazardous
- Potential environmental issue at manufacturing site

A competitor lowers prices on certain product lines (which is a recognized vulnerability), resulting in the manufacturing company having to respond by reducing its prices- which lowers margins, triggers a loss and negative cash flow. The manufacturing company has limited debt capacity and because of its performance, it is unable to access capital markets. The prolonged losses trigger a breach of loan covenants and lenders are reluctant to provide a waiver. Because of debt and performance issues, the company is under strict expense constraints, so it is unable to hire sufficient staff to execute on its R&D and marketing strategy.

2. Company unable to access capital; due to cost constraints is unbable to hire additional R & D and marketing talent to execute strategy

Organization
- Loss of execution
- Executive compensation
- Loss of key personnel
- Labour relations
- Leadership succession
- Key talent retention
- Loss of culture

Strategy Formulation
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- Consideration of growth alternatives including M&A
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- Production delays
- Input costs
- Vendor performance
- Labor disruption
- Information systems disruption

External
- Macro economic downturns
- Competition
- Opportunistic takeover bid
- Foreign exchange
- Interest rates
- Cyber security

Hazardous
- Potential environmental issue at manufacturing site

3. Financial results triggers a bank loan covenant breach

1. Competitor lowers prices resulting in the enterprise incurring significant losses and negative cash flow

7. Re-Analyze Consequences

Having reviewed the higher risks in the context of the interconnectivity analysis, performing a re-analysis may determine if higher risk categories have a greater impact on the business should they should occur at or near the same time. This is also appropriate when two identified higher risks are not overly significant to the corporation on their own but could be when taken together.

This is the heat map example from section 5 which is the original analysis of exposures.

Risk Category	Severity	Inability to Mitigate	Time Analysis	Inherent Risk	Likelihood	Residual Risk
External Risk						
Competitors lower price	High	High	Fast	High	Moderate	High
Strategic Risk						
Failure to execute on a new product development road map	High	Moderate	Relatively Slow	High	Low	Moderate
Failure to execute on a critical marketing plan	High	Moderate	Slow	Moderate	Low	Low
Possible opportunistic takeover bid at a depressed value	High	High	Very Fast	Very High	Low	Moderate
Financial Risk						
Failure to attain bank covenant level performance	Very High	Moderate	Relatively Slow	High	Moderate	High
Limited debt capacity and inability to access capital markets	Very High	High	Relatively Slow	High	High	High

Comparing the heat map above with the one below, several things have changed. Although the mitigation and time analysis for each risk is unchanged, the aggregate severity has now increased exponentially because of the interconnectivity of competitor lowering prices which ultimately increases exposure to its debt position and on executing product development and marketing plans. As well there is increased exposure to at takeover bid because the enterprise value would be under pressure.

Further, because of the domino effect, the likelihood of occurrences has dramatically shifted, most to a high or very high category resulting in overall increased residual risks.

Risk Category	Severity	Inability to Mitigate	Time Analysis	Inherent Risk	Likelihood	Residual Risk
External Risk						
Competitors lower price	High	High	Fast	High	Moderate	High
Strategic Risk						
Failure to execute on a new product development road map	Very High	Moderate	Relatively Slow	High	Low	Very High
Failure to execute on a critical marketing plan	Very High	Moderate	Slow	High	High	Very High
Possible opportunistic takeover bid at a depressed value	Very High	High	Very Fast	Very High	Very High	Very High
Financial Risk						
Failure to attain bank covenant level performance	Very High	Moderate	Relatively Slow	High	Very High	Very High
Limited debt capacity and inability to access capital markets	Very High	High	Relatively Slow	High	Very High	Very High

For the board of this enterprise, this analysis highlights the exposure to competitor actions because of its vulnerability as a high cost producer and with high debt exposure.

