

# 7th Annual Global CEO Survey

## Managing Risk: An Assessment of CEO Preparedness\*

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PricewaterhouseCoopers serves the business community through adherence to what we call Connected Thinking across our global organisation. This edition of the Global CEO Survey connects the minds of nearly 1,400 CEOs worldwide to reveal unexpected patterns, shared convictions and debates, and the challenges of our time. The focus of this report is enterprise risk management, now coming of age. The report also includes featured interviews with global leaders in business and government who exemplify connected thinking through their breadth of experience and understanding. Detailed survey findings are available at [www.pwc.com/globalceosurvey](http://www.pwc.com/globalceosurvey).

This is one of the most exciting surveys in years to be released by PricewaterhouseCoopers at the Annual Meeting of the World Economic Forum. Its focus is enterprise risk management. Only now being codified, enterprise risk management provides a framework for CEOs and management teams to deal effectively with uncertainty, and the risks and opportunities associated with uncertainty, in order to enhance value. Some three years ago, PricewaterhouseCoopers was asked by the Committee of Sponsoring Organisations of the Treadway Commission to lead its project to research and develop a comprehensive enterprise risk management framework. The results of that effort will be issued as a book in mid 2004 and will reach, we hope, the desks of CEOs in all parts of the world.

A framework and new perspectives on best practices are important additions to management knowledge, but they leave unexplored many dimensions of the actual experience of CEOs and their companies. Although CEOs today tend to be optimistic, what risks do they perceive in the environment and within their companies? How deeply is formal enterprise risk management embedded in their organisations? Are there CEOs and companies today that demonstrate exceptional skill in enterprise risk management? We are grateful to the nearly 1,400 CEOs who have taken part in this year's survey, which explores those questions and more.

It has long been our practice to seek the individual views of widely respected leaders on the issues under investigation in the survey. This year's edition features interviews with two chief executives—Travis Engen of Alcan and François Roussely of Electricité de France—as well as an interview with Henrique Meirelles, chairman of the Banco Central do Brasil. We thank them sincerely for their participation.

A survey is an objective document, an exercise in questionnaire design and statistical processing. It can also be something more: a source of new and important insights, a strategic resource. I trust that this year's Global CEO Survey will serve those larger purposes.

Samuel A DiPiazza Jr  
Chief Executive Officer  
PricewaterhouseCoopers International Limited



## Table of Contents

### 2 Highlights

### 3 Survey Participants and Methods

### 4 The CEO at Work: Management Strategies, Performance Forecasts

### 10 The Business Climate and Risk Appetite

### 18 Enterprise Risk Management: An Enquiry

- What Is Enterprise Risk Management?
- Basic Processes of Enterprise Risk Management
- Full Implementation of Enterprise Risk Management
- Levels of Commitment
- Barriers to Implementation
- Communicating and Reporting Enterprise Risk Management Information
- Benefits of Enterprise Risk Management
- Is Enterprise Risk Management in Place Now?

### 40 Evidence of Excellence

- When Enterprise Risk Management Is a CEO Priority
- When Enterprise Risk Management Is Integrated into Strategic Planning
- Advanced Practitioners: The Most Committed CEOs and Their Companies

### 53 Featured Interviews: Risk Management in Personal Perspective

- **HENRIQUE MEIRELLES**  
President, Banco Central do Brasil
- **TRAVIS ENGEN**  
President and Chief Executive Officer, Alcan Inc.
- **FRANÇOIS ROUSSELY**  
Chairman and Chief Executive Officer, Electricité de France

## Highlights

- Two cadres of CEOs and companies, each just 15 percent of the total sample, prove to be advanced practitioners of enterprise risk management (ERM). The benefits they generate from their ERM programmes are dramatically greater. For example, 74 percent of the CEOs of certain advanced companies report that ERM helps them create value, contrasted with 39 percent of all other CEOs. **Pages 47–52**
- ERM is a priority among more than a third of the CEOs (39 percent strongly agree) and their boards (38 percent). **Pages 28–29**
- These more committed CEOs report significantly higher benefits from their ERM programmes (though not as high as for the top 15 percent of advanced practitioners). For example, 62 percent of the more committed CEOs strongly agree that ERM enhances their ability to take appropriate risks to create value, while only 32 percent of all other CEOs share that view. **Pages 42–44**
- Entry-level ERM involves six basic processes. From 60 percent to 73 percent of the CEOs report that those elements are well embedded in their organisations. **Pages 22–23**
- Full implementation of ERM involves a more advanced set of elements. From 13 percent to 33 percent of the CEOs strongly agree that their companies have one or more of those elements in place. **Pages 24–27**
- Nearly 40 percent of the CEOs report that they already have effective and efficient ERM in place, while 46 percent view its implementation as a one- to three-year project. **Pages 38–39**
- CEOs are prepared to take risks to move their companies forward. Nearly half say they are more aggressive risk takers, though 20 percent have scaled back their risk appetite. **Pages 15–17**
- CEOs worldwide are optimistic about their companies' growth potential. The survey indicates that more than 80 percent are confident about revenue growth over the next 12 months and over the next three years. **Pages 7–8**

## Survey Participants and Methods

The 2004 edition of the Global CEO Survey, seventh in a series, casts a wider net than any previous edition. Nearly 1,400 interviews with CEOs were conducted on a worldwide basis in fourth-quarter 2003 (the precise number is 1,394), the great majority of them by means of telephone interviews, with regional exceptions in Japan, where a postal survey was conducted, and in China, Kenya, and Nigeria, where face-to-face interviews were conducted. The entire research effort was coordinated by the PricewaterhouseCoopers International Survey Unit, based in Belfast, Northern Ireland, in close cooperation with a New York-based team of project managers and a global advisory board of PricewaterhouseCoopers partners.

By region, there were 454 interviews in Europe, 182 in the United States (plus, in North America, 95 in Canada and 36 in Mexico), 258 in South America, 319 in the Asia-Pacific region, and 50 in Africa. By broad industry grouping, there were 244 interviews in financial services, 173 in technology and media, and 974 among consumer and industrial products manufacturers, distributors, and retailers (referred to hereafter as the product sector), in addition to 3 companies that did not provide an industry designation. Company size is also a critical measure: 37 percent of the companies represented have more than 5,000 employees; 32 percent have 1,000–5,000 employees; 13 percent have 500–999 in their workforce; 16 percent have a workforce of fewer than 500; and the small remaining percentage offered no information about workforce size.

Thirty-three percent of the respondents' companies earn annual revenue in excess of \$1 billion; 14 percent earn \$500 million–\$1 billion; 45 percent earn less than \$500 million; and 8 percent offered no information. The regional distribution, in revenue terms, shows the highest concentration of \$1 billion-plus companies in Europe (45 percent), followed by Asia-Pacific (39 percent) and North America (21 percent).

New to the survey this year is an exploration of the findings for the 536 participating middle-market companies, defined as having less than \$500 million in revenue.



## ► The CEO at Work: Management Strategies, Performance Forecasts

The world is in difficulty—yes. Few observers trust the global economy to make steady gains—yes again. But the surveyed CEOs are by and large confident that their companies will do well. They are reshaping their organisations to compete effectively and prosper in today's conditions. There is no status quo. Structure and operations are being questioned and, when necessary, altered. The result is a robust sense of enterprise.





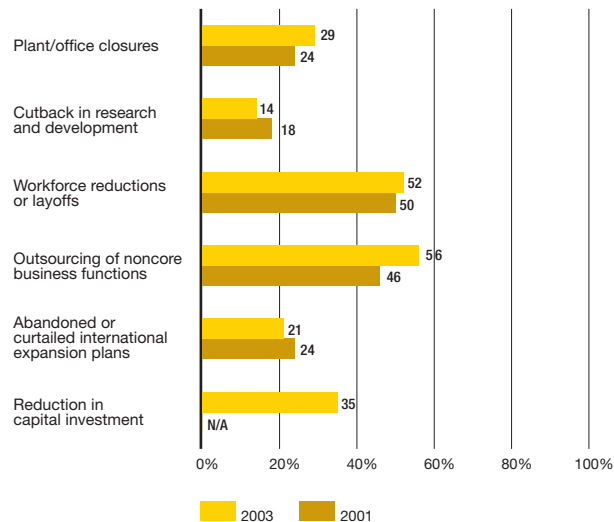
To set the stage for this year's focused exploration of risk management, it makes sense to look first at general management issues, for most of which year-on-year comparative data are available. These initial concerns are three in number: What management strategies are the CEOs using to respond to global economic conditions? What are the CEOs' short-term (one-year) expectations for revenue growth and profitability? And what are their expectations of revenue growth over the longer term (three years)? The aggregate answers reveal that CEOs worldwide are decisively reworking their companies to ensure stability and performance, and they are generally optimistic about the results of their efforts.

**EXHIBIT 1** shows considerable year-on-year consistency in most respects, with one noticeable shift: CEOs in the aggregate are more likely than ever to outsource core business functions—minimally as a means of cost and head count control and maximally as a means of ensuring quality through the competitive marketplace. Regional data show that the trend toward outsourcing is strongest in South America, where 73 percent of participating CEOs report that they have used this management strategy to meet current economic conditions. Asked whether outsourcing is a short- or long-term change, 73 percent of the CEOs report that they view the change as long-term.

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**EXHIBIT 1 ■ ADDRESSING GLOBAL ECONOMIC CONDITIONS**

Which methods are CEOs using to deal with the challenges presented by global economic conditions?



From an industry perspective, outsourcing is more frequent in the technology and media sector (64 percent) and among products companies (56 percent) than in financial services (50 percent).

The risks of outsourcing in the high-tech and products sectors are arguably two in number: first, the outsource company may be somewhat thinly capitalised and therefore less stable and second, it may not have enough productive capacity to respond to peak periods of demand. However, the economic advantages of outsourcing are believed to outweigh those risks.

R&D spending, always an important indicator, is in the aggregate less subject to cutbacks than two years prior, and regional data show that cutbacks are lowest in Asia-Pacific, where only 12 percent of participating regional CEOs have recently used that strategy. The US and Europe are not far off, at 14 percent each. A considerable majority of CEOs in all regions (66 percent) view cutbacks in that area to be a short-term measure.

