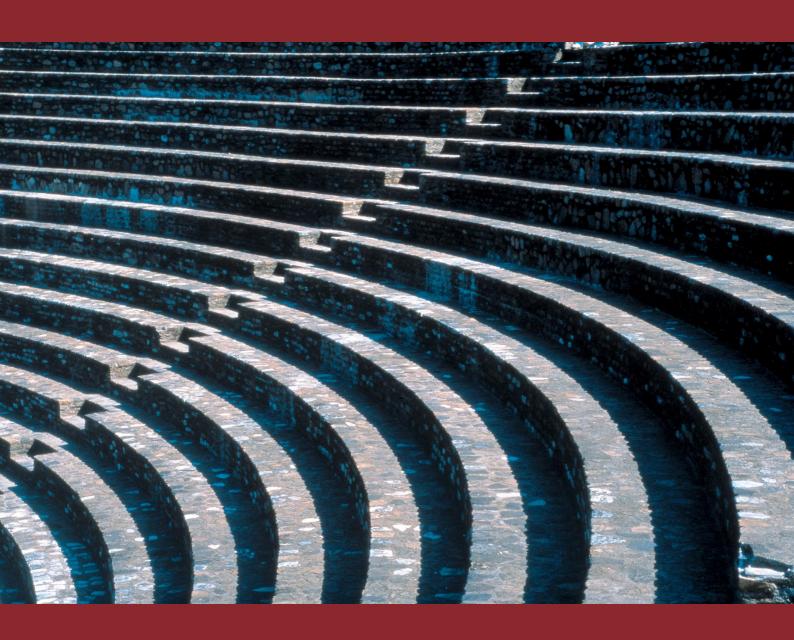


Financial and Management Accounting Committee

Enhancing Shareholder Wealth by Better Managing Business Risk



PriceWaterhouseCoopers 🔞

This study was prepared by the Global Risk Management Solutions group within PricewaterhouseCoopers on behalf of the Financial and Management Accounting Committee (FMAC) of the International Federation of Accountants (IFAC). The mission of IFAC is the worldwide development and enhancement of an accountancy profession, with harmonized standards, able to provide services of consistently high quality in the public interest.

The mission of the FMAC is:

To support IFAC member bodies in the global development and promotion of the financial and management accounting aspects of the profession.

The FMAC welcomes any comments you may have on this study both in terms of feedback and in terms of its future activities.

Comments should be sent to:

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Cover: The "stairs/steps" on the cover illustrate how companies need to "progress upwards to value". The copyright in this image is the property of PricewaterhouseCoopers.

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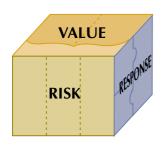
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Preface -The objectives of this paper

Over the past year the Financial and Management Accounting Committee (FMAC) of the International Federation of Accountants has witnessed a growing interest in business risk among CEOs of large and small organizations.

This paper has been developed in response to this increasing demand for information on risk management issues. It is intended to extend awareness of some of the leading edge issues, provide practical guidance on best practice and convey current thought leadership in regard to risk management.

On behalf of FMAC, the Global Risk Management Solutions group within PricewaterhouseCoopers has worked in close collaboration with an FMAC working party.



Executive summary

Why is there such interest in risk management?

Until recently, risk has been viewed by business as a negative concept: a hazard or downside. However, CEOs have recognized that managing risk is an integral part of generating sustainable shareholder value.

This positive interpretation of risk reflects the new understanding of the connection between well-managed risk and improved performance. That is, where management mobilize the linkage between risk management, achievement of corporate goals and reduced volatility of outcomes, the organization's economic performance can be enhanced significantly.

Understanding the organization's risk profile

The risks faced by organizations are part of a risk continuum. They can be evaluated in terms of hazard, uncertainty and opportunity and by the degree of influence they have on conformance, operating performance and strategic objectives. Effective risk management practices can identify and evaluate risks across all levels of the continuum and can deliver realistic assessments of the likelihood and impact of risks on the organization's value.

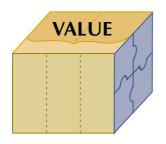
Risk response or architecture

Risk response or architecture ensures that resource allocation responds to the continuum of risks faced by the organization. For its success, the response or architecture is reliant upon gaining commitment from executive management and the Board of Directors, establishing the business process including assigning responsibilities for change, resourcing, communication, training and reinforcing a risk culture throughout the organization via human resources mechanisms.

Future developments

New international expectations and in some cases, standards, are emerging and additional tools and techniques are becoming available for better measurement of risks and value.

Managing the risk profile, i.e. both threats and opportunities, creates and preserves shareholder wealth



1. Why is there such interest in risk management?

Because risk management is integral to sustainable shareholder value creation

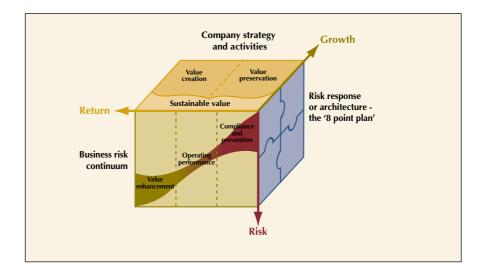
Investors, directors, managers and regulators in both the government and private sectors around the globe are expanding the breadth and depth of their interest in risk.

The work done over the last decade on 'control frameworks' has built a platform from which enlightened management can now see the full perspective of risk. Business risk management establishes, calibrates and realigns the relationship between risk, growth and return.

The central thesis of this paper is that sustainable growth in shareholder value is inextricably linked to risk which requires response which in turn drives value; it is an interactive process.

The following illustration depicts the integrated relationship of:

- creating and delivering sustainable shareholder value
- the business risk continuum
- the risk response or architecture.



The combination of identifying and measuring the risk continuum plus the risk response produces 'risk management'.

What is risk?

Uncertainty in achieving objectives

Risks are uncertain future events which could influence the achievement of the organization's strategic, operational and financial objectives. The dimensions of risk include the impact on an organization's reputation, even the "loss of legitimacy" from activities deemed unacceptable to the community.

Risk management is conformance and performance

Directors continue to ask management and consultants the question "Where is the organization exposed?" This arises from the ongoing conformance burden of corporate governance. On the other hand the less frequently asked question "Are we taking enough risk?" reflects a healthy focus on performance improvement. Risk management is thus an 'adhesive that joins performance with conformance'.¹

Global executives are launching major initiatives to improve their companies' management of risk² to drive performance. These initiatives focus on actively managing risks that must be taken in the pursuit of opportunity and, ultimately, profit. This 'new look at risk'³ contrasts with the more common notion of risk management, which has concentrated on protecting the organization from losses through conformance procedures and hedging techniques. Such risk management tactics seek only to avoid the downside of financial loss. Today, Boards expect that management will look at both risk assessment - understanding the potential upside and downside of actions - and the management of risk to raise the likelihood of success, reduce the likelihood of failure and decrease the uncertainty of overall financial performance.

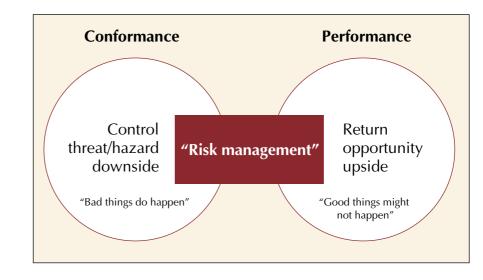
Risk management in the full sense is about seeking the upside while managing the downside.