8. Prioritization

Overview

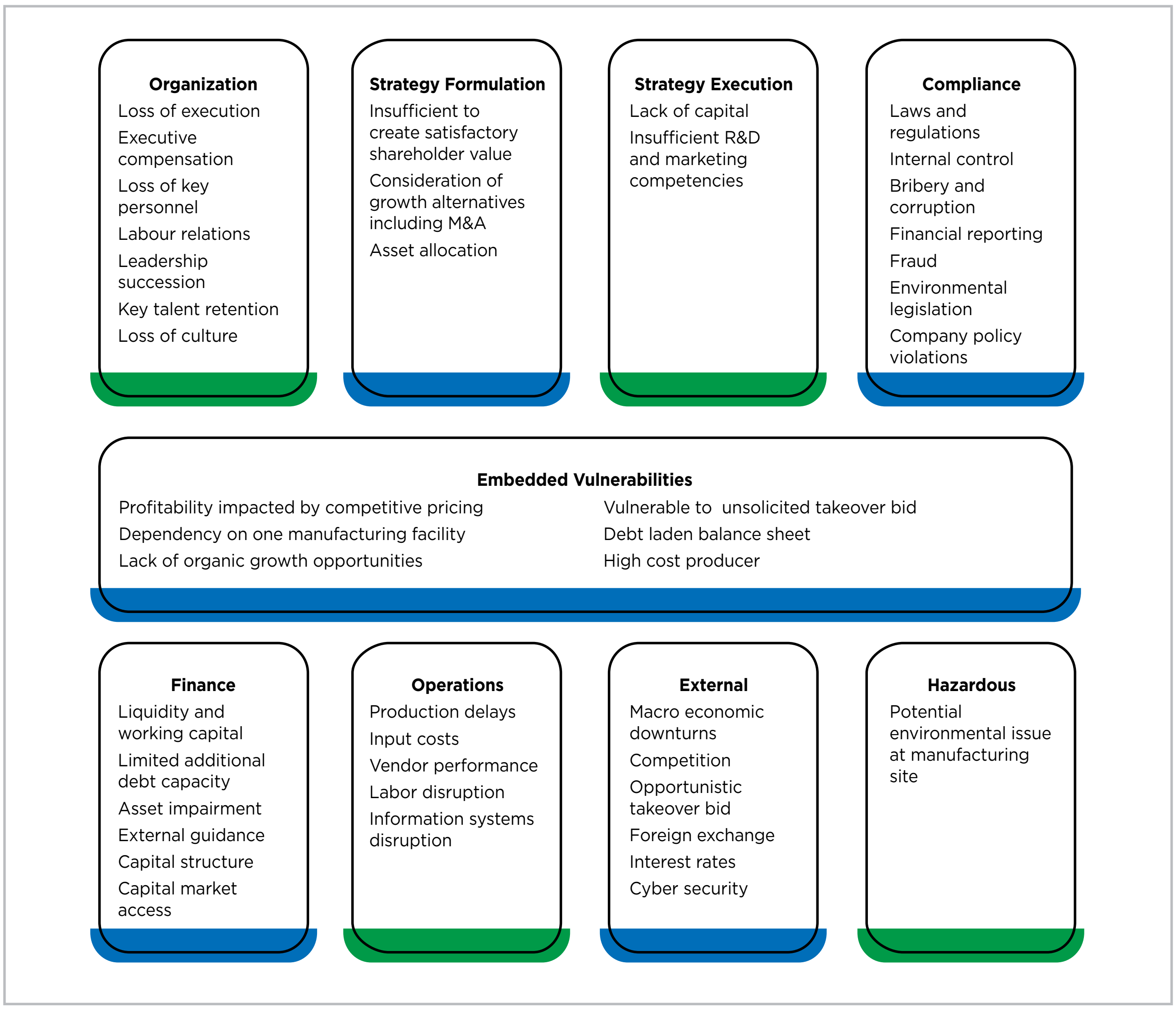
Having completed the analysis of the various identified, quantified and assessed risks, the next step is to rank the larger risks in order of residual risks after interconnectivity analysis.

While it is important for boards to understand the breadth of risks facing the corporation, this process allows boards to focus on the most critical risks.

Specific numerical ranking is less important than identifying those risks which, if left untended, could threaten viability of the enterprise, materially destroy asset and shareholder values or significantly affect longer term performance.

Example

This risk universe which is also shown in section 6, represents the critical risks of the business, all worthy of board attention.



Tools to assist boards in prioritizing risks

Avoid top ten

Management will often recommend to the board the top ten risks in a legitimate attempt to simplify and focus efforts on the most significant risks. This sounds right in theory except for one glaring flaw. What if risk ranked eleventh is also critical?