Workforce reductions or layoffs, while all but unchanged in the aggregate on a year-to-year basis, were considerably higher this year in Europe (60 percent) than in the United States (42 percent). This may well correlate with the survey finding on outsourcing in Europe: 59 percent of participating regional CEOs have recently used this approach, while a more modest 34 percent have done so in the United States. However, many factors are likely to be responsible for such a large-scale and important pair of changes.

The CEOs' responses about reductions in capital spending—a topic new to the survey—are best viewed by region and industry. In regional terms, there is a gradual shift: South America, 43 percent; Europe, 37 percent; US, 34 percent; and Asia-Pacific, 28 percent.

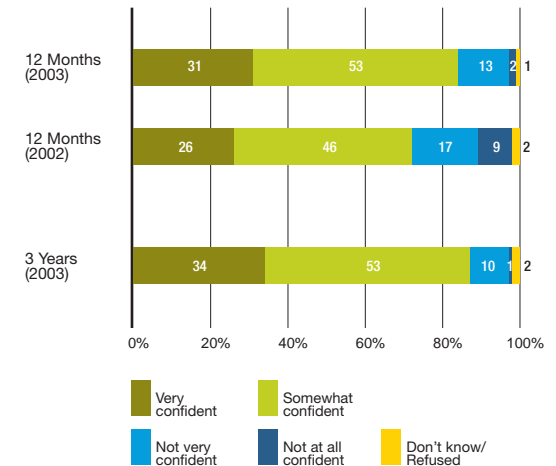


Responses by CEOs in the middle market track quite closely with those by CEOs leading larger companies. There are, of course, some differences. For example, fewer middle-market companies have used plant or office closures as a means of responding to the current economic climate (just 20 percent contrasted with 37 percent among larger companies), and among those few, a greater percentage (31 percent contrasted with 20 percent among larger companies) regard those measures as temporary. Similarly, middle-market companies have relied less on workforce reductions and outsourcing. Proportionately speaking, there appears to be somewhat less large-scale reconfiguration among middle-market companies.

Performance forecasts are measures of confidence. As in past surveys, this edition enquired about the CEOs' confidence in their companies' prospects for revenue growth during the next 12 months and three years (**EXHIBIT 2**). Where the coming year is concerned, the participating CEOs are more confident of revenue growth than just one year ago: 31 percent are very confident and 53 percent somewhat confident of good performance—both numbers reflecting significant year-on-year gains. CEOs in the United States (37 percent) and Asia-Pacific (36 percent) lead with respect to being very confident of revenue growth, while the European participants—with just 22 percent reporting they are very confident—are a good deal more cautious. In terms of industry sectors, financial services CEOs worldwide reflect the greatest confidence in both the next year (37 percent are very confident) and the next three years (39 percent are very confident).

## EXHIBIT 2 ■ CEO CONFIDENCE IN REVENUE GROWTH

How would you assess your level of confidence in prospects for the revenue growth of your company over the next 12 months/3 years?



The three-year projections track closely with the one-year projections. Thirty-nine percent of CEOs in the United States, Asia-Pacific, and South America report that they are very confident of revenue growth, while in Europe the percentage is significantly lower, at 26 percent. In all regions, a majority or a near majority are somewhat confident of revenue growth, but the cautiousness of European CEOs is worth noting in light of the momentous changes under way in the European Union.

Middle-market companies are again within a few percentage points of their larger peers on both measures. Broadly speaking, this will prove to be the pattern for the middle market.

Do the CEOs say their companies will meet profit targets in the next 12 months? The year-on-year findings reflected in **EXHIBIT 3** show remarkable consistency—with a slight falloff in the aggressively confident top range. A larger majority (63 percent) than in the prior year (58 percent) expect to match profit targets, but smaller percentages of the participating CEOs expect to exceed or greatly exceed

targeted numbers (respectively, 22 percent and just 5 percent). In regional terms, 29 percent of Asia-Pacific CEOs expect to exceed or greatly exceed their profit projections compared with

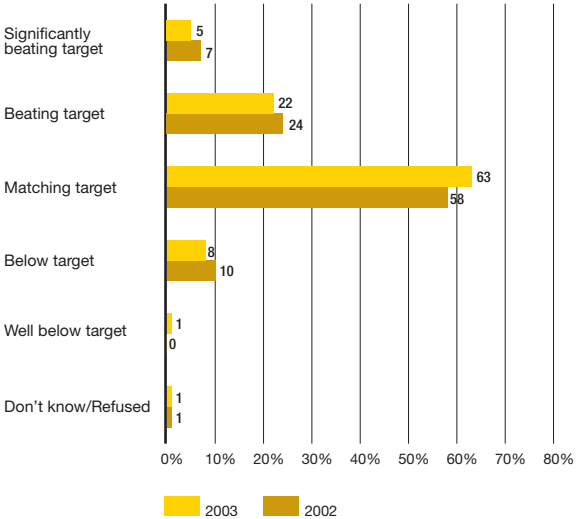


22 percent of US CEOs and 25 percent of European CEOs. The majority of CEOs in all regions—ranging from 59 percent to 65 percent—expect to match their target levels of profitability. By industry sector, the same holds true. At the top of the range, financial services CEOs are significantly more confident than others that they will either exceed their targets (28 percent) or exceed them by a wide margin (9 percent). For its part, the middle-market results are again very similar to those for larger companies.

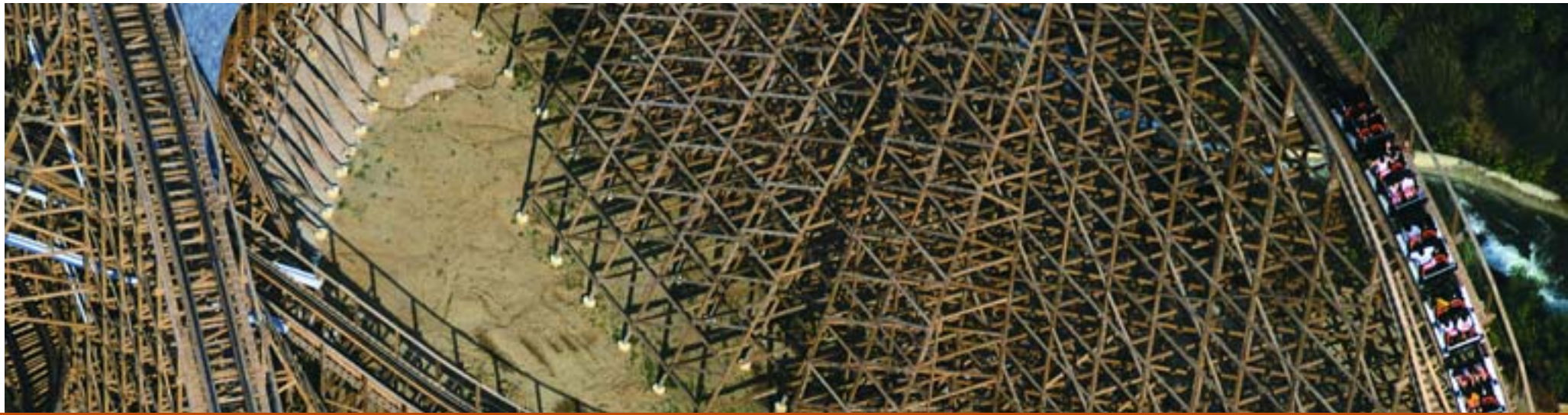
Clearly, despite the many difficulties facing the participating CEOs in an era widely recognised as troubled and somewhat unstable, the CEOs are predominantly optimistic about the performance of their businesses. Is it possible to learn more about the external and internal difficulties they regard as foremost? The survey provided much perspective on those issues, as the next section makes clear.

**EXHIBIT 3 ■ MEETING PROFIT TARGETS**

In the next 12 months, what are your prospects of meeting profit targets?







## ► The Business Climate and Risk Appetite

The CEOs assess the many difficulties that could potentially affect their companies—everything from global terrorism to currency instabilities and excessive regulation. Despite those threats, nearly half report that they are more aggressive risk takers than in the past, and only 20 percent have scaled back their risk appetite. This business climate is not for the faint of heart.



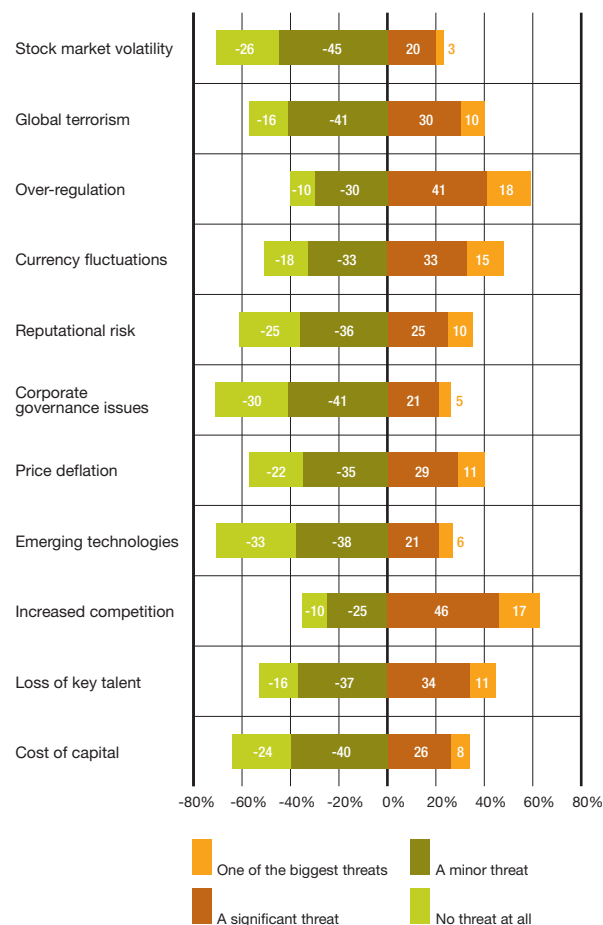
**EXHIBIT 4** is a ladder of difficulties potentially facing all CEOs and their companies. In asking the CEOs to evaluate the importance of each risk in the ladder, the survey raises a straightforward question: what risks are “out there” in the external environment, and what risks internal to the company are foremost? In the next section of this report, the CEOs’ approach to managing the risks of enterprise—those shown in **EXHIBIT 4** and still others—will begin to come into focus.