On the former, seeking the upside:

"....risk is inherent in business. Although the nature and extent may differ, risk is as applicable to a small retailer as it is to a multinational conglomerate. A company takes risks in order to pursue opportunities to earn returns for its owners; striking a balance between risk and return is key to maximizing shareholder wealth." ⁴

while the latter, managing the downside, requires a combination of conformance and performance.

Shareholder value managers anticipate risk to mitigate hazards, resolve uncertainty and harness opportunities



Risk management reconciles the two perspectives:

Risk joins performance with conformance

> To understand these two views a brief review of what is occurring in the market place is helpful:

A market snap-shot - conformance

After the infamous 'excesses of the 80s' the 1990s have seen a great outpouring of frameworks or models to better control business management. Some of the highlights include the all-pervasive COSO report in the United States, CoCo in Canada, Cadbury and Hampel in the United Kingdom, Commission Peters in the Netherlands and the Risk Management Standard in Australia. (a more detailed review of the status of these developments is set out in Appendix A.) If a common thread can be identified in all of these models, it is the linkage between risk and 'control'.

A market snap-shot - performance

Most of the focus in the various conformance frameworks mentioned above emanates from the view of risk as hazard or downside and related conformance. What about upside and value?

What about the investors' perspective? Where is the linkage between pricing of risk and risk and return?

Leading edge practice is building on the platform of conformance to pursue the relationships that have always been implicit between risk and return and return and growth. Executive managment are concerned with expanding shareholder wealth.

The relationship that risk management has to improving performance and thus shareholder value highlights the fundamental objective of

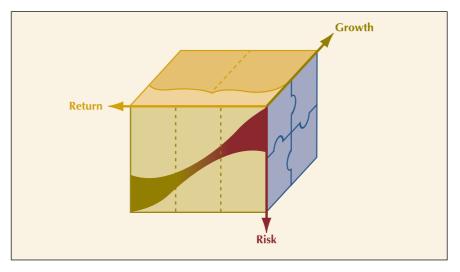
Risk is good!	managing business risks. Risk management is an integral part of business and risk is good - if commensurate with an adequate level of return. Management in general, and the CFO in particular, must closely link risk management, achievement of corporate goals and reduced volatility of outcomes to drive performance.
	Central to understanding shareholder value is an appreciation of growth, risk and return. For example:
Growth, risk and returns drive shareholder value	"Academic research suggests there is a significantly higher correlation between changes in underlying free cash flows and change in shareholder value, relative to changes in EPS for a company. Free cash flow and economic profit valuation methodologies are built on explicit assumptions about growth, risk and return and are not reliant on relative measures or market determined multiples (eg price/earnings multiple). Cash returns, growth and risk are the fundamental drivers of shareholder value and provide a more comprehensive and accurate assessment of the underlying economics of the business. The EPS approach does not adequately reflect the risk and return drivers." ⁵
	Cohen and Peacock expand on these points:
	"Taking and managing risk is at the heart of shareholder value creation. Yet current approaches to shareholder value creation often emphasize growth and return while paying little attention to the specific risks inherent in implementing profitable growth strategies. Where risk is identified, many companies continue to rely on static financial risk mitigation strategies such as foreign exchange and capital structure practices formulated when the organization's size and financial structure were vastly different.

sustainable returns to shareholders.

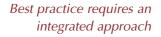
into its existing focus on growth and return." 6

While the stock market has been rewarding companies for their success in creating shareholder value, new approaches are necessary to sustain current levels of growth. A handful of leading companies are demonstrating that a more dynamic approach to risk management is critical to delivering superior,

To this end, management must be willing to expand its approach to shareholder value by integrating a dynamic concept of risk



Therefore these three elements are fully part of the integrated approach set out in this paper:



The importance of the relationship of the management of risk to shareholder value should not be underestimated. As management becomes more aware of the importance of risk, there is a progression along a broad risk spectrum to greater sophistication in risk management and appreciation of its linkage to shareholder value. This can be seen in the following, which is drawn from a recent global survey.



Source: PricewaterhouseCoopers

These are, in effect, the 'steps' companies climb as they move to valuebased management.

Companies progress from compliance to value-based management The above diagram demonstrates the natural progression from managing the risks associated with compliance and prevention (i.e. the downside) through managing to minimize the risks of uncertainty in respect of operating performance and then moving to the higher level of managing opportunity risks (i.e. the upside) which need to be taken in order to grow sustainable shareholder value. The more sophisticated approach:

- allows better allocation of capital to risk and risk management initiatives
- supports better allocation of risk management resources
- provides better performance indicators and monitoring opportunities
 often annual measures are inadequate and static
- affords some protection against executive liability and adverse publicity or attention from investors and other stakeholders
- supports better risk reporting throughout the organisation.

In order for this drive to performance to have practical application at a business level, two clear sets of answers need to be established

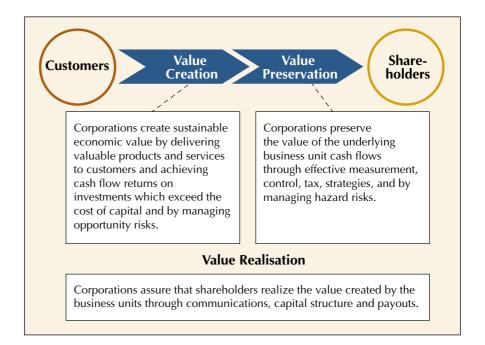
- what are the drivers of value, and how are they structured and managed?
- what are the key risks associated with these drivers of value?

The answers to these questions can be formulated by:

- mapping the processes that drive value within the organization
- identifying and analyzing the business risks and establishing the appropriate responses that will have most impact on the value drivers.

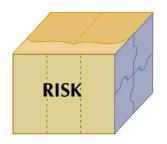
This approach requires and delivers an integrated approach to business risk management.

Sustainable value creation can be further explained as follows:



Risk and reward must be fundamental to decision making To develop a capability in risk management that will create an instinctive and consistent consideration of risk and reward in day-today decision-making, planning, execution and monitoring of strategy requires linking the value creating activities to the business risk profile and to the risk response or architecture.

The rest of this paper is devoted to a more detailed analysis of the business risk continuum and the risk response or architecture.



2. Risk management - What is an organization's business risk profile?

The business risk continuum

Shareholders understand value - the risk and return dimension i.e. the pricing of risk. Do they understand risk and response? Shareholders and lenders entrust their capital to companies and their Board of Directors because they seek a higher return than they could achieve from a risk free investment in say Government securities.

This implies that they expect boards and management to demonstrate entrepreneurship and dynamism, that is to take risks. They expect that the risks will be well considered and well managed and that the risk profile of the enterprise will be widely understood.⁷

This IFAC paper is elaborating on the risk and response dimension; shareholder value analysis addresses risk and return.

How to identify the organization's risk profile

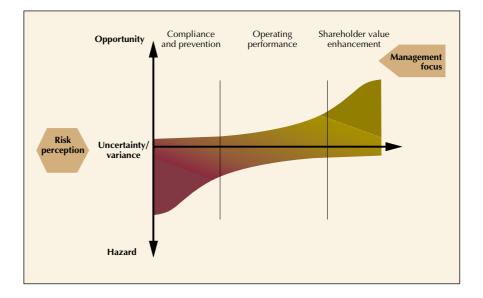
The first step toward clarity is to recognize that 'risk' is most often used in several distinct senses: risk as opportunity, risk as hazard or threat, or risk as uncertainty.