In our view, shortening the list too far exposes the board to error of omission. Better to have too many than too few. The risk universe example is typical of what the board should expect to see as a final list of risks that should be assessed and monitored at a board level.

9. Monitoring

Overview

The increasing trend in quarterly board materials is stoplight type graphics to demonstrate the state of the enterprises' risk universe, highlighting areas of increasing exposure. This analysis tends to be superficial, failing to provide sufficient early warning of pending risks and often with limited commentary.

In monitoring risk, there is no substitute for director vigilance for both self-inflicted exposures as well as changes in external conditions. Using specific early warning processes and related metrics can significantly enhance such vigilance as well as detailed annual reviews.

Early warning processes

The key to early detection of changes in exposures is using appropriate metrics – both leading and lagging indicators. Most organizations focus on the latter. For example, monitoring results through review of quarterly financial performance. Make no mistake, there is a place for lagging indicators but there are two shortcomings with relaying solely on such metrics. First, by definition, these indicators measure past results and may or may not provide insight into future performance. Second, root cause analysis is more complex and may not yield the intended conclusions.

The benefit of leading indicators is that they can identify issues earlier and root cause analysis is relatively simple. To illustrate, let's use a simple example. In monitoring revenue performance, lagging indicators would include such things as actual revenue versus plan perhaps broken down by product line and geographies.

Typically, variance explanations are often vague – market performance, competitive actions etc. One leading indicator might be sales staff turnover. Higher than planned sales turnover inevitably will result in lower sales because of the time involved to fill vacancies and train new staff. Looking only at revenue statistics will be extremely difficult to identify sales staff turnover as an important cause of the shortfall in performance. Additionally, monitoring leading indicators should lead to relatively simple root cause analysis and responsive corrective actions.

In our example, the root cause analysis of excessive sales staff turnover (through exit interview and other means) might include shortfalls in sales commission plans, poor recruitment, inadequate sales training, territorial misalignments etc.

Mid-cycle reviews

In section 3 we discussed mid-cycle reviews for strategic plans. There is also merit in a similar review of risks. This would involve review of the risk universe and understanding what has changed. These types of reviews will be discussed in Implementation Section 19.

Regularly scheduled, thorough risk reviews (with and without management present), should form part of a board's annual agenda. Monitoring should involve both external and internal scanning.

Tools to assist boards monitor risk

Early warning indicators

Strategic	Financial	Response Strategy
• Linkage to annual operating plan including metrics • Financial performance • Market performance • Product/service sales trends and market share data • Customer survey resultsStrategic initiatives – post implementation review including M&A	• Cash flow performance • Changes in capital structure – particularly increasing debt • Updates on capital spending and financing requirements • Update on debt duration analysis • Status of capital markets and availability	• Leading and lagging indicators • Operational benchmark data • Staffing/productivity/ turnover statistics • Capacity utilization • Product/service cost performance • Overhead cost trends • Quality statistics • Customer satisfaction trends

Organizational

- Executive performance
- Involuntary and voluntary turnover
- High performer turnover and exit interview results
- Periodic talent reviews progress to fill gaps
- Succession plan execution and staff development
- Employee engagement data and trends
- Peer group compensation data

External

- Competitive updates
- Periodic industry updates - external sources
- Macroeconomic indicators and trends
- Geo-political updates

Compliance

- Whistleblower activity
- Communication from regulators
- Compliance-related litigation

Hazardous

- Communication from regulators
- Internal and external reports
- Formal studies

10. Implementation

Overview

Implementing a new board risk oversight process can be daunting but with commitment and a systematic approach it can be affected within a reasonable period. Risk oversight should not be an academic exercise that fulfills a governance requirement. Rather, it should be an important, value-added board responsibility and process. There are two fundamentals to consider: the overall approach should be practical – not theoretical; and, it should be premised on improving enterprise performance as well as safeguarding assets and value.

Preconditions for success

Board alignment and commitment

The board as a whole must be committed to undertaking risk oversight in a structured and systematic way. Commitment should not be hollow. It means each director should set aside time not just in board meetings but in preparation and ongoing monitoring and observation.