The CEOs are not alarmists. They are more likely than not to evaluate a threat, internal or external, as minor or insignificant. Yet there are some issues that trouble them—foremost among them, the threat of increased competition. Seventeen percent of the CEOs describe increased competition as a very substantial threat, and another 46 percent view it as significant. What is interesting here is that competition generally grows out of positive assets and strategies, pitted against each other in the open marketplace. In this sense, the CEOs’ greatest concern is just what it should be: prevailing in the competitive global marketplace.

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#### EXHIBIT 4 ■ THREATS TO GROWTH PROSPECTS

Thinking about potential threats to your business growth prospects, how big a threat do you consider each of the following to be?



Competition is not their only concern. A related issue, the loss of key talent, looms as major for 11 percent of the CEOs and as significant for another 34 percent. By industry sector, loss of key talent is a marked concern among CEOs in the financial services sector, 16 percent of whom consider it a major issue, while another 33 percent consider it significant. Much the same is true of their assessment of the threat of increased competition (14 percent regarding it as major, 46 percent regarding it as significant). Financial services institutions are clearly under intense pressure to deploy winning strategies and to retain top talent in order to remain ahead of the pack.

The threat of over-regulation has been in the news in recent years: how much is too much? Over-regulation is viewed as a very substantial threat by 18 percent of the CEOs, with another 41 percent recognising it as a significant threat. The South American CEOs are particularly concerned—72 percent perceive either a major or reasonably important problem in over-regulation—and the Europeans are not far behind, at 61 percent. Although one might expect US CEOs to be most exercised about the threat of over-regulation, the survey finding does not support that thesis: just less than half (49 percent) consider over-regulation to be a major or significant threat. This is, of course, a very meaningful proportion of the whole, but in global perspective it is far from the loudest shout of protest.

Historically, many US industries have not been heavily regulated, and US CEOs are less likely than others, even today, to perceive as excessive the regulatory regimens under which they operate. With the Sarbanes-Oxley Act now in place and implemented by several new layers of regulation, US CEOs have by and large accepted with good grace the new requirements.



Few would deny we are in an era of new regulation, re-regulation, and—as many CEOs see it—over-regulation. The reasons for this situation differ in different regions. In the United States, for example, an underlying and nearly unnoticed corporate permissiveness led to business failures on a scale that hurt many investors and employees, and diminished investor confidence in the probity of corporate information. The remedy, in terms of oversight, regulation, and enforcement, is subject to much debate and remains a work in progress. In Europe, the slow but steady progress toward union has required a strong focus on regulation. Each region has its reasons—but all are immersed in an era of regulatory change that cannot but concern CEOs.

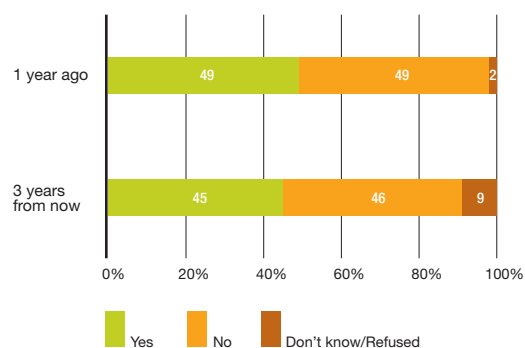
One would think that global terrorism must rank quite high among threats to business growth in light of the events of 9/11, wars and unresolved disputes in the Middle East, and the global occurrence of terrorist acts in public places. With 10 percent of the participating CEOs perceiving a major threat in that regard and another 30 percent perceiving a significant threat, this is evidently so. But in point of fact, currency fluctuations worry them somewhat more, with 15 percent and 33 percent, respectively, considering that issue to be a major or significant threat. Not surprisingly, 62 percent of participating South American CEOs have their eyes on the threat of currency fluctuations, because many of the currencies in the region have been subject to pressure in recent times. There is no science of comparative threats, but it is clear enough that the risk of abrupt business interruptions caused by terrorist events is somewhat less concerning to CEOs than the long-term and often politically difficult issues surrounding currencies.





**EXHIBIT 5 ■ RISK IN THE BUSINESS ENVIRONMENT**

Do you think the business environment is more risky than it was a year ago/will be 3 years from now?



Those views—and in very nearly the same percentages—prevail among the CEOs of middle-market companies. Even on such issues as the cost of capital, where size matters, they are only slightly more concerned than their larger-company peers. The congruence between middle-market and larger-company CEO views on many issues suggests that the challenges and management methods common to CEOs leading companies of all sizes far outweigh the differences. An analogy from seafaring may be useful here: the skipper of an immense aircraft carrier and the skipper of the small vessel that protects its flanks face the same weather and seas, use the same navigational instruments, have equal responsibility for the welfare of their crew and equipment safety—and so on. Divergences between smaller and larger companies will appear, however, in the CEOs' responses about enterprise risk management, discussed in later sections of this report.

Is the business environment more risky now than it was a year ago? And do the CEOs expect it to be more risky in three years' time? Asked to respond either yes or no to both questions, the CEOs generated what amounts to a coin toss: nearly half in each case took one view or the other (**EXHIBIT 5**). Slightly more texture appears from a regional perspective—for example, US and European CEOs tend by a small margin to regard the business environment as less risky than a year ago (58 percent and 52 percent, respectively, offering this view), while small majorities of South American and Asian CEOs view it as more risky. As to the three-year period, the Asian CEOs (51 percent yes, 38 percent no) are more apprehensive than those of other regions. On the whole, both by region and by industry, there is modest confidence that the business environment will be

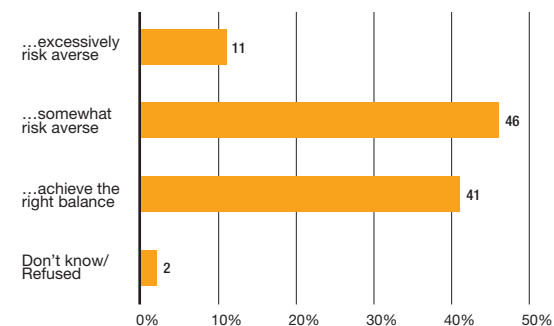
less risky. The CEOs of middle-market companies appear to be slightly more apprehensive than their larger-company peers in the near term—52 percent versus 47 percent say the world is riskier today—but for the longer term, they have virtually the same view.

When experienced leaders divide so nearly equally on a question, this survey report can only take its place among them and record that the matter of overall risk in the business environment is somewhat inscrutable.

How is the current climate affecting the risk appetite of CEOs? **EXHIBIT 5** looks at that question from the outside in—in terms of perceptions of the external environment—while **EXHIBIT 6** adopts the opposite perspective by looking within the company for recent changes in management's attitude toward risk. The topic of risk appetite has been much debated in the past year, not least in the United States, where new regulation and enforcement at the level of the board of directors and the CEO have arguably slowed the risk-taking, entrepreneurial strategies of some companies, and the media have had a nearly nonstop menu of corporate scandals to report and investigate. In addition, the other risk factors brought to light in **EXHIBIT 4** contribute to a climate in which the appetite for risk may well have changed in ways that a survey can effectively detect.

**EXHIBIT 6** ■ CURRENT RISK CLIMATE

Do you think that the current climate is making companies...?



**EXHIBIT 6** is a classic bell chart, with the great majority of CEOs falling somewhere in the middle: 46 percent recording the view that the current climate has made companies somewhat risk averse and another 41 percent stating that the balance between risk taking and risk avoidance is about right under the circumstances. By region and industry sector—and, as well, for the middle market—the percentages run a close parallel to those numbers for all participants.

**EXHIBIT 7** shows that the CEOs' reported practice in their own companies tends to differ from how they perceive the business world at large to be behaving. If there were a perfect correlation between the findings in **EXHIBITS 6** and **7**, one would expect a much higher percentage of CEOs

to be at least somewhat more risk averse, but such is not the case: nearly half of the CEOs (48 percent) report that they are somewhat more or significantly more aggressive in their attitude toward risk taking. Yet there are regional differences. Only 5 percent of the US CEOs report that they are significantly more aggressive where risk is concerned, while 17 percent of Asia-Pacific CEOs regard them-

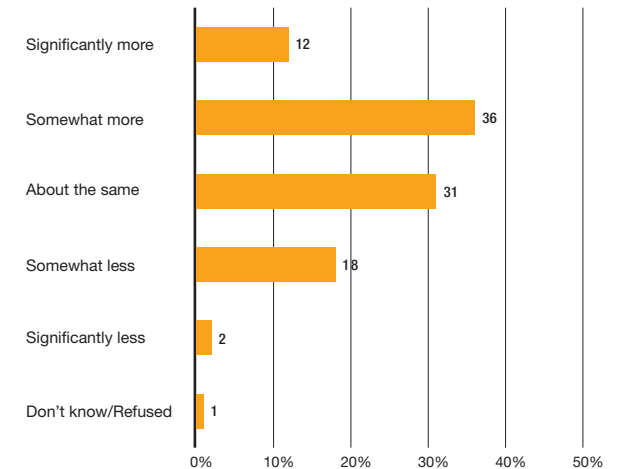
selves as significantly more aggressive. There are industry differences as well: in the technology and media sector, 15 percent of the CEOs report that they are significantly more aggressive, and another 43 percent—considerably more than in the other industry sectors—view themselves as somewhat more aggressive. Among middle-market CEOs, 49 percent regard themselves as significantly or somewhat more aggressive, again tracking closely with the overall survey and with their larger-company peers.