Risk as opportunity is implicit in the concept that a relationship exists between risk and return. The greater the risk, the greater the potential return and, necessarily, the greater the potential for loss. In this context, managing risk means using techniques to maximize the upside within the constraints of the organization's operating environment, given any limitations through having to minimize the downside.

Risk as hazard or threat is what managers most often mean by the term. They are referring to potential negative events such as financial loss, fraud, theft, damage to reputation, injury or death, systems failure, or a lawsuit: the downside. In this context managing risk means installing management techniques to reduce the probability of the negative event without incurring excessive costs or paralyzing the organization.

Risk is: Hazard Uncertainty Opportunity A third view embraces the more academic notion of risk as uncertainty. This refers to the distribution of all possible outcomes, both positive and negative. In this context, risk management seeks to reduce the variance between anticipated outcomes and actual results.

Each element of the three-part definition of risk above broadly connects with one or more functions within companies. Although functional emphasis and management boundaries are inherently flexible, risk as hazard typically represents the perspective of managers responsible for conformance activities - particularly, the financial controller, internal audit, and insurance administrators. Risk as uncertainty is a governing perspective of the CFO and line management responsible for operations. Risk as opportunity often reflects the outlook of senior management and the planning staff, who largely address the upside element of risk. These concepts underpin an organization's risk profile and can be illustrated in terms of a business risk continuum.



This was initially identified in "In Pursuit of the Upside: The New Opportunity in Risk Management", an article written by Lee Puschaver and Robert G Eccles - PWReview, December, 1996.

The risk profile is a continuum

The nature of the three components of risk perception is:

Hazard	Uncertainty/Variance	Opportunity
 Traditional focus Defensive in nature Purpose is to allocate resources to reduce the probability or impact of a negative event 	 Control focused on the distribution of outcomes Hedging in nature Purpose is to reduce the variance between anticipated outcomes and actual results 	 Investment focused Offensive in nature Purpose is to take action to achieve positive gains Requirements of a growth strategy due to implicit relationship between risk and return

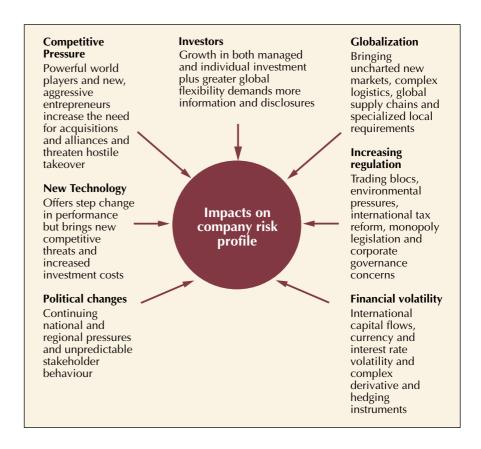
Of the three aspects, most companies formally address hazards yet senior management spends most of its time considering opportunities. Therefore business processes for risk profile identification and risk response must be linked to sustainable shareholder value.

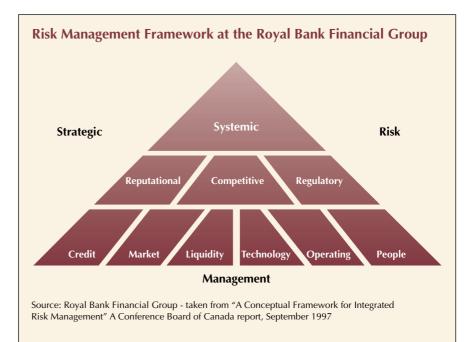
How is the risk profile identified and assessed?

Risk identification

Potential exposures are vast!

Identification is a crucial stage in the risk management process, and as depicted below, the range of potential exposures is vast.





A practical example of a risk identification model is as follows:

The Royal Bank Financial Group has a three-tiered framework to identify and analyse the risk facing the organization as a whole. Each unit and branch uses the framework to identify and assess risk.

Level 1 risks: Systemic risks are the political, economic, social and financial risks over which an organization has very little control. These create the environment within which the organization must operate. Management must be aware of these factors and how they affect different areas of the organization.

Level 2 risks: These are factors that the organization cannot control but can influence. The Royal Bank Financial Group identifies several level 2 risks, including competitive, reputational and regulatory.

Level 3 risks: These risks vary with each industry but can be generally viewed as risks that an organization can have a great deal of influence over. The Royal Bank Financial Group identifies level 3 risks as credit, market, liquidity, technology, operating and people.

Accepting that risk is any future event influencing the achievement of a business objective, it follows that risk identification should start with a consideration of the organization's critical objectives. Risk identification and definition should be approached in a systematic way by:

- developing a sound understanding of the strategic and operational objectives of the organization, including critical success factors, and the opportunities and threats related to the achievement of these objectives. These represent risks.
- analyzing the significant functions undertaken within the organization to identify the significant risks which flow from these activities.

Each risk should be explored to identify how it potentially evolves through the organization. It is important to ensure that the risk is carefully defined and explained to facilitate further analysis. Accurate definition of the risk is critical to successful risk management.

The objectives and/or value drivers of the business and the key risks to not achieving these objectives can be identified by management and other relevant personnel in a number of ways:

- workshops and interviews
- brainstorming
- questionnaires
- process mapping, which involves identifying and mapping the core business processes/value chains and identifying the dependencies on internal enablers (such as personnel, technology, physical assets, etc) and external factors (eg regulation, legislation, reinsurers, customers, service providers etc) that cut across the processes
- comparisons with other organizations and
- discussion with peers.

Risk assessment

Once risks have been identified, an assessment of possible impact and corresponding likelihood of occurrence will be made using consistent parameters that will enable the development of a prioritized risk map. In the planning stage management should agree on the most appropriate definition and number of categories to be used when assessing both likelihood and impact.

Impact

The assessment of the potential impact of a particular risk may be complicated by the fact that a range of possible outcomes may exist or that the risk may occur a number of times in a given period of time.

Such complications should be anticipated and a consistent approach adopted which, for example, may seek to estimate a worst case scenario over, say, a 12 month time period.

Risk identification must be systematic

The assessment of the impact of the risk on the organization should take into account the financial impact, the impact on the organization's viability and objectives and the impact on political and community sensitivity. The analysis may be either qualitative or quantitative, but should be consistent to permit comparisons.

An example of the qualitative approach is:

high

Risk impacts both finances

and viability

- moderate or
- low.

Both hazards and
opportunitiesThe following scale is to be used as a guide only. (Note that both the
scales and definitions are the same for hazards and opportunities.):

Impact			
High	Financial impact on the organization is likely to exceed say \$z million, or Significant impact on the organization's viability or its strategic / operational objectives, or Significant political and/or community sensitivity.		
Moderate	Financial impact on the organization is likely to be between \$y million and \$z million, or Moderate impact on the organization's viability or its strategic / operational objectives, or Moderate political and/or community sensitivity.		
Low	Financial impact on the organization is likely to be between \$x million and \$y million, or Minimal impact on the organization's viability or its strategic / operational objectives, or Minimal political and/or community sensitivity.		

Likelihood of occurrence

The likelihood of a risk occurring may be assessed on a gross, a net and/or a target basis.

The gross basis assesses the inherent likelihood of the event occurring in the absence of any processes which the organization may have in place to reduce that likelihood.