Leadership

Unless the board chair and the chief executive officer fully endorse and support formal enterprise risk management and board oversight, the process is doomed from the outset. The reality is that much of the work will be undertaken by senior management. The senior team must view risk management as an important part of its responsibility and it is valued added – not a theoretical exercise.

Incorporated into the annual board workplan

Risk oversight should be embedded into the boards workplan. Later in this section we will propose a structure for board and committee involvement and timeline.

Adoption of a framework

Whether the board chooses to adopt this framework or another, a defined, detailed framework for risk oversight is critical - otherwise the process migrates to an ad hoc, theoretical process.

One size does not fit all

Enterprises have different levels of complexity and available resources so the board should determine a practical approach that meets its needs without overburdening the management organization. For example, smaller, less complex organizations may be able to simplify the consequential risk and interconnectivity analytics if its risk universe is relatively straight forward.

Board member and management assignment

It is extremely helpful for two individuals are charged with driving the implementation process – one from the board and one from senior management. It does not have to be the board chair and the chief executive officer. For example, one board member may some experience in risk and is willing to take on the implementation role. Similarly, an executive below the CEO level can be assigned the responsibility. In larger enterprises this would be the chief risk officer. In smaller organizations, a direct report to the CEO might take on this role.

Set a realistic timeline

Using a phased approach as described below is likely to take two to three years for full implementation.

Board processes

Planning and assignments

At the outset, the board in conjunction with the chief executive officer should determine the overall approach, timeline and assignment of responsibilities. This type planning can also be assigned to the Governance Committee.

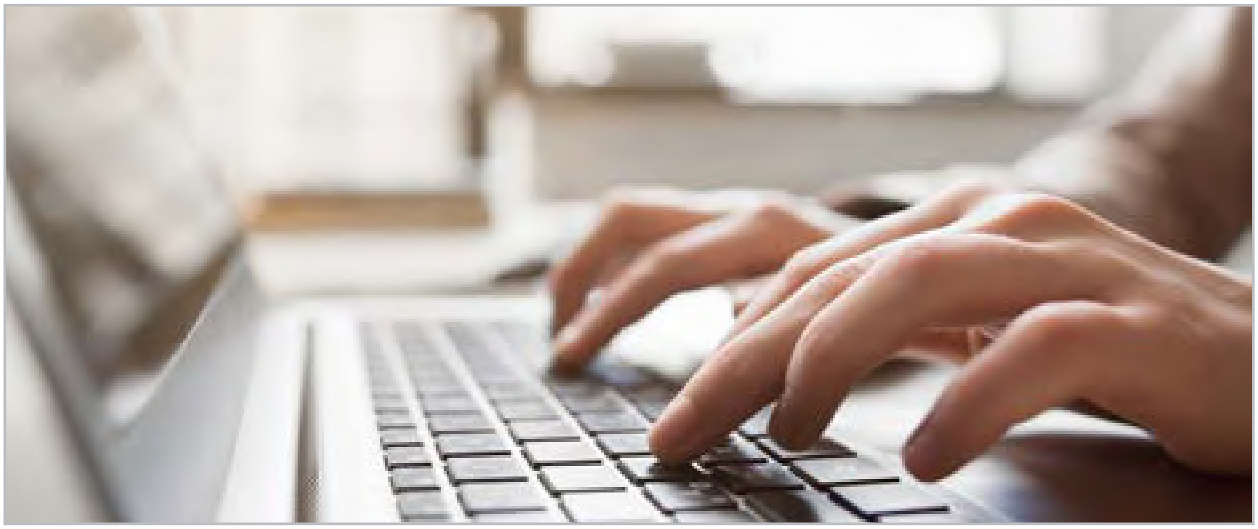
Board and committee assignments

There is always some debate as to where risk oversight should be assigned. Should be assigned to a single existing committee, to a separate risk committee or remain as a full board responsibility. There are many governance models and each enterprise should adopt a board assignment model that works for it.

That being said, we feel very strongly that risk oversight is a team sport and the full board must take an active role because the nature of risks requires the full capabilities of the board. To illustrate the point, in assigning total risk oversight to the audit committee, the board becomes reliant of members with financial backgrounds to assess complex exposures such as strategic formulation and execution risk as well as organizational and operational risks – not typical areas where the audit committee has deep experience.