Generally speaking, what is the lesson here? The CEOs converge to some degree toward a wary view of the external environment: new regulation and other constraints have made companies—“not my own, but other companies”—more risk averse. On the other hand, in their own management practice and in their own industries, which they understand in depth, they tend to recognise the need to continue taking risks in order to reap rewards that will set their companies apart competitively and in investors’ minds. US CEOs are unlikely to be an exception. Though only a small percentage report that they have *increased* their risk taking in the past year, the traditional US attitude favours risk taking. The constraining effect of new regulation, to which many in the media and elsewhere have referred, may be more a debating point than a day-to-day reality.

**EXHIBIT 7** ■ LEVEL OF RISK APPETITE

Compared with 12 months ago, in accomplishing your business objectives, are you and your management team more or less aggressive in your attitude to risk taking?





## ► Enterprise Risk Management: An Enquiry

“Enterprise risk management provides a framework for management to effectively deal with uncertainty and associated risk and opportunity, and thereby enhance its capacity to build value.” So reads the definition provided by a comprehensive new publication soon to be released. Dozens of questions press forward about the state of enterprise risk management. How advanced is it? Do CEOs value it? Precisely how does it help? Are there expert practitioners?



The exploration of enterprise risk management that follows is based on the conviction that an important new management practice has emerged, now more thoroughly understood and structured than in years past. Most observers share the view that rigorous risk management is essential to corporate stability and long-term performance. But there is very little information available about the degree to which enterprise risk management has been integrated into current management practice and business processes and still less information about regional and industry-sector variations and the middle market's share in the venture.

The following sections of this survey report create what amounts to a profile of global CEO commitment to enterprise risk management and the depth of penetration of enterprise risk management practices. They also offer an overview of the field itself—of the most important concepts, capabilities, barriers, and benefits. This overview includes ideas—in large part emerging from survey findings—about the hierarchy of enterprise risk management functions: Which elements are most important? What constitutes full implementation? What generates the greatest benefit? Everything that follows records or builds on the CEOs' thinking.

**Risk identification, risk assessment processes, agreed patterns of response, risk controls, risk monitoring, and regulatory compliance processes are all reported by substantial majorities to be embedded in the organisation.**

## What Is Enterprise Risk Management?

The Committee of Sponsoring Organisations of the Treadway Commission, often referred to as COSO, is a globally respected, voluntary private-sector organisation sponsored jointly by the five major financial professional associations in the United States. (Those organisations are the American Accounting Association, the American Institute of Certified Public Accountants, Financial Executives International, the Institute of Internal Auditors, and the Institute of Management Accountants.) Since its founding in 1985, COSO has periodically issued comprehensive studies of key business issues, which have found large audiences. Recognising the need for a comprehensive framework of risk management concepts and guidelines suitable for use by all types of businesses, COSO commissioned PricewaterhouseCoopers to draft such a framework. An exposure draft, some 137 pages in length, was circulated in late 2003 for comment among all stakeholders who chose to participate in the review process. The final version is scheduled for publication in mid 2004.

A number of definitions drawn from the exposure draft offer a baseline understanding of the concept and objectives of enterprise risk management.

- Enterprise risk management provides a framework for management to effectively deal with uncertainty and associated risk and opportunity, and thereby enhance its capacity to build value.
- Enterprise risk management is a process, effected by an entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.





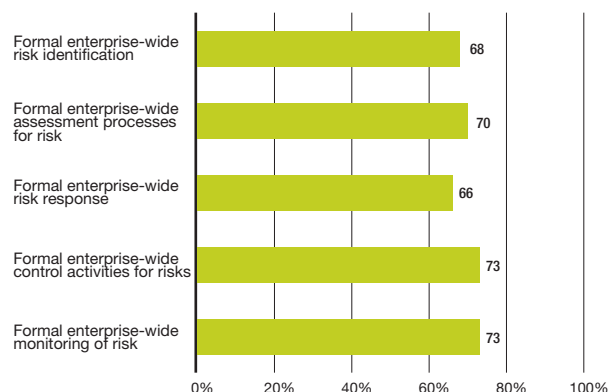
- Enterprise risk management provides enhanced capabilities to align risk appetite and strategy; link growth, risk, and return; enhance risk-response decisions; minimise operational surprises and losses; identify and manage cross-enterprise risks; provide integrated responses to multiple risks; seize opportunities; and rationalise capital.

All of the foregoing offers definitions and objectives. With that foundation, the question naturally arises: What are the basic, practical processes of enterprise risk management? That question is the point of departure for the enquiry that begins on the next page.



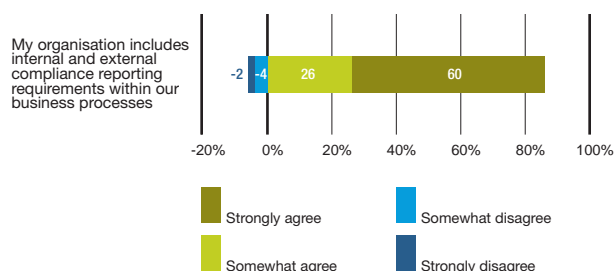
#### EXHIBIT 8 ■ BASIC PROCESSES OF ERM

Which of the following processes does your organisation have in place?



#### EXHIBIT 9 ■ BASIC PROCESSES OF ERM—COMPLIANCE

To what extent do you agree or disagree with the following statement regarding regulatory compliance?



## Basic Processes of Enterprise Risk Management

EXHIBITS 8 and 9 enquire about the six enterprise risk management functions that can reasonably be regarded as basic processes: when those functions are present, enterprise risk management in its basic form is also present. The exhibits indicate that three-fifths to three-quarters of the CEOs affirm that those basic processes are in place and functioning in their companies. Risk identification, risk assessment processes, agreed patterns of response, risk controls, risk monitoring, and regulatory compliance processes are all reported by substantial majorities to be embedded in the organisation. This will be an important point to keep in mind as the pattern of enterprise risk management begins to emerge more fully from the survey data.

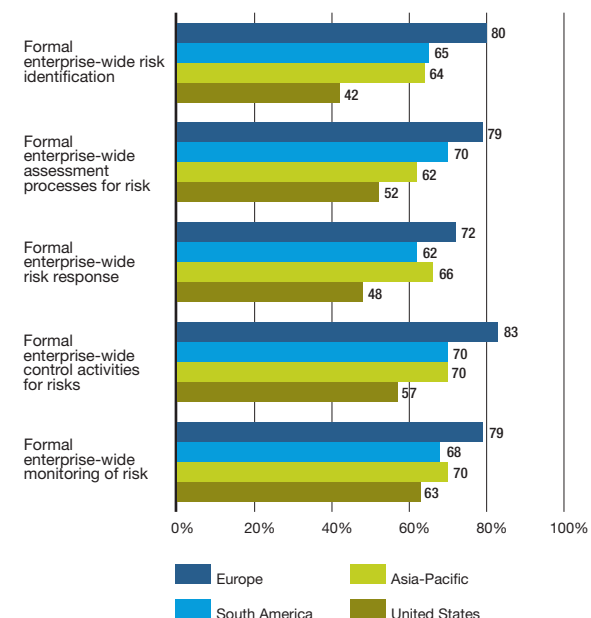
Viewed in regional perspective, the data show that US CEOs are strong with respect to compliance reporting (surpassed only by the South American CEOs) but less involved with the basic processes of enterprise risk management than CEOs in other regions (EXHIBIT 10). For example, 42 percent of US CEOs report that their companies have formal enterprise-wide risk identification in place, as contrasted with 80 percent in Europe and 65 and 64 percent, respectively, in South America and the Asia-Pacific region. US CEOs may be more sceptical of their own progress, but the underlying reason for the findings is more likely to reflect the current business and regulatory climate in the United States. Under fire for more than two years over the quality of corporate governance and reporting and now focused on meeting new regulatory requirements, US CEOs in the aggregate tend to care most about the regulatory compliance aspects of enterprise risk management. The fact that they rank with their peers in other regions in terms of the basic process that supports regulatory compliance gives some weight to that explanation. A significant number of US CEOs also have the other basic processes in place, indicating what could be the beginning of a more general trend. While it seems unlikely that US CEOs are less sophisticated enterprise risk managers than their peers in other regions, the data consistently show differences in perspective and emphasis.

On an industry basis, it is no surprise that the highly regulated financial services sector has the best-developed basic processes for enterprise risk management, ranging from 89 percent of financial services CEOs reporting the presence of formal enterprise-wide risk monitoring to 78 percent reporting that formal enterprise-wide risk response mechanisms are in place. This is true also with respect to compliance: 67 percent of financial services CEOs strongly agree that their organisations include compliance reporting requirements within business processes—noticeably ahead of the same measure among product company CEOs (59 percent). Product companies consistently lag across all six basic processes behind the other two industry sectors. For example, only 63 percent of product CEOs report that they have formal enterprise-wide risk identification in place, as compared with 84 percent of financial services CEOs. This can be explained by industry differences: as noted earlier, financial services institutions are more closely regulated in many aspects of risk management. While product companies must abide by a host of regulations in such areas as environmental impact and worker safety, they operate in a quite different risk environment than financial services.

With regard to the basic processes of enterprise risk management surveyed in **EXHIBITS 8** through **10**, the middle-market CEOs depart from their larger-company peers. Except for the compliance function, they are consistently 10 percent to 15 percent behind, or slightly more, suggesting that enterprise risk management at the basic level has been pursued more actively by companies with revenue in excess of \$500 million.

**EXHIBIT 10 ■ BASIC PROCESSES OF ERM BY REGION**

Which of the following processes does your organisation have in place?



The survey indicates a considerable gap between the level of adoption of the basic processes of enterprise risk management and the level of full implementation.

## Full Implementation of Enterprise Risk Management

The six items surveyed in **EXHIBITS 8** through **10**, taken together, represent the basic processes of enterprise risk management. What can reasonably be defined as full implementation of enterprise risk management requires a more deeply embedded set of capabilities and management practices, the eight elements reflected in **EXHIBIT 11**.