The net basis assesses the likelihood, taking into account current conditions and processes to mitigate the chance of the event occurring.

The target likelihood of a risk occurring reflects the risk appetite of the organization. Where the net likelihood and the target likelihood for a particular risk differ, this would indicate the need to alter the risk profile accordingly.

It is common practice to assess likelihood in terms of:

- high probablemoderate possible or
- low remote.

The following scales are to be used as a guide only. (Note that although the scales are the same for both hazards and opportunities, the definitions are different.):

Assessment	Description	Indicators
High	Probable likely to occur in say a one year time period or more than 25% chance of occurrence	potential of it occurring several times within the next ten years has occurred within the last two years typical of operations of this type due to external influences
Moderate	Possible likely to occur in a ten year time period or less than 25% chance of occurrence (but greater than 2%)	could occur more than once within the next ten years can be difficult to control due to some external influences history of occurrence in the organization
Low	Remote not likely to occur in a ten year time period or less than 2% chance of occurrence	has not occurred in this country would be surprising if it occurred

Likelihood of Occurrence - Hazards

Likelihood of Occurrence - Opportunities				
Assessment	Description	Indicators		
High	Probable favorable outcome is likely to be achieved in a one year timeframe or better than 75% chance of occurrence	clear opportunity which can be relied on with reasonable certainty to be achieved in the short term, based on current management processes		
Moderate	Possible reasonable prospects of favorable outcome in a one year timeframe or 25 to 75% chance of occurrence	opportunity which may be achievable, but which requires careful management might be categorized as a "stretch goal" in a business plan		
Low	Remote some chance of favorable outcome in the medium term or less than 25% chance of occurrence	possible opportunity which has yet to be fully investigated by management opportunity for which the likelihood of success is low on the basis of management resources currently being applied		

The risk map or matrix - the key risk profile measure

Risk maps or risk matrices are widely viewed as a simple yet powerful way of displaying the relationship between likelihood and impact for the key identified risks, thus providing both measurement and reporting of the risk profile. When different matrices or maps are prepared for both hazard and opportunity risks, an organization is moving towards measuring and displaying the separate components of the business risk continuum.

In other words, the business risk continuum is a qualitative aggregation of the series of risk matrices covering hazard, uncertainty and opportunity.

Typical risk matrices can be displayed as follows:

Risk profiles are displayed in risk maps or matrices

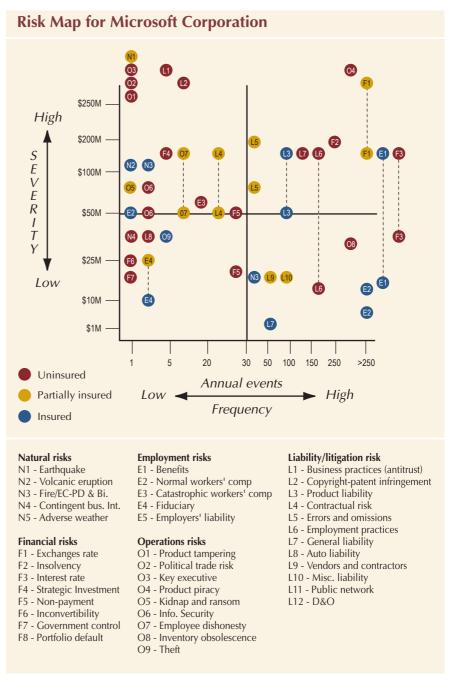
	HAZARD	1AZARD		
	High	 Property development approvals Production quality problems Serious accident at any location 	 Schedule delays caused by subcontractors or systems integration difficulties 	 Year 2000 bug Government intervention in markets Skills deficit against Future needs
Impact	Medium	 Construction cost overrun Loss of certification at any site Corporate governance or succession planning shortcomings 	 Workload/future commissioning delays workload shortfall in second half of year 	 Poor employee morale Management overload New tax regimes
	Low	 Information systems and communication facilities at any site 	 Profit shortfall Schedule/cost difficulties 	 Loss of intellectual property Public liability claims Product R&D under- resourced
	Likelih	Low ood (Remote)	Medium (Possible)	High (Probable)

OPPORTUNITY

	High	 Joint venture opportunities 	 Innovative project funding 	 Unavailability of capital results in lost opportunities
Impact	Medium	 R&D in partnership with customers 	 Opportunity to develop sustainable Asian Markets business 	 Reduce costs of major suppliers Differentiate from competitors Partner with suppliers
impact	Low	 Further reduced direct costs Greater understanding of product and customer contribution Achieve greater leverage from customer relationships Success of business initiatives 	 Greater use/sharing of "partnering" technology developments internally 	 Environmental emissions and trading
	Likelih	High ood (Probable)	Medium (Possible)	Low (Remote)

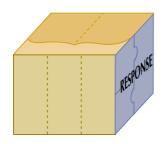
Companies may wish to display risk maps in a variety of alternative ways. For example, risks might be aggregated by critical success factors or overall organizational objectives. These are practical matters for commercial management judgement.

The financial and business research group of The Conference Board of Canada reported that Microsoft Corporation "started with a series of 'risk maps' that plotted Microsoft's natural, operational, legal, financial and human resources risks on graphs, as follows".



Source: "A Conceptual Framework for Integrated Risk Management" A Conference Board of Canada report, September 1997

Having measured the organization's risk profile, the final link in the process, which closes the loop back to value, lies in the management response to the risk profile. Risk response or architecture is an integral part of an organization's business processes.



3. Risk management - What is the management response to risk?

Establish an integrated risk architecture

Current developments

Managing the different elements of business risk is a shared responsibility. Senior management faces several pressing needs. First, it must choose tools and techniques appropriate for particular risk elements. Second, and more challenging, management must decide how integrated or dispersed its approach to risk should be. This involves designing and implementing organizational structures, systems, and processes to manage risk, such as:

- a highly integrated approach to risk management uses a common language, shared tools and techniques, and periodic assessments of the total risk profile for the entire organization (as described in Section 2). An integrated approach is particularly effective when risk factors are common across functional and business units, when functional and business units are highly interdependent, and when tools and techniques developed in one unit can be readily applied to other units. Integration is crucial when management strives to achieve a shared corporate vision across the organization. Integration does not just happen. It is invariably the result of deliberate management strategy
- a highly dispersed approach to risk management lets each functional or business unit create its own language for risk management and its own tools and techniques. No structured effort is made to examine organizational risk in the aggregate or to share practices across units. The dispersed approach is typically used when risk factors vary substantially across functional and business units and/or when functional and business units operate quite independently. While management might deliberately adopt a dispersed approach, in practice it often arises from corporate inertia. This approach still requires management to allocate organization resources across the many demands for capital.

The integrated approach appears to be more proactive and is representative of emerging best practice.

Best practice is moving to an integrated approach A dynamic risk management architecture will enhance shareholder value Leading organizations have realized that the full spectrum of risks cannot be assessed intuitively or in isolation and have developed integrated risk management⁸ frameworks to help them pursue their business objectives with confidence. These frameworks represent current world class business risk management.