We would assert that a hybrid model works exceptionally well in most circumstances. While the Board has ultimate responsibility for the oversight of enterprise risk, to facilitate a more focused attention on specific risks, the Board may delegate certain risk oversight responsibilities to committees while retaining the following responsibilities:

- direct oversight of certain risks
- oversight of committees' activities with respect to risk
- maintaining a current risk universe



The Committees will be responsible for oversight for specific risks as determined by the Board. Additionally, the audit committee can be tasked to provide oversight of the enterprise's risk management system.

Let's look at our example risk universe and determine the assignment of risks

Organization
- Loss of execution
- Executive compensation
- Loss of key personnel
- Labour relations
- Leadership succession
- Key talent retention
- Loss of culture

Strategy Formulation
- Insufficient to create satisfactory shareholder value
- Consideration of growth alternatives including M&A
- Asset allocation

Strategy Execution
- Lack of capital
- Insufficient R&D and marketing competencies

Compliance
- Laws and regulations
- Internal control
- Bribery and corruption
- Financial reporting
- Fraud
- Environmental legislation
- Company policy violations

Embedded Vulnerabilities
- Profitability impacted by competitive pricing
- Dependency on one manufacturing facility
- Lack of organic growth opportunities
- Vulnerable to unsolicited takeover bid
- Debt laden balance sheet
- High cost producer

Finance
- Liquidity and working capital
- Limited additional debt capacity
- Asset impairment
- External guidance
- Capital structure
- Capital market access

Operations
- Production delays
- Input costs
- Vendor performance
- Labor disruption
- Information systems disruption

External
- Macro economic downturns
- Competition
- Opportunistic takeover bid
- Foreign exchange
- Interest rates
- Cyber security

Hazardous
- Potential environmental issue at manufacturing site

RISKS TO REMAIN THE RESPONSIBILITY OF THE FULL BOARD

Strategic		Operational	External
• Formulation • Insufficient to create Satisfactory shareholder value • Consideration of growth alternatives including M&A • Asset allocation	• Lack of capital • Insufficient R&D and marketing competencies	• Production delays Input costs • Vendor performance	• Macroeconomic downturns • Competition • Opportunistic take-over bid

Organization	Compliance	Hazardous	Vulnerabilities
• CEO succession	• Bribery and corruption • Environmental legislation	• Potential environmental issue at manufacturing site	• Profitability impacted by competitive pricing • Dependency on one manufacturing facility • Lack of organic growth opportunities • Vulnerable to unsolicited takeover bid • High cost producer

RISKS TO BE ASSIGNED TO THE AUDIT COMMITTEE

Financial		Operational	External
• Liquidity and working capital • Limited additional debt capacity • Asset impairment	• External guidance • Capital structure • Capital market access	• Information systems disruption	• Foreign exchange • Interest rates • Cyber security

Organization	Compliance	Hazardous	Vulnerabilities
• Financial leadership succession	• Internal control • Financial reporting • Fraud • Laws and regulations as they relate to finance		• Debt laden balance sheet

RISKS TO BE ASSIGNED OF THE HUMAN RESOURCES AND COMPENSATION COMMITTEE

Organizational		Operational	External
• Loss of executives • Executive compensation • Loss of key personnel • Labour relations	• Leadership succession • Key talent retentionLoss of culture	• Labor disruption	

Organization	Compliance	Hazardous	Vulnerabilities
	• Laws and regulations as they relate to human resources		

RISKS TO BE ASSIGNED OF THE GOVERNANCE COMMITTEE

Organization	Strategic	Operational	External
• Board succession			

Financial	Compliance	Hazardous	Vulnerabilities
	• Laws and regulations • Company policy violations		

Build into committee mandates and annual agendas

To ensure that each risk is subject to oversight, the board and committee mandates and annual workplans should be reviewed and amended accordingly. Note that each exposure need not be captioned as a "risk." For example, review of oversight of internal control environment is already part of the audit committee's mandate so it is unnecessary to add a separate caption to include the word "risk."

Reporting to the Board

The Committee should report to the Board its oversight of risks as they are reviewed in accordance with the annual calendar. Additionally, once annually the Committee should present to the Board all assigned risks summarized and ranked by severity and residual risk.