There are enough elements in the chart to merit a quick inventory. Full implementation of enterprise risk management is in place when:

- The CEO has the information needed to manage risk at the enterprise level.
- A common terminology or set of standards exists for managing risk.
- Enterprise risk management is fully integrated within the strategic planning process.
- Risk management data are quantified to the greatest possible extent.
- Risk management is fully integrated across all functions and business units.
- All in the organisation understand their level of personal accountability within the enterprise risk management framework.
- The costs of regulatory compliance are closely tracked.
- Compliance with regulatory requirements is closely managed and monitored to eliminate the risk of noncompliance.

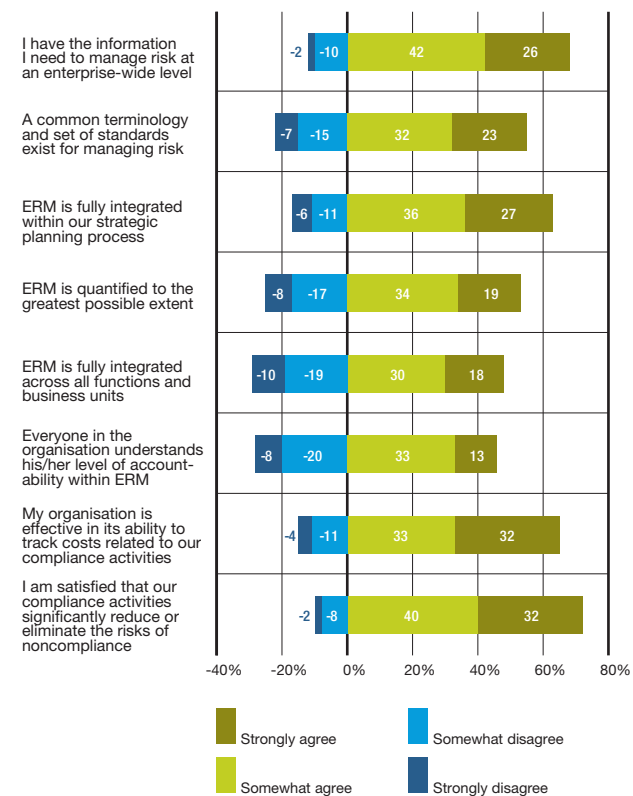
Concerning the basic processes of enterprise risk management (**EXHIBITS 8 through 10**), the survey has shown that very substantial majorities of the CEOs are confident that their companies are doing the right things. **EXHIBIT 11** offers findings at an advanced and complete level of implementation, where those majorities now dwindle to more restrained levels. CEOs who strongly agree that these capabilities are in place range from a high of 32 percent (compliance functions) to 27 percent (integration in strategic planning) and a low of 13 percent (organisation-wide understanding of risk accountabilities). The CEOs who somewhat agree that these capabilities are in place range from 40 percent to 30 percent of the respondent population.

The overall finding is straightforward and worth noting: if it is reasonable to define the capacities in **EXHIBIT 11** as full implementation of enterprise risk management, then somewhat less than a third of the participating CEOs are confident that their companies have achieved that level of performance. This contrasts with the finding for basic processes, concerning which two-fifths to two-thirds of the CEOs are confident that their companies are in strong positions.

By region and industry sector, some variations—and uniformities—are revealing. Findings among the US CEOs are consistent with the findings and discussion in earlier pages on the basic processes of enterprise risk management. Both at the basic level and at this advanced level of full implementation, the US CEOs appear to be more focused on regulatory compliance than on the broader elements of enterprise risk management. Only 20 percent of US CEOs strongly agree that they have the information they need to manage enterprise-wide risk, and only 12 percent strongly agree that a common terminology and set of standards exist. For the remaining elements of full implementation reflected in **EXHIBIT 11**, the US CEOs report a “state of play” that is less advanced than in other regions. For example, only 7 percent of US CEOs strongly agree that enterprise risk management is fully integrated across all functions and business units, while 22 percent of European CEOs take that view.

#### EXHIBIT 11 ■ ELEMENTS OF FULL ERM IMPLEMENTATION

To what extent do you agree or disagree with each of the following statements regarding risk management and ERM?



**Concerning the basic processes of ERM, substantial majorities of the CEOs are confident that their companies are doing the right things. At an advanced and complete level of implementation, those majorities dwindle to more restrained levels.**

For the **EXHIBIT 11** elements concerned with compliance, CEOs in the South American sample are more confident than others that their companies are doing the right things; 46 percent in that region strongly agree that they are tracking compliance costs effectively, while 35 percent strongly agree that their compliance systems are reducing or eliminating the risks of noncompliance. The US CEOs are more proactive here: 28 percent (matching the European CEOs) are very comfortable with their companies' ability to track compliance-related costs, and 33 percent are very comfortable that they have reduced or eliminated the risks of noncompliance (as compared with the Europeans, at 29 percent).

In terms of industry sector, financial services CEOs are more confident than others (35 percent in strong agreement) that they have the information they need to manage enterprise risk, and a comparable percentage (36 percent) reports the use of common terminology and standards. In the other elements as well—such as integration in strategic planning (39 percent in strong agreement) and degree of quantification (30 percent in strong agreement)—the financial services sector again leads by a noticeable margin. Many of the measures are considerably weaker in the other industry sectors. For example, only 22 percent of CEOs in the technology and media sector strongly agree that they have the information they need, and only 20 percent of product company CEOs strongly agree that they have a common terminology and set of standards. The weakest numbers by industry sector occur just where one might expect them: in the measures of organisation-wide accountability. While the financial services sector leads in that respect (20 percent in strong agreement), only 10 percent of product companies strongly agree that all is well in this dimension of enterprise risk management, and none of the percentages, including the finding for financial

services, is impressive. Many companies find dissemination of a fairly complex body of knowledge and guidelines across the entire organisation to be a difficult process.

As with the basic processes of enterprise risk management, middle-market companies tend to be somewhat less advanced than larger companies. On the issue of common terminology and standards, for example, just 18 percent of middle-market CEOs are very comfortable with their companies' performance in this respect, while 27 percent of larger-company CEOs are satisfied that all is well. Approximately the same percentage of middle-market and larger-company CEOs strongly agree that they have the enterprise-level information they need to manage risk, but a considerably smaller percentage of middle-market CEOs are fully comfortable with the degree of quantification of enterprise risk data (middle market, 13 percent; larger companies, 23 percent). For the compliance elements of full implementation, the two samples are much closer.

In summary, the survey indicates a considerable gap between the level of adoption of the basic processes of enterprise risk management and the level of full implementation in all respects. Approximately two-thirds of the surveyed companies have basic processes in place, while some one-third of the companies have achieved full implementation. A factor that accounts for the gap is the degree of commitment to enterprise risk management at the level of the CEO and board, as well as within the company as a whole. The survey explored this further topic in some depth.





**Slightly more than a third of European CEOs agree strongly (35 percent) that risk management is a board priority. This exceeds the percentage of strong agreement among US CEOs on that point—just 28 percent.**

## **Levels of Commitment**

The survey enquired as to whether enterprise risk management is a priority among CEOs. In the aggregate, as **EXHIBIT 12** shows, more than a third (39 percent) strongly agree that it is a priority. Is it also a priority of the board? Again, more than a third of the participating CEOs (38 percent) strongly agree that it is a board priority. What about the company as a whole? Here the percentage of strong agreement drops (31 percent) but still hovers at the one-third level.

These are interesting numbers, particularly because they identify a group of CEOs—somewhat more than a third of the total sample—among whom enterprise risk management is a strong priority. The findings for this group will be of particular interest at a later stage of this report. In regional perspective, a substantial percentage of Asia-Pacific CEOs describe enterprise risk management as a priority (46 percent in strong agreement), while somewhat lower percentages strongly agree that their boards and overall companies are committed (in both respects, 39 percent). Percentages in other regions are generally lower—noticeably so among European CEOs, only 23 percent of whom strongly agree that enterprise risk management is a priority for the entire organisation. On the other hand, slightly more than a third of European CEOs—who traditionally work with boards that take an active hand in overseeing (and often managing) the company—agree strongly (35 percent) that risk management is a board priority. This exceeds the percentage of strong agreement among US CEOs on that point—just 28 percent. However, US boards are rapidly evolving, under new regulatory requirements, toward a much more acute recognition of their oversight responsibilities on behalf of shareholders—not least for issues of enterprise risk. The gap between European and US CEOs may well close.

By industry sector, 55 percent of financial services CEOs strongly agree that enterprise risk management is a personal priority. Product companies follow at some distance (36 percent in strong agreement), with the technology and media sector just slightly below that level (32 percent). Where boards and entire companies are concerned, the percentages reflecting strong commitment remain considerably higher in financial services, and that difference is especially marked for the company as a whole (42 percent in strong agreement in financial services, contrasting with 28 percent in each of the other sectors).

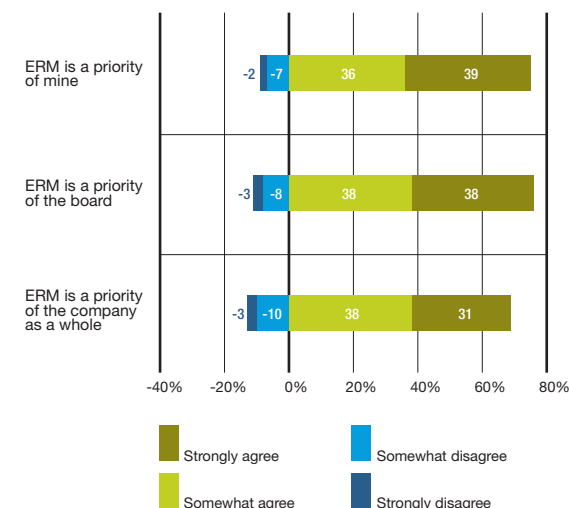
Middle-market companies lag somewhat behind larger companies on all three measures. They are similar with respect to the CEOs' strong personal commitment (37 percent among middle-market CEOs—quite close to 40 percent of larger-company CEOs) but more distant on the other measures. For example, just 27 percent of middle-market companies are reported to give strong priority to enterprise risk management—somewhat below the 33 percent level reported for larger companies.