As the integrated approach becomes more sophisticated, the framework involves:

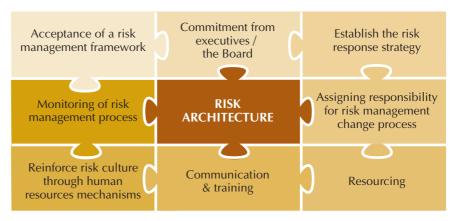
- capturing risk as an opportunity rather than a threat to be avoided
- leveraging competitive advantage by focusing on the key success factors and through improved management of operations
- enhancing shareholder value by reducing the adverse impact of down-side risk and maximizing up-side potential
- all business activities: integrated risk management is not focused only on treasury or finance, but spans the full scope of an organization's activities.

At world class level, the dimensions of risk management include:

- risk management structure embedded in the organization to facilitate the timely identification and communication of risk
- resources investment is sufficient to support management's objectives for implementing risk management
- risk culture which strengthens management's decision making processes
- tools and techniques developed to enable efficient and consistent management of risks across the organization.

As an organization faces change, the risk management framework must adapt. World class management has a positive and dynamic approach to change and its affect on the risk management architecture, which can be depicted as an integrated '8 point plan' as follows:

The risk architecture '8 point plan'



A paradigm shift will occur

Implementing a risk architecture is not a response to risk but rather an organizational paradigm shift, involving changes in the way an enterprise:

- organizes itself it gives a new view of the organization and the way the organization manages internal and external change
- assigns accountability aligns objectives throughout the organization (linking strategic objectives with tactical objectives and process objectives)
- builds risk management as a core competency creates a foundation to analyze hazard, uncertainty and opportunities relevant to each business objective and assesses and develops holistic controls to mitigate these risks
- implements continuous, real-time risk management the organization is continually practicing and evolving its risk management methods and is always looking for the next generation of tools and techniques to improve its risk management (e.g. by risk quantification etc). Risk management is embedded into the organization and promotes operational efficiency, not more bureaucracy, with full regard to the cost/benefit of the risk responses.

1. Acceptance of a risk management framework

Emerging best practice indicates the need for a formal risk management framework in order to guide the integration of risk management into the organization's day to day operations.

The elements could include:

Risk management policy

An organization's risk management policy statement defines its approach to risk management and its attitude to, and appetite for, risk. The policy also defines overall responsibility for the policy, for risk review as well as reporting requirements. A sample policy is set out below.

Resourcing risk management

The resourcing of risk management involves the identification of resources required to implement, monitor and coordinate the risk management process including the reporting of risk management.

Implementation of risk management

The implementation of risk management involves the formalization of the processes involved in the identification and definition of risk, the assessment of risk in terms of likelihood and impact (guidance on this was set out in the previous section of this paper), and the key aspects of the business processes to respond to risk.

Risk management review and reporting

This formalizes the process of risk review and reporting including both the form and regularity of reporting and the risk reporting structure.

The risk policy should be adopted by management and endorsed by the Board of Directors.

Sample Policy

It is the policy of the organization and all subsidiaries to adopt a common approach to the management of risk. This approach involves a clearly stipulated strategy defining the risks that the organization is in business to take and those that it is not.

The foundation of this policy is the obligation and desire to protect:

- our people, customers;
- the environment in which we operate; and
- our position as provider of the highest quality products and related services.

Our policy in respect of these foundation attributes is that physical, financial and human resources will be applied to ensure our standards of product achieve and exceed expectations - no other business priority will be more important.

It is also our policy that to achieve the economic expectations of our shareholders, the organization must pursue opportunities involving some degree of risk. Our policy is to give full and due consideration to the balance of risk and reward, as far as practicable, to optimize the rewards gained from our business activities.

The application of this policy will be the responsibility of the Board through the Chief Executive Officer. The Chief Executive Officer and Executive Management team is responsible for the implementation of this policy through a risk management program. Reporting of performance against policy and strategic targets will be conducted routinely depending on the nature of the risks.

This strategy is supported by analytical techniques to identify and evaluate risk, control and response measures to improve/optimize the organization's risk profile and key performance indicators and communication techniques that apply across and upwards through the organization. This policy and underlying strategies will be reviewed annually by the Board of Directors to ensure its continued application and relevance. An independent review of the adoption and effectiveness of this policy will be undertaken prior to the Board's review on a semi-annual basis.

The organization is committed to the philosophy of effective business risk management as a core managerial capability.

Signed and dated for and on behalf of the Board of Directors

Chief Executive Officer

Company Director

2. Commitment from executives/the Board

Corporate Governance and risk

Corporate Governance is now understood to be the prime responsibility of the Board of Directors and Chief Executive Officer. It combines legal duties with responsibilities to improve and monitor the performance of an organization and is focused on three principal objectives:

- to protect and reinforce the rights and interests of the shareholders, particularly in areas where those rights and interests may conflict with the interests of senior management
- to ensure that the Board of Directors and Chief Executive Officer properly fulfil their primary responsibility to direct the strategy and monitor the performance of the organization, particularly with regard to assessing the performance of senior management and
- to ensure that management controls and reporting procedures are satisfactory and reliable. With respect to reporting, the information supplied to shareholders must provide a realistic, timely, and up-todate assessment of the organization's position and results.

The management of risk is a key part of each objective.

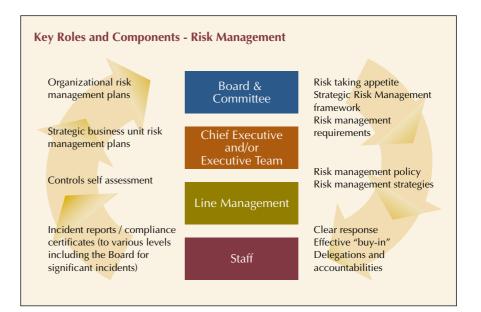
Toronto Stock Exchange Guidance

Guidelines on the disclosure requirements of The Toronto Stock Exchange included in *The Toronto Stock Exchange Company Manual* identify managing risk as one of the principal responsibilities of the Board of Directors.

"The board must understand the principal risks of all aspects of the business in which the corporation is engaged and, recognizing that business decisions require the incurrence of risk, achieve a proper balance between the risks incurred and the potential returns to shareholders. This requires the board to ensure that there are systems in place which effectively monitor and manage those risks with a view to the long term viability of the corporation."

Risk management supports corporate governance

The risk management which derives from this flows down through executives and into the organization as follows:



Risk and Audit Committees

Management can expect to see the establishment of risk committees as a new feature of corporate governance landscape.

PricewaterhouseCoopers Europe, in conjunction with the Community of European Management Schools, reported the responses of 65 companies to a survey about their experience of, and attitudes to, audit committees.

In respect of risk the question and findings were as follows:

"Does the committee review risk exposure and consider risk management measures? Does it assess going concern risks?"

These areas were commonly dealt with by audit committees in Belgium, Italy and the UK, reflecting a growing view that the audit committee should concern itself with all risks which may, ultimately, pose a threat to the financial health of the business. In Belgium it was common for finance directors and internal auditors to make presentations to the audit committee members on how different types of risk (for example credit risk, environmental risks, IT risks) are managed in the organization.

Risk committees are a new feature

In other countries such as France, Sweden and Switzerland this view was less predominant. A number of Swiss companies commented that risk management was the domain of financial and operational management, or that these issues were dealt with by separate risk management committees, distinct from the audit committee.

It is perhaps surprising that almost half the audit committees do not consider going concern risk, since this does have a direct impact on the financial statements.

3. Establish the risk response strategy

Following the agreement on the risk assessment rankings in the division or business unit, management action will need to be taken to reduce the risk levels where they have been deemed unacceptably high or alternatively remove constraints where they are preventing the business from pursuing opportunities. Management responses need to be developed to improve the current processes and close the gap between the risk profile and the organization's appetite for risk.