Risk interconnectivity would be a board level responsibility.

Define monitoring metrics by key risk and executive assignments

The individual risks assigned to the full board and committees (including a preliminary analytical assessment) are to be reviewed - entailing examining the analytics to determine residual risk, mitigation planning, monitoring, establishing metrics that would be included in board and committee materials. For each risk, the board and committee would establish the appropriate monitoring activities as well as frequency of review.

For each risk, a management member would be assigned to work with the board or committee to determine residual risk, mitigation and response strategy as well as monitoring metrics.

Reviews

It is useful for the board to receive from management a quarterly update on risks. Rather than look at mind-numbing stoplight charts, a simple one-page commentary on which risk have changed – either heightened or lessen is far more beneficial.

Periodic deep dives on specific risks by the full board or committee are recommended if the exposure's severity or likelihood has elevated. Full review of strategic risks after the strategic plan has been presented is also useful.

Validation of ERM processes, mitigation and response strategies

Internal audit can play a valuable role for the board by providing a comprehensive review of the enterprise risk management system - is it designed and functioning as intended?

Separately, internal audit can verify that the mitigation and response strategies are actually in place.

Separate risk committee

Separate risk committees would be used only in unique circumstances. For example, this is a requirement for financial institutions but the scope of such committees typically is limited to financial type exposures.

Phased implementation approach

Phase 1

Define board level risk oversight parameters

It is not uncommon for an enterprise to identify one hundred or more risks. How does a board determine which risks merit board attention and which do not? This involves parameter setting. In our view the board should provide oversight on all risks that potentially could threaten the viability of the enterprise, expose the enterprise to material asset or shareholder value destruction or result in significant underperformance as defined by the board.

Preliminary key risk universe and embedded vulnerabilities

Based upon the parameters discussed above, determine a preliminary risk universe by risk category and an initial list of embedded vulnerabilities. Ideally this can be set out in a single page. Typically, this list would be based on severity only without regard to mitigation and probability analysis. This will be refined in phase 2.

Determine board processes

Determine the overall approach, timeline and board and committee responsibility assignment including mandate modifications, workplan adjustments and reporting mechanisms.

Define information requirements for each risk

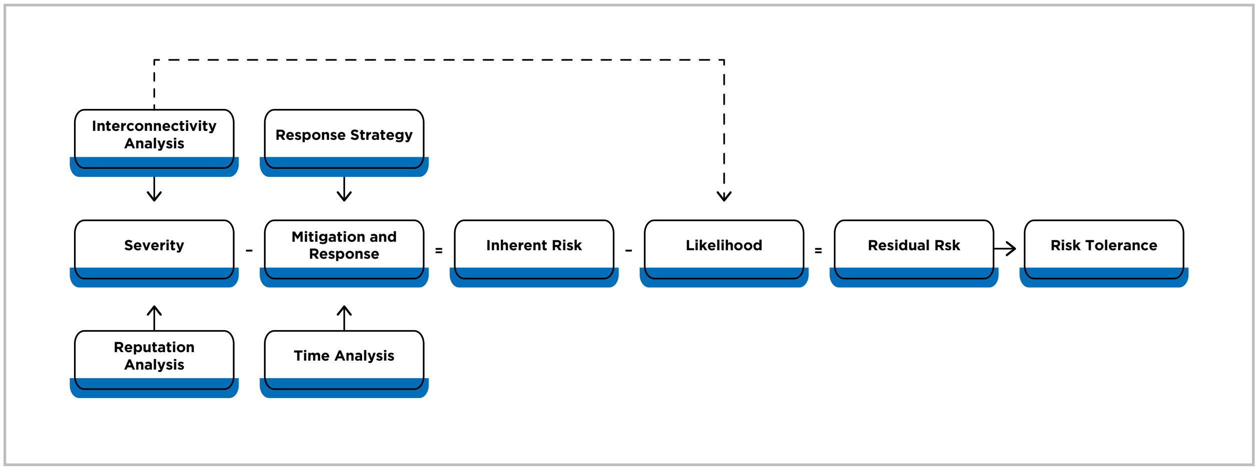
For each exposure in the preliminary risk universe determine what information is required to understand the risk. Illustratively, here is an example of what might be required for competitive risk:

- relative size and market position
- summarize key strategies and major initiatives
- review of comparative business models
- results of customer surveys including competitor customers
- comparative financial analysis an assessment of reasons for performance differences
- comparative competitive advantages and disadvantages against key drivers
- comparative competitor breadth of capabilities

Phase 2

Detailed consequential analytics

Using this model, determine the residual risk for each exposure.