## Barriers to Implementation

**EXHIBIT 13** offers another ladder, in this instance of barriers and difficulties that can stand in the way of implementing enterprise risk management. The exhibit offers two data sets: the aggregate CEOs' assessments of a wide range of possible barriers, and their view of which barriers are most important. It is clear at a glance that three issues stand out: the availability of information, the timeliness of information, and what the survey questionnaire called "people," by which it designated the training and capability of personnel to carry out an enterprise-wide risk management framework. These three factors were also identified as the most important difficulties, accompanied by a fourth, over-regulation, which scored at the same level as timeliness of information.

### EXHIBIT 12 ■ LEVELS OF COMMITMENT

To what extent do you agree or disagree with each of the following statements regarding risk management?



When fully implemented, enterprise risk management creates a more fact-based analysis of the current risk portfolio and of potential scenarios in the future. It is dependent on the availability and timeliness of information reaching decision makers. In companies that have mastered the skills of enterprise risk management, there often occurs a process of reducing the volume of data that enters the risk management system because management has identified the key data elements that are genuinely required and has distinguished them from masses of unimportant or irrelevant information. The survey findings demonstrate that the CEOs understand the centrality of information management in a successful programme of enterprise risk management.

No less central is the challenge of training personnel to participate knowledgeably and capably in risk management. A high percentage of CEOs (63 percent) point to the so-called people issue as a key challenge, and 20 percent of the whole sample regard that challenge as the most important potential barrier to implementation. Over-regulation is also much on the minds of the CEOs: 48 percent of them regard it as a barrier to achieving enterprise risk management, and 13 percent consider it to be the most important barrier. CEOs tend to be sharply aware of what is commonly called the burden of regulation: as rules and regulations multiply, the risk of failing to comply increases and the overall complexity of enterprise risk management must also increase to cope with the added density of compliance obligations. The expense of compliance also mounts, draining funds away from market-facing initiatives.

While slightly more than a third of the CEOs regard the necessary investment in enterprise risk management to be a barrier to successful implementation, only 4 percent point to investment as most important. It appears that, true to their calling, the CEOs are interested in cost control, but in the end they recognise that the benefits of enterprise risk management cannot be achieved without substantial investments.



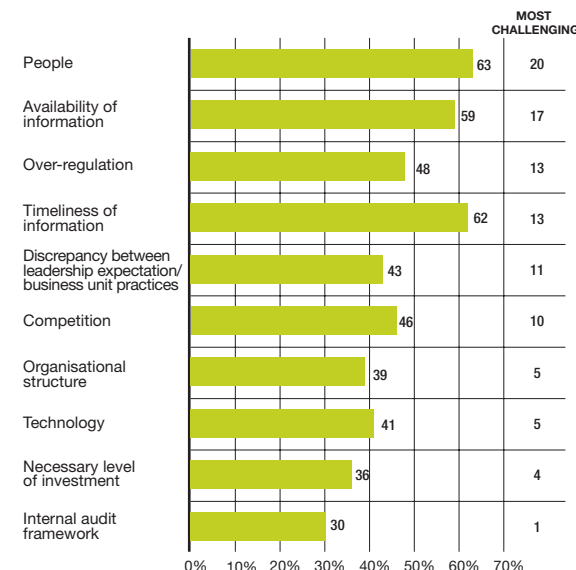
In regional perspective, the survey shows that 58 percent of the European CEOs regard the people issue as a key challenge, followed by the availability of information and its timeliness. In the US, the people issue is also foremost (to 71 percent of CEOs) followed by information issues. In South America, timeliness of information is regarded as key (73 percent), and this is true also among those in the Asia-Pacific region (61 percent). Over-regulation is of particular concern in South America (64 percent of regional CEOs) and in Europe (51 percent of regional CEOs); the Asia-Pacific CEOs are least worried about it: just 34 percent of regional CEOs tagged it as a key challenge.

From the perspective of industry sectors, the percentages are surprisingly uniform, with the information and people issues remaining foremost, followed by the challenge of responding to over-regulation. Generally by 4 percent to 6 percent, larger percentages of middle-market CEOs find the various barriers to implementation to be troublesome. For example, on the people issue, 66 percent of middle-market CEOs find it difficult, while 60 percent of the larger-company CEOs share that view—not an enormous difference but reasonably consistent across the full set of issues addressed in **EXHIBIT 13**. Middle-market CEOs weight the importance of the various challenges just as their larger-company peers do.

The categories arrayed in **EXHIBIT 13** are of two kinds: (1) challenges inherent in the process of implementing and sustaining enterprise risk management and (2) matters imposed from outside, such as over-regulation. However, all are barriers to implementation that CEOs have no choice but to address. Are there any barriers that CEOs deliberately impose—or impose without fully realising that other options exist? This is the topic of the next section of the report.

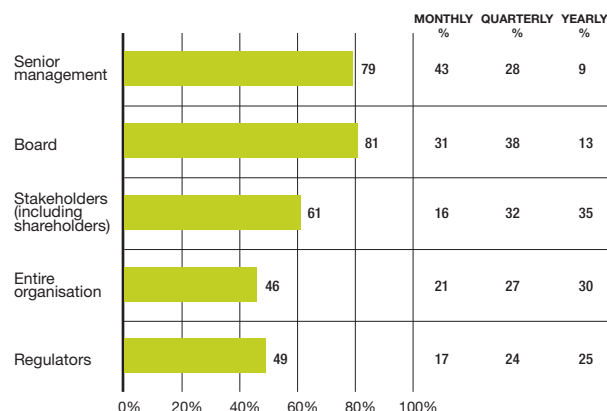
# **EXHIBIT 13 ■ CHALLENGES TO IMPLEMENTATION**

Which of the following are key challenges that restrict your organisation in identifying and managing enterprise-wide risks, and which is most challenging?



#### EXHIBIT 14 ■ REPORTING RISK PROFILE

To which of the following groups do you periodically report your company's enterprise-wide risk portfolio, and how often does this occur?



## Communicating and Reporting Enterprise Risk Management Information

Enterprise information is like a tree falling in the forest unheard unless it is communicated in a full and timely way to relevant users. The preceding discussion has made clear that information issues represent one of the key challenges in building and sustaining an enterprise risk management framework. But even if the CEO has the information in hand, to whom is it communicated and how frequently? This question yields interesting findings.

EXHIBIT 14 indicates that senior management and the board receive information about the company's enterprise-wide risk portfolio more frequently than other users and that senior management is more likely than the board to receive monthly communications. Shareholders and other stakeholders are likely to receive less frequent communications; an annual effort to communicate with stakeholders appears to be a common practice. Company personnel were separated out by the survey from other stakeholders, and the data indicate that among all listed users, they are least likely to receive frequent information from top management about the risk portfolio. Reports to regulators are driven largely by compliance requirements, and so the survey findings in this regard are unlikely to represent decisions taken by the CEOs. The findings by region and industry and for the middle market generally parallel the overall profile in EXHIBIT 14.

The questions that emerge concern frequency of reporting. Why do senior managers tend to hear more frequently from the CEOs than their boards do? Why do shareholders hear from the CEOs on a predominantly annual basis concerning the crucial matter of enterprise-wide risk? The value of this data set is that it uncovers a pattern that in many companies may not be deliberate but more a matter of tradition and custom. This in turn raises the question of what would constitute best and most desirable practice.

## Benefits of Enterprise Risk Management

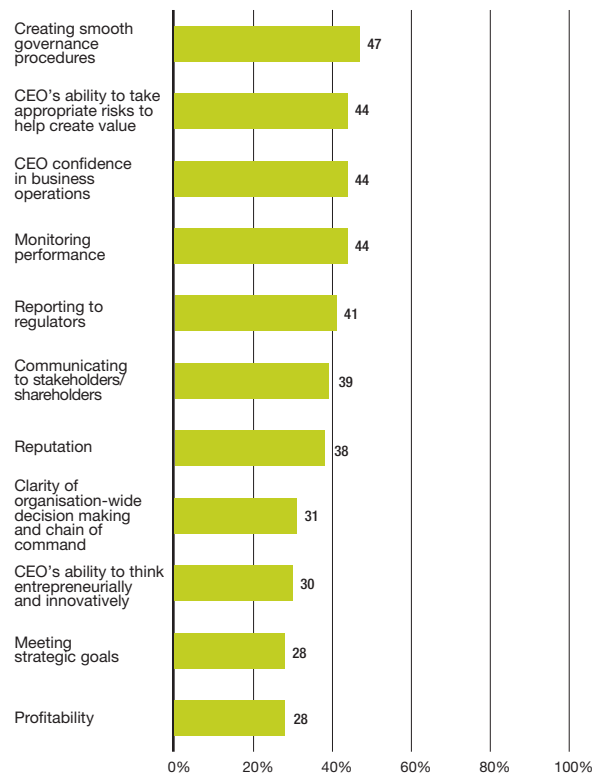
Thus far, the survey has looked at the structural and operational features of enterprise risk management at two levels: basic processes and full implementation. It has also assessed the important issue of senior-level priorities (the CEO and board), the nature of the barriers that make implementation difficult, and the question of communication. It is sensible to recall at this point the COSO definition cited earlier on page 20: “Enterprise risk management provides a framework for management to effectively deal with uncertainty and associated risk and opportunity, and thereby enhance its capacity to build value.” In the logic of this survey, the time has come to explore the positive implications of enterprise risk management—effectively dealing with uncertainty, defending against unwanted risk and seizing attractive opportunities, and enhancing the capacity to build value for shareholders and other stakeholders. The survey enquired in considerable detail about the CEOs’ views and experience in those respects.

**EXHIBIT 15** arrays the 11 primary benefits of enterprise risk management—admittedly a considerable number, but each item is important to form a well-rounded view. A number of the findings focus on the CEOs’ managerial style and their experience in decision making and the chain of command. Forty-four percent of the CEOs strongly agree that enterprise risk management will enhance their ability to take appropriate risks that create value. Nearly a third of the CEOs strongly share the view that it will enhance their ability to think entrepreneurially and along innovative lines. Similarly, nearly a third strongly agree that it adds clarity to organisation-wide decision making and the chain of command.