Closing the gaps by positive processes

This action will be formulated into a risk management response which ensures a disciplined approach to the future management of risk as outlined below.

a policy statement authorized at an

Policy

	appropriate level should codify the organization's attitude to a particular risk
	this policy statement should also prescribe the objectives of the organization's risk response.
Accountability	individual accountability for the management of the risk should be clearly established
-	the designated person should have the appropriate technical expertise and authority to effectively manage the risk.
Current Business Process	a description of the management processes that are currently employed to manage the risk.
Future Actions	recommended business processes that are to be implemented or refined to reduce the residual risk to an acceptable level
	responsibility and milestones are assigned.

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Performance Measures	 key measures used by management to enable them to assess and monitor the effectiveness of the risk
	 the measures may be proactive or reactive. Proactive measures are best as they tend to monitor risk preventative actions rather than risk detective actions.
Independent Expert	 if appropriate, a suitably qualified independent expert (internal or external) assesses the adequacy of the risk response
	 the frequency of the review will depend upon the nature of the risk.
Contingency Plan	 if appropriate, develop plans to manage or mitigate a major loss following the occurrence of an event.

4. Assigning responsibility for risk management change process

Change process

In moving the organization to one where line management take ownership of risk management, it is important to ensure that the daily operation of the business supports this strategy. By evaluating and aligning all the change levers shown below under the broad categories of strategy, people and processes, the senior management team will ensure an holistic approach to making the change.

During the period in which the change is being undertaken, some additional activities will need to be undertaken to sell the concept of the ownership of risk to staff and to win their "hearts and minds". Communication of the organization's approach to risk management and how it supports the strategic direction for the business together with a clear articulation of what the individual is required to do is vital to ensure that staff understand the proposed changes. In addition, visible support and leadership from senior executives is necessary to secure commitment.

Winning the 'hearts and minds' is the key

Levers of change



Winning the "hearts and minds" is the key

Source: PricewaterhouseCoopers

These levers are divided into three categories to assist understanding:

The strategic levers

Customers/markets and products/services refers to who and where an organization's customers and markets are and what an organization provides to those markets and customers both at present and in the future. These will have significant risk implications.

The organizational levers

Organization and people/culture refers to the internal structures of the organization.

System levers

Business process and technology refers to the key processes within the organization for delivering customer services and operations (i.e. both internally and externally) and the technology which helps facilitate those processes.

5. Resourcing

All levels of management must be involved Risk management is the responsibility of all levels of management. The policy, design and framework for risk management is driven by the Board of Directors and managed by a corporate risk management team.

The risk management organization would be expected to have representatives at all levels of the organization, including:

- Board of Directors
- executive committee
- business unit general managers
- functional experts and specialists
- line management
- key supervisors and staff.

Within the organization, the corporate risk management group is responsible for setting policy and strategy.

The organization could consider the following organizational model for a risk management function:

The Board of Directors

The Board of Directors, as delegated representatives of stakeholders, and members, must ensure appropriate corporate governance frameworks are established and operating. The establishment of a risk management committee may review and endorse risk management policies and strategies, and provide the organization with a clear focus on the management of risk.

Risk management group:

This group is responsible for setting group policy, strategies and has a performance monitoring role. Risk management must be made accountable at all levels throughout the organization. The organization must avoid risk management becoming only a corporate responsibility. The roles and responsibilities of a risk management group should include:

- primary advocate for risk management at the strategic and operational levels of the organization
- provide policy, framework and methodologies to business units to identify, analyze and manage their risks more effectively to achieve their objectives
- develop risk response processes to assist appropriate type and level of response required and assess the adequacy of the responses (i.e. including crisis response)
- not be responsible for risk management, but facilitate, challenge and drive risk management

- provide assurance that risk management policy and strategy set by the Board of Directors is operating effectively to achieve the group's business objectives
- trouble shooting team
- report to the Board on risk management.

If this capability is to be established, considerations of resourcing must be addressed including issues such as:

- cost and support required
- skills and experience in risk management
- career development opportunities and succession planning
- relationship with business units
- information collection and management including, where appropriate, the use of specialized risk management software to record and update risk assessments.

Business units:

The business units are responsible for risk management. Business unit general managers are responsible for managing risks in their business unit.

The general managers should be charged with the task of creating a risk aware culture, where each employee is accountable for managing risk. Included should be specific risk management obligations and performance measures to focus line management and functional specialists on the risk management strategy and objectives.

To this end, management are accountable for implementation and operation and reporting of the group risk management policies and strategies. The corporate risk management team will provide advice, training, guidance, tools and methodologies to assist the business unit managers achieve this end. Where required, external experts should be engaged.

6. Communication and training

Communication and training strategy

Communication and training is important to:

- introduce the concept of risk management
- educate management in risk management policies and practices
- communicate risk assessments and risk responses to responsible officers

- facilitate improvement and enhancements to the risk management plan
- facilitate and encourage regular reviews of an operation's risks
- monitor risk management and
- manage issues arising.

No single issue is more important than another but all must be viewed in an overall context. All communications must be directed to ensuring staff embrace the risk management concept and that it becomes an integral part of the organization's management culture.

7. Reinforce risk cultures through human resources mechanisms

A new approach to risk management may require managers to think and behave in a different way. It is possible to facilitate changed managerial behavior in relation to risk management by making changes to organization and job design, performance measures, accountabilities, reward systems and incentives.

Clarifying strategy, competitive context and new philosophy and values through communications, training, and leadership action will reinforce the risk management message.

In managing the transition to risk ownership by line managers, it is important to consider all elements outlined above, to ensure that every part of the organization is designed to work in support of the overall strategy for risk management. If one part is not aligned, mixed messages may be sent to staff and the anticipated benefits may be diminished.

Educational systems in companies may also require refocusing. Training programs can afford senior managment with an opportunity to convey to employees the new risk management priorities and to encourage the development of new core competencies. Information about dominant values, competitor analysis, the business environment and the organization's future all have risk implications which can be addressed through training programs.

Corporate culture can also be modified through a wide range of informal practices. Casual encounters, social events, sporting activities etc all present opportunities for conveying either directly or implicitly changed values.

Incentive systems should reward effective risk management

8. Monitoring of risk management process

The final component of effective risk management is a reporting and monitoring structure to ensure that risk response gaps are filled and that the risk responses continue to operate effectively and remain appropriate in light of changing conditions.

This should enable the risk management activities throughout the organization to be monitored, aggregated and reported upwards to the Board of Directors. This responsibility is often given to either a dedicated Risk Manager, or a sub-committee of senior managers and Company Directors.

Internal reporting

Tuning internal information to risk

Business risk management reporting outputs must be carefully tuned to the needs of the various uses of business risk information. The information must be concise, unambiguous, standardized and integrated with existing reporting processes.

A preliminary assessment of user needs for business risk management information and a suggested response to those needs is set out below. Significant tailoring to specific management needs may be necessary. Reporting on shareholder value at risk is becoming a central theme.