Define risk tolerance and risk appetite by examining each high residual risk.

Perform interconnectivity and compounding analysis
Using the preliminary risk universe, compete a re-consequential analysis after examining risk interconnectivity and compounding impacts.

Refinement of the risk universe
Based upon the re-consequential analysis, refine the risk universe.

Define monitoring metrics and reporting
Determine early warning indicators and other monitoring metrics and analytics as well a validation methodologies and reporting. Embed metrics into quarterly board and committee packages.

Phase 3

Complete first mid-cycle review
Based on the first mid-cycle review, determine the required refinements to the risk universe, analytics and board processes.

Final Thoughts

Effective board oversight of risk requires rigor, objectivity, a heightened sense of risk's importance, and, most importantly, the recognition that unforeseen events and circumstances can and often do occur. Progressive boards will keep watchful eyes and a finely tuned antenna both internally and externally always being mindful that it is seldom a single issue or event that spells disaster but rather several factors occurring simultaneously. They will also exert prudency and conservatism in setting capital structure parameters.

Above all, members of progressive boards will have the courage and conviction to raise unpopular or seemingly remote risks and their fellow directors will have the discipline and enlightenment to listen and assess an appropriate response.

When the consequences of the compounding effect of several risks occurring at once turns into reality, the board will be judged with 20/20 hindsight. Boards that dismiss risks too quickly because they are unlikely to occur will find their own reasoning equally dismissed by shareholders after-the-fact.

Where to Find More Information

Additional references

2019 Vendor Risk Management Benchmark Study, Running hard to Stay in Place,
Protivity.com, Sharedassessments.org
https://www.protiviti.com/sites/default/files/2019-vendor-risk-management-benchmark-study-sharedassessments-protiviti.pdf

COSO Guidance on Enterprise Risk Management
Enterprise Risk Management—Integrating with Strategy and Performance (2017)
https://www.coso.org/Pages/erm.aspx

The Harvard Law School Corporate Governance and Financial Regulation Forum — selected articles
https://corpgov.law.harvard.edu/

Recent Application of Caremark: Oversight Liability
Posted by Jason J. Mendro, Andrew S. Tulumello, and Jason H. Hilborn, Gibson, Dunn & Crutcher LLP, on Friday, August 16, 2019
https://corpgov.law.harvard.edu/2019/08/16/recent-application-of-caremark-oversight-liability/

The Governance Implications of the Equifax and Facebook Settlements
Posted by Michael W. Peregrine, McDermott Will & Emery LLP, on Wednesday, August 14, 2019
https://corpgov.law.harvard.edu/2019/08/14/the-governance-implications-of-the-equifax-and-facebook-settlements/

Cyber Lessons and #MeToo Risk
Posted by Laurie Hays and Jamie Singer, Edelman, on Thursday, May 9, 2019
https://corpgov.law.harvard.edu/2019/05/09/cyber-lessons-and-metoo-risk/

Risk Management and the Board of Directors
Posted by Martin Lipton, Sabastian V. Niles, and Marshall L. Miller, Wachtell Lipton Rosen & Katz, on Tuesday, March 20, 2018
https://corpgov.law.harvard.edu/2018/03/20/risk-management-and-the-board-of-directors-5/

Institute of Risk Management (IRM) https://www.theirm.org/resource-centre/#/

Nassim, Nicholas Taleb, **The Black Swan: Second Edition: The Impact of the highly Improbable**
New York: Random House, Trade Paperback Edition, 2010.