**Forty-four percent of the CEOs strongly agree that enterprise risk management will enhance their ability to take appropriate risks that create value. Nearly a third of the CEOs strongly share the view that it will enhance their ability to think entrepreneurially and along innovative lines.**

**EXHIBIT 15 ■ BENEFITS OF ERM**

Percentage reporting strong or considerable positive impact



By region, it is the South American CEOs, with 64 percent in strong agreement, who shift the aggregate percentage upward. The US CEOs are the most circumspect regarding all three enquiries. For example, only 30 percent strongly agree on the first question. US CEOs are also the most sceptical concerning the contribution of enterprise risk management to decision making and improved clarity in decision making; just 17 percent strongly agree that there is something to the notion—well behind the Europeans, for example, among whom 28 percent strongly agree that the organisation is strengthened in these respects. In other words, the US CEOs are true to form, again more reserved than others about the value of enterprise risk management. The reasons for this must also be consistent—probably the preoccupation of US CEOs with meeting new regulatory requirements and ensuring the integrity of corporate governance and corporate reporting under new rules.

The findings by industry sector bring clarity because industries engaged in global competition and/or using world-class technologies and methods tend to have much the same management values and practices. Financial services CEOs are more enthusiastic than others regarding all three benefits. For example, 55 percent agree strongly that enterprise risk management enhances their ability to create value compared with 44 percent in the technology and media sector and 41 percent among product companies. Only a quarter of CEOs in the technology and media sector strongly take the view that risk management will contribute to their personal entrepreneurship and freedom to innovate, although about a third (33 percent) somewhat agree with that notion.



Middle-market CEOs show the same level of strong agreement as their larger-company peers on the first two questions but differ on the third: only 28 percent of them find that enterprise risk management has clarified organisation-wide decision making as contrasted with 34 percent of their larger-company peers.

The further findings reported in **EXHIBIT 15** reflect an additional set of possible benefits from well-implemented enterprise risk management. Two findings of interest have to do with the so-called soft elements of management experience. Fully 44 percent of the CEOs share the view that enterprise risk management has a very positive effect on their level of confidence in the way the business is operating. This is such a high proportion that it is worth looking immediately at the regional and industry-sector data, which show that the strongest endorsements of this premise are to be found in South America (62 percent) and Europe (41 percent), and by industry, in financial services (52 percent). Middle-market CEOs are somewhat less convinced than their larger-company peers on the issue of confidence, but the numbers are actually quite high among both groupings: 41 percent of middle-market CEOs perceive a very positive impact on their level of confidence in the operations of their businesses, while 47 percent of their larger-company peers share that view.

An additional key finding about soft management issues concerns reputation. Thirty-eight percent of CEOs take the view that enterprise risk management has a very positive impact on reputation, and here it is the South American CEOs (52 percent) and those in the Asia-Pacific region (40 percent) who pull the percentage up, while the Europeans (33 percent) and the US CEOs (26 percent) are less persuaded of a very positive impact. Middle-market and larger-company CEOs coincide in their views on this issue.



Findings regarding the impact of enterprise risk management on meeting strategic goals and on profitability stand out: 28 percent of the CEOs perceive a very positive impact in both areas. Financial services CEOs in each case are more enthusiastic than others, and US CEOs in each case are the least persuaded of a very positive impact. It is possible that here, as elsewhere in the survey, the US CEOs view enterprise risk management through a narrow aperture, as a method of helping ensure regulatory compliance rather than as a broad-based discipline capable of yielding a broad array of benefits. Some US CEOs concede, outside the confines of this survey, that at this time their view of their greatest risk is that they may have to restate a financial statement. Such

anecdotal evidence speaks to the overall state of the US business environment.

**EXHIBIT 15** revisits, in part, topics broached in earlier stages of the survey—for example, reporting to regulators—but now approaches them explicitly in terms of opportunities that may flow from well-implemented enterprise risk management. Here, there is more enthusiasm for the hard, or operational, benefits of

rigorous risk management: 44 percent agree that there can be a considerable positive impact in the area of performance monitoring, and 41 percent perceive a considerable positive impact on reporting to regulators. While the percentages for meeting strategic goals and profitability are relatively low, more than a quarter of the CEOs also perceive a strong positive impact on these additional hard measures.



On a regional basis, the South American CEOs perceive much benefit in the areas of governance, shareholder communications, and reporting to regulators: respectively, 58 percent, 55 percent, and 51 percent perceive considerable positive impact. The Asia-Pacific CEOs are most interested in creating smooth governance procedures, with 47 percent perceiving considerable positive impact in that regard.

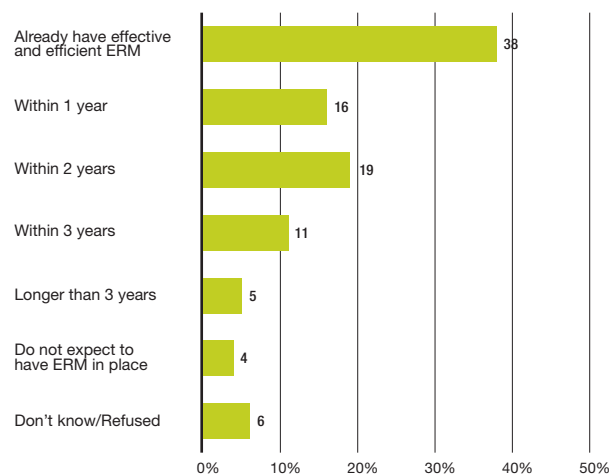
By industry sector, financial services CEOs are particularly focused on the issues of reporting to regulators (63 percent perceiving considerable positive impact), governance (58 percent), and performance monitoring (52 percent). Middle-market CEOs tend to be marginally more reserved, typically in a range of 3 percent to 5 percent, than their larger-company peers about the boost provided by enterprise risk management in addressing the various opportunities scanned in **EXHIBIT 15**.

In summary, the findings in **EXHIBIT 15** suggest a combination of hard and soft benefits flowing from well-implemented enterprise risk management. Where the CEOs are directly concerned, it is good medicine: it tends to increase their confidence in their business operations and frees them to act vigorously on behalf of their companies and stakeholders while clarifying key internal functions across the company. Other key benefits include soft factors such as the enhancement of corporate reputation and hard factors such as improved regulatory reporting and performance monitoring.

**Where the CEOs are directly concerned, enterprise risk management is good medicine: it tends to increase their confidence in their business operations and frees them to act vigorously on behalf of their companies and stakeholders.**

#### EXHIBIT 16 ■ IS ERM IN PLACE?

When would you expect your organisation to have effective and efficient ERM in place?



## Is Enterprise Risk Management in Place Now?

The language of some of the preceding survey questions is equivocal about timing. Certain questions ask whether enterprise risk management *will* have a positive impact or not; others enquire as to whether it *does* have a positive impact or not. Present and future are somewhat mixed—and not without reason. Enterprise risk management in its true dimensions is still an evolving discipline, and its adoption in depth by businesses is also ongoing, by no means complete. The COSO framework (see pages 20–21) is likely to have considerable impact on the understanding and implementation of enterprise risk management, but it is only now passing from the stage of an exposure draft to formal publication (as noted earlier, in mid 2004). As a US publication, it may help convince US CEOs that their generally sceptical attitude toward enterprise risk management is becoming outdated. In light of the varying degrees of acceptance evident in the findings, a survey question about the timing of the implementation of enterprise risk management has proved to be more than a footnote to the overall survey. The results of that enquiry appear in **EXHIBIT 16**.

Thirty-eight percent of the CEOs consider that they already have effective and efficient enterprise risk management in place. Among them, 48 percent of the Europeans take that view, but only 29 percent of the US CEOs. The intervening percentages are 34 percent for the South American CEOs and 31 percent among Asia-Pacific CEOs. In industry perspective, not surprisingly, the financial services CEOs lead, with 51 percent reporting that they now have what is needed, as compared with 36 percent in the technology and media sector and 35 percent among product company CEOs. Thirty-one percent of middle-market CEOs share the view that enterprise risk management is already fully implemented—well below the 44 percent recorded by larger-company CEOs.

Over time, 24 percent of the South Americans report that within one year they expect to have in place what is needed—as opposed, for example, to 10 percent of the US CEOs, who view it more as a two- or three-year project (respectively, 22 percent and 14 percent). Another regional number worth noting is the percentage of those who do not expect to implement enterprise risk management: 11 percent among US CEOs and much smaller percentages elsewhere. In addition, middle-market CEOs and larger-company CEOs are almost equally inclined to put implementation into a two-year time frame: 16 percent of middle-market CEOs compared with 15 percent of larger-company CEOs.

The findings by industry track with previous questions: financial services CEOs lead in reporting that enterprise risk management is now in place (51 percent, as opposed to 36 percent in the technology and media sector and 35 percent among product company CEOs). All three sectors show 16 percent to 20 percent of CEOs who regard the implementation as a two- or three-year project, and only small percentages in any sector—for example, 2 percent in financial services—report that they do not expect to implement enterprise risk management.