User needs	Suggested response
The Board or Directors and most senior management need to:	
know about the most significant exposures for the organization	top ten (or more) risks reported for the organization and the major business groups including consolidated and summarized data
gain comfort that the business risk management process is operating effectively	capacity to report emerging risks and other exceptional information and balanced status reporting (opportunities and hazards)
gain an understanding of the shareholder value at risk, particularly within the control of management	impact measured in shareholder value terms with an indication of which risks are controllable through management action
see how these exposures are trending over time	year on year comparisons
be assured of the implementation of an appropriate, effective management response	representations by management as to appropriateness of risk management responses can be sourced from the Board of Directors' questionnaire, possibly using a software based assurance gathering process

Board of Directors and business group reporting

Business unit reporting

User needs	Suggested response
information about significant business risks under span of responsibility	matrix reporting by major area of business risk
an indication of possible quick wins in risk response implementation	management's relative control over the risk response assessed
assurance that business risk management processes are operating effectively	information for significant business risk drivers are analyzed and documented in database
sufficient data to appropriately monitor and assess business risk management performance of functional reports	reporting by accountable manager
assurance that appropriate management actions are being undertaken to enable sign-off of the Board of Directors' questionnaire	matrices provide information for active review process of key risks and performance of functional reports
renewable process to support continuous improvement	movement in risks over time reflected in risk profile matrices

Individual reporting

User needs	Suggested response
context and framework for understanding business risk and managment business risk response	all relevant data about risks contained in the business risk database including risk management action plan
information about risk drivers to monitor changes in risk intensity	risk drivers are analyzed and documented
ownership of individual risks and understanding business risk management responsibilities	accountabilities determined
understanding the context of risk to enable continuous improvement of risk response	context and significance of risk established

The Role of Internal Audit

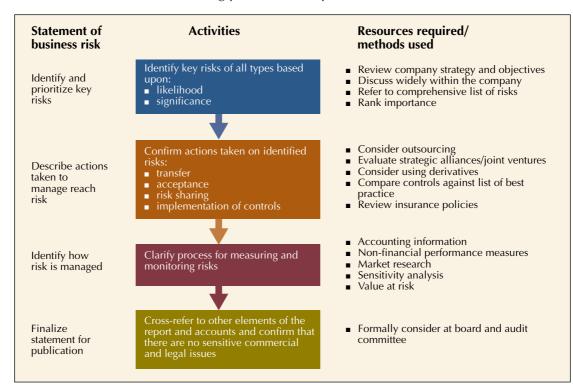
To achieve effective control, best practice requires a robust internal audit function. Thus one of the principal functions of internal audit is the examination of control systems. Internal audit provides the Board of Directors or Chief Executive Officer, together with senior management, with a valuable resource to evaluate control systems and to provide assurance concerning the effectiveness of control systems. Internal audit is, in effect, part of the performance monitoring process.

Internal audit however, in many companies, has moved from the compliance function to playing a major integrated role, often as the "champion" of risk management. Internal auditors act as facilitators and mentors to management and are exercising a major influence over the adaption of best practice.

Internal auditors can be 'champions' of risk management

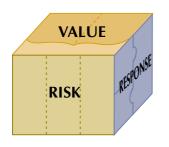
External reporting

Corporations are also focussing on the need to report risk externally. The Institute of Chartered Accountants in England and Wales proposes the following process to compile a "Statement of Business Risk":



Source: The Institute of Chartered Accountants in England and Wales - Financial Reporting of Risk: Proposals for a Statement of Business risk

As one of the principal factors affecting the cost of capital is the perceived risk of the enterprise, this disclosure should lead to better informed capital markets.



4. What are the future developments?

Alignment of shareholder value and risk management

The preceding three chapters of this paper have addressed the individual elements of:

- creating and delivering shareholder value
- the business risk continuum
- the risk response or architecture.

For some organizations the ideas set out in this paper will be new; others will be well advanced in applying these principles and processes. There are of course also several fronts on which advances are being made. Some of these are as follows.

Measurement

The identification and measurement of risk covers many professional disciplines including engineering, actuarial, mathematics and financial studies, and there are numerous linkages between these various professions and disciplines.

International standards are emerging and are under development and one of the many threads that draw the various interested parties together is "quantitative methods".

Current and future developments in quantitative methods fall into two broad categories; on the one hand methodologies exist and will continue to be refined for the measurement of specific risks, both as to their likelihood and impact while on the other hand, the aggregation of risks, sometimes using statistical methods so as to determine an overall impact either on technical or commercial operations or cumulatively to an overall effect on shareholder value.

Measurement - the way forward

The determination of shareholder value by Shareholder Value Analysis methodologies is quite well developed already and helps focus the risk management process on the value drivers that are keys for managing threats and opportunities. Shareholder Value Analysis easily provides a (quantitative) framework which can be used to evaluate the (quantitative) impact of possible risk scenarios. In most cases risk impact will be related to the impact on future cash flow from operations, but the shareholder value model will show that other drivers like financial structure, taxation, market outlooks etc. are also of importance.

Likelihoods of risk scenarios could be supported by historical (and benchmarking) information, but could on the other hand be assessed on a subjective basis to be able to predict them more reliably than historical data, certainly when new activities are commenced.

Shareholder value models already include ways of quantifying hazard, opportunities and uncertainty in the way they quantify shareholder value. Shareholder value determination uses assumptions on business risks, most commonly the risk premiums in calculating net present value dependent on the industry. However, the area of managing risk is dealing with the company specific risk profile and is often not well understood by shareholders and investors. Work still has to be done on the relationship between the company risk profile and the common industry risk profile.

The impact of risk management programs will be assessed in the future by assessing the impact of risk management activities on the company risk profile. The shareholder value model probably provides the framework for assessing this impact, which may be a more comprehensive way of assessing risk management activities than by quantifying impact and probability of each risk scenario. This may probably be done by assessing the changes in the probabilitydistribution-curve describing the possible future (cash flow) scenarios that are reflected in shareholder value calculation.

Finally, information technology will:

- facilitate better processing of the building components of shareholder value and
- generate further questions as more layers of the picture are revealed.

Appendix A

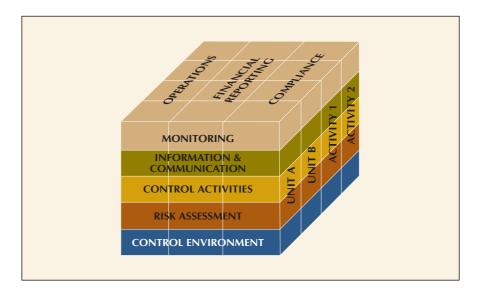
A market-place snapshot - conformance, a more detailed review

In the United States:

COSO

The Committee of Sponsoring Organizations (COSO) of the Treadway Commission engaged Coopers & Lybrand to carry out a study which was published in their final report, Internal control - integrated framework, in 1992. The aim was to provide a definitive framework against which businesses can assess their control systems and determine how to improve them.

The COSO cube represents how the internal control framework applies to all organizations:



The COSO Report concepts have been incorporated into regulation and professional standards in the United States, formed a basis for CoCo in Canada and the Cadbury guidance in the United Kingdom, have been used by other countries, have been translated into at least eight foreign languages, have been adopted by academia, accepted by the United States General Accounting Office, and serves as a control framework for hundreds of companies.

COSO was ground breaking and its strength can be measured by the ongoing relevance of the thinking embedded in its guidance.

The Public Oversight Board

Recommendation V-12 states:

"The SEC should require registrants to include in a document containing the annual financial statements:

- (a) a report by management on the effectiveness of the entity's internal control system related to financial reporting; and
- (b) a report by the registrant's independent accountant on the entity's internal control system related to financial reporting."