PWC, Risk Oversight Series
Practical advice on risk and crisis topics
https://www.pwc.com/us/en/services/governance-insights-center/library/risk-oversight-series.html

Ontario Securities Commission, **National Policy 58-201, Corporate Governance Guidelines**
https://www.osc.gov.on.ca/en/SecuritiesLaw_rule_20050617_58-201_corp-gov-guidelines.jsp

The Global Risks Report 2019 | World Economic Forum,
https://www.weforum.org/reports/the-global-risks-report-2019

Select CPA Canada Corporate Oversight and Governance Resources

Oversight of the external auditor: Guidance for audit committees
January 2014, updated September 2018
https://www.cpacanada.ca/en/business-and-accounting-resources/audit-and-assurance/enhancing-audit-quality/publications/external-auditor-oversight-audit-committee-guidance

Assessment of the External Auditor, Tool for Audit Committees
January 2014, Updated Sept 2019
https://www.cpacanada.ca/en/business-and-accounting-resources/audit-and-assurance/enhancing-audit-quality/publications/annual-assessment-of-external-auditor-tool

Periodic Comprehensive Review of the External Auditor – Tool for Audit Commit-tees
https://www.cpacanada.ca/en/business-and-accounting-resources/audit-and-assurance/enhancing-audit-quality/publications/comprehensive-review-of-external-auditor-tool

John Caldwell, CPA, CA & Ken Smith, Ph.D., MBA, CMC, ICD.D, **Overseeing Mergers and Acquisitions: A framework for boards of directors, 2015**
https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/strategy-development-and-implementation/publications/overseeing-mergers-and-acquisitions-directors-framework

Caldwell, John CPA, CA & Smith, Ken, Ph.D., MBA, CMC, ICD.D, **Overseeing Strategy: A framework for boards of directors, 2015**
https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/strategy-development-and-implementation/publications/overseeing-strategy-framework-for-directors

Audit Committee Guide to Audit Quality Indicators, 2018
https://www.cpacanada.ca/en/business-and-accounting-resources/audit-and-assurance/enhancing-audit-quality/publications/guide-to-audit-quality-indicators

Key Performance Indicators, A Tool for Audit Committees, 2017
https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/corporate-governance/publications/kpis-a-tool-for-audit-committees

Alan Willis, CPA, CA and Sarah Keyes, CPA,CA, **Climate Change Briefing, Questions for Directors to Ask, 2017**
https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/corporate-governance/publications/climate-change-questions-directors-should-ask

On the Radar Directors' Canada's Sustainable Finance Movement — Is it on Your Radar? 2018
https://www.cpacanada.ca/en/business-and-accounting-resources/financial-and-non-financial-reporting/sustainability-environmental-and-social-reporting/publications/on-the-radar-sustainable-finance

Cybersecurity: Is it on your radar? 2019
https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/corporate-governance/publications/cybersecurity-bulletin-for-directors

On the Radar: The business impact of environmental and social issues: Is it on your radar? 2018
https://www.cpacanada.ca/en/business-and-accounting-resources/finan -cial-and-non-financial-reporting/sustainability-environmental-and-social-reporting/publications/business-impact-of-environmental-social-issues

Drivers of Change: Navigating the Future, CPA Canada, 2017
https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/strategy-development-and-implementation/publications/drivers-of-change

Dr. Peter Stephenson & Dr. Guy Beaudin, **20 Questions Directors Should Ask about CEO Succession, CPA Canada, 2008**
https://www.cpacanada.ca/en/business-and-accounting-resources/strate-gy-risk-and-governance/corporate-governance/publications/20-questions-on-ceo-succession

Richard Wilson, **20 Questions Directors Should Ask about Cybersecurity,**
CPA Canada, 2019 (Available Oct 2019)

Alan Willis, **Environmental, Social Governance Briefing: Questions for Directors to Ask (Available winter 2020)**

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Currently, John is the chair of the board for Advanced Micro Devices Inc., a world leader in semiconductors for computing and consumer electronics. He is also a director of Faro Technologies, Inc., the world leader in three-dimensional manufacturing measurement systems; IAMGOLD, a leading mid-tier gold mining company; and is chair of the board of Samuel Son & Co Limited, one of the largest North American metal processors and distributors and industrial manufacturers. Currently he serves on four audit committees, chairing one; four corporate governance committees, chairing two; and two compensation committees.

John has extensive executive-level and board experience, having served as a chief executive officer in three advanced technology public companies for more than 18 years. Throughout his career, he has served on a total of 13 boards of directors. He also has a background in finance, having served as a chief financial officer of two public companies.