In the United Kingdom:

The Cadbury Commission

The Committee on the Financial Aspects of Corporate Governance, chaired by Sir Adrian Cadbury, published its report in 1992. Cadbury required that directors of public companies report on the effectiveness of their organization's internal controls and the external auditor should review such statements of compliance. The Cadbury Code also encouraged enterprises to disclose specific key risks.

Generally Accepted Risk Principles - GARP

Coopers & Lybrand developed an industry standard for risk management and internal controls in 1996 known as Generally Accepted Risk Principles (GARP).

GARP provides a benchmark of risk management practices for those who manage and regulate trading, treasury and investment activities in the financial markets.

Hampel

The reporting obligations of UK listed companies changed as a result of the adoption of the Hampel Committee's Combined Code issued in June 1998. The Hampel Committee Final Report obliges an organization's directors to make statements to show how they:

- apply the principles of the Combined Code and
- comply with the Combined Code, which incorporates earlier work of Cadbury, Greenbury and Hampel.

This requirement does not mean more annual report detail but it does require a more in substance approach to risk management reporting.

Additionally, the scope of the reporting requirement extends to require directors to:

"at least annually, conduct a review of the effectiveness of the group's system of internal controls".

This will relate to all relevant control objectives and not merely financial controls. This should include business risk assessment and response, financial management, compliance with laws and regulations and the safeguarding of assets including minimizing the risk of fraud.

Financial Reporting of Risk

In 1998 The Institute of Chartered Accountants in England and Wales released its proposals that a statement of business risks be included in the annual reports of publicly traded companies. The statement would identify and prioritize key risks, describe actions taken to manage each risk and identify how risk is measured. The purpose of financial reporting of risk is not to burden business with voluminous new reporting but to encourage the provision of quality information on business risks that will be of real benefit to investors.

The Royal Society of Arts

The Royal Society of Arts report, Tomorrow's Company, points out that only through deepened relationships between employees, customers, suppliers, investors and the community will companies anticipate, innovate and adapt fast enough while maintaining public confidence.

"Innovation and adaption" both call for superior risk management.

In Canada:

The CICA Criteria of Control Committee ("CoCo")

In 1995 the Committee issued "Guidance for Directors - Governance Processes for Control". This guidance posed many questions including "Are major risks and opportunities identified and related control objectives set? How are new risks, opportunities and control requirements identified?"

Toronto Stock Exchange Guidelines (on Corporate Governance)

Guidelines on the disclosure requirements of the Toronto Stock Exchange included in *The Toronto Stock Exchange Company Manual* identify managing risk as one of the principal responsibilities of the board. "The board must understand the principal risks of all aspects of the business in which the corporation is engaged and, recognizing that business decisions require the incurrence of risk, achieve a proper balance between the risks incurred and the potential returns to shareholders. This requires the board to ensure that there are in place systems which effectively monitor and manage those risks with a view to the long term viability of the corporation."

The Canadian Institute of Chartered Accountants ("CICA")

In 1998 the CICA, through its Criteria of Control Board, issued a paper "Learning about risk: choices, connections and competencies".

This paper examines the nature of risk and offers some risk models and propositions about how risk identification and assessment may be addressed. The paper is the result of a program of wide-ranging literature research, interviews and thinking over the past year. It contains material that will challenge conventional views including:

- strategic choices
- operational risk and control choices
- crisis choices
- resilience and survival choices
- leadership choices
- choosing to be aware
- intuition and the choice to deny or act.

The Conference Board of Canada

In 1997 the Conference Board of Canada issued "A Conceptual Framework for Integrated Risk Management" authored by Lucy Nottingham. The key message is that integrated risk management is a critical tool to steer organizations through turbulent and volatile environments. The conceptual model involves:

- a framework for risk management
- a top-down-driven and supported risk management policy, approach and processes
- a "champion" or central co-ordination point
- organization-wide risk management processes.

In The Netherlands:

The Dutch commission on Corporate Governance, known as the Commission Peters, has issued a report on corporate governance: "Corporate Governance in The Netherlands, Forty Recommendations". Included in these recommendations is the requirement for the Board to discuss the organization's strategy and its risks, as well as the assessment of the internal control structure, with the supervisory board.

In Australia and New Zealand:

Australian Stock Exchange

In 1995 the Australian Stock Exchange (ASX) introduced a listing rule requiring all listed companies to provide a Statement of Corporate Governance Practices in their annual report. The ASX responded to both local and international shareholder pressure and, among other things, required that the following be covered in the annual report.

"The Board's approach to identifying areas of significant business risk and putting arrangements in place to manage those risks."

Standards Australia and Standards New Zealand 4360:1995 "Risk Management"

In late 1995 Standards Australia and Standards New Zealand issued Standard 4360:1995 - "Risk Management" This sets out generic guidelines for the identification, analysis, assessment, treatment and monitoring of risk. Although it is not mandatory, this Standard has had wide recognition, particularly in the government sector, and has been considered as a possible basis for world guidance under the umbrella of the International Organization for Standardization.

In France:

The Vienot Report

In 1995, the French Association of Private Companies, chaired by Mark Vienot, head of Société Générale published a report called 'The Board of Public Companies'. Amongst other things, the report expressed the view that the board of directors should not simply aim at maximizing share values (as in the UK and the US). Rather, its goal should be to serve the company, whose interests should be "clearly distinguished from those of its shareholders, employees, creditors (including the tax authorities), suppliers and clients" but still "equated with their general common interest, which is to safeguard the prosperity and continuity of the undertaking".

Risk management processes could support the focus on "prosperity and continuity".

In Italy:

Riforma Draghi

In Italy, the proposals formulated from the Commission of the Ministry of the Treasury, presided over by the Director General Professor Mario Draghi, also clarify the tasks of supervisory boards, including observance of the laws and corporate charter, but also internal controls.

In South Africa:

The King Report

Mervyn King, South Africa's leading authority on corporate governance and author of the 1995 King Report, delivered to South Africa the equivalent of the Cadbury Report in the United Kingdom; enhanced disclosure will strengthen conformance.

Notes

- 1 Jim Kropp, PricewaterhouseCoopers, 1998 "At What Risk ...?"
- 2 Lee Puschaver and Robert G Eccles "In Pursuit of the Upside: The New Opportunity in Risk Management" PW Review, December, 1996
- 3 Mark Stephens "CFO: Architect of the Corporations Future"
- 4 The Institute of Chartered Accountants in England & Wales "Financial Reporting of Risk: Proposals for a Statement of Business Risk"
- 5 Greg Morris, Robert G Eccles and Ian Falconer "ValueReporting(tm) in Australia Improving Competitiveness in Capital Markets"
- 6 Fred L Cohen and Jonathan M Peacock, PWReview, December '97 "Managing Risk to Increase Shareholder Value: New Concepts and Tools"
- 7 Paul Barratt "Business Council Bulletin", July 1995
- 8 Lucy Nottingham, The Conference Board of Canada "A Conceptual Framework for Integrated Risk Management"

International Federation of Accountants

Financial & Management Accounting Committee 1998-2000

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South Africa	Neil Oberholzer**	
United Kingdom	William Connell	Tony Dart Christopher Jackson
United States	Gary A. Luoma	John F. Morrow Terry Funk

* Chairman of the FMAC Working Party working with PricewaterhouseCoopers on this Study.

** Member of the FMAC Working Party working with PricewaterhouseCoopers on this Study.