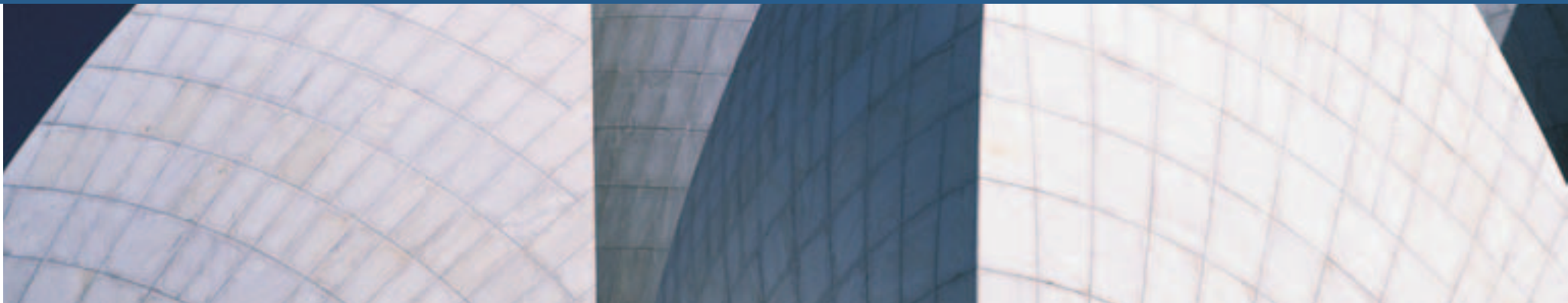
In summary, somewhat more than a third of the CEOs take the view that enterprise risk management, effective and efficient, is already in place, while another 46 percent view its implementation as a one- to three-year project. The remainder either have no plans to implement enterprise risk management or did not offer a response.





## ► Evidence of Excellence

There is a survey within the survey. It jumped out of the numbers when they could at last be viewed as a whole pattern. Certain CEOs and their companies are dramatically ahead in terms of implementing enterprise risk management and benefiting from it. And among these leaders, there is a still more skilled, much smaller number of CEOs and companies that reach an outstanding level of performance.





The survey has shown (**EXHIBIT 12** and related discussion) that nearly 40 percent of the participating CEOs strongly agree that “enterprise risk management is a priority of mine.” This cadre of 534 CEOs in all parts of the world are committed practitioners of enterprise risk management who ask more of their companies, achieve better results in terms of full implementation, and reap greater rewards in terms of the benefits arrayed in **EXHIBIT 15**. It is clearly worthwhile to explore the data for this cadre. That analysis appears in the pages that follow.

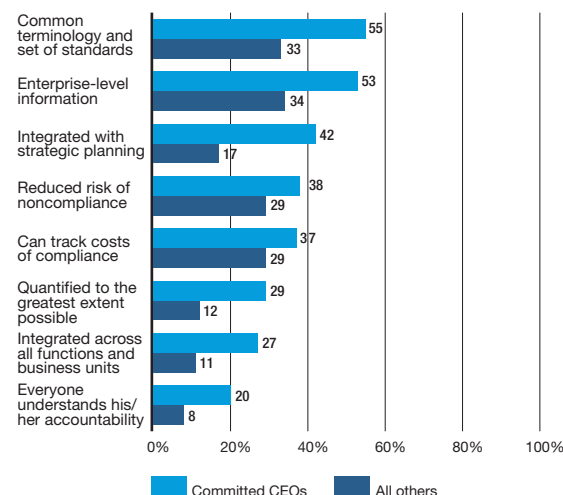
There is another way to excel. For those companies in which enterprise risk management is reported to be integrated into the strategic planning process, the degree of implementation and the reported benefits are measurably greater than for other surveyed companies, even if the CEO does not view enterprise risk management as a personal priority. In this category, there are some 378 companies—again in all parts of the world.

The two cadres are large, and the survey will soon show that their achievements represent only initial levels of excellence, not the highest levels of excellence reflected in the data. However, the findings for these companies are already significantly better than for all other participating companies. The route to excellence in the first cadre is through the CEO’s personal commitment, while in the second cadre the route is organisational, tied to integration into strategic planning. Both cadres

**The route to excellence in the first cadre is through the CEO’s personal commitment, while in the second cadre the route is organisational, tied to integration into strategic planning. Both cadres stand out and form the basis for much smaller segments that can justly be called advanced practitioners of enterprise risk management.**

**EXHIBIT 17 ■ FULL ERM IMPLEMENTATION**  
**When ERM is a CEO priority**

Percentage reporting strong or considerable positive impact



stand out and form the basis for much smaller segments—each of them no more than 15 percent of the overall survey population—that can justly be called advanced practitioners of enterprise risk management. These are the elite. Yet they are not without problems and further progress is needed here also.

## When Enterprise Risk Management Is a CEO Priority

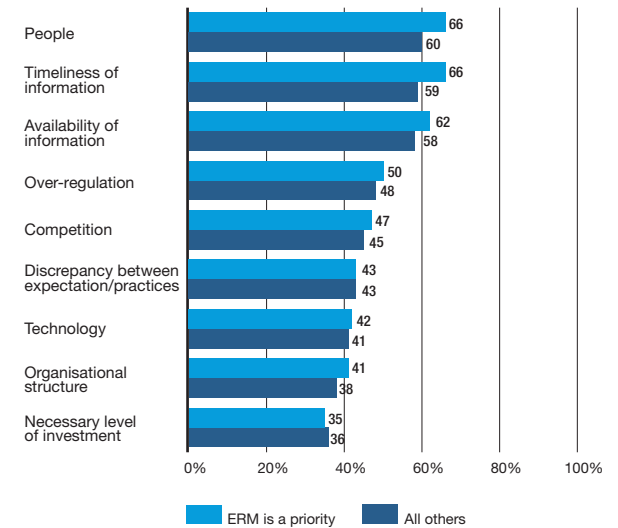
This analysis begins with an overview of the limitations and difficulties faced even by the personally committed, and goes on to look at the advantages they enjoy over their less committed peers. Although enterprise risk management is a high priority among these CEOs, they agree strongly that the key elements of full implementation have been achieved only in a range of 20 percent to 55 percent, as will be evident in [EXHIBIT 17](#). For example, just 53 percent of these committed CEOs strongly agree that they have the enterprise-wide information they need, and 55 percent report that their companies use a common terminology and set of standards. Thus, essentially half of these committed CEOs report that their companies fall below these levels of performance. The results seem somewhat weak until one looks at the bar representing all other CEOs, which shows that only a third of them have access to the enterprise-wide information they need; identically, a third report common terms and standards. The contrast with respect to depth of penetration in the organisation (“everyone understands his/her accountability”) is still more revealing: this difficult challenge, reported to be well in hand by only 20 percent of the committed CEOs, is reported by only 8 percent of all others to be well in hand. A scan of [EXHIBIT 17](#) makes clear that the highly committed CEOs are doing considerably better than their less committed peers in terms of implementing enterprise risk management.

**EXHIBIT 18** provides a comparative view of how the committed CEOs compare with all other CEOs with respect to the challenges and barriers that make implementation of enterprise risk management a demanding discipline. Overall, the committed CEOs prove to be more aware than their peers of the difficulties that must be faced. Larger percentages of the committed CEOs, though often by narrow margins, strongly agree that these issues are real challenges (there are two exceptions to this general observation, at the bottom of the exhibit). On three of the four most urgent issues—the people issue, information timeliness, and information availability—the margins are actually wider than for other issues, again suggesting that the committed CEOs have hands-on experience and make a realistic appraisal of the difficulty of implementation.

Committed CEOs know the problems. They are also two to three times more likely to agree strongly that enterprise risk management confers clear benefits. These findings are arrayed in **EXHIBIT 19**, in which the salient points easily stand out. On the issue of enhanced CEO ability to take appropriate risks in order to create value, fully 62 percent of the committed CEOs strongly agree that enterprise risk management helps—nearly twice the percentage of all other CEOs. The ratio is nearly identical where entrepreneurial thinking and innovation are concerned: 43 percent of the committed CEOs see a strong link, while only 22 percent of all other CEOs do so. The impact of enterprise risk management on improving the clarity of decision making is also reported to be strongly positive by 50 percent of the committed CEOs, as compared with 19 percent of all others.

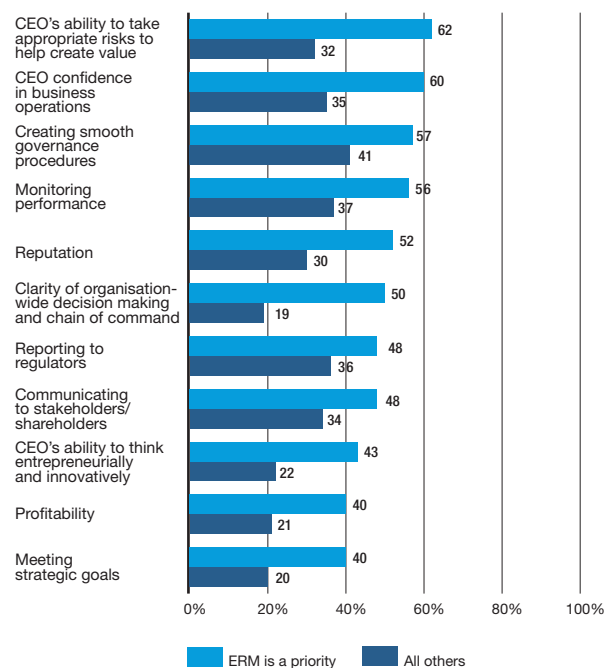
**EXHIBIT 18 ■ CHALLENGES**  
**When ERM is a CEO priority**

Which of the following are key challenges that restrict your organisation in identifying and managing enterprise-wide risks?



**EXHIBIT 19 ■ BENEFITS OF ERM****When ERM is a CEO priority**

Percentage reporting strong or considerable positive impact



The same thrust is evident elsewhere in **EXHIBIT 19**. The most striking difference is in the committed CEOs' confidence in their business operations: 60 percent report a very strong impact on this measure, as compared with 35 percent among all other CEOs. The issue of reputation also yields a marked difference: 52 percent of the committed CEOs perceive a very strong impact on their companies' reputations, while only 30 percent of all other CEOs make that connection. The message in the numbers is evident: the CEO's personal commitment to implementing and sustaining enterprise risk management is crucial to its success. Further, that success—even when implementation is still progressing—can be measured in tangible and intangible benefits ranging from profitability to confidence.

## When Enterprise Risk Management Is Integrated into Strategic Planning

As noted earlier, there is another path to the initial levels of excellence. Twenty-seven percent of all participating CEOs (representing 378 companies) strongly agree that enterprise risk management is fully integrated within their companies' strategic planning process. In other words, companies in this cadre have achieved a significant degree of organisational integration of enterprise risk management as contrasted with the preceding cadre, in which companies benefit from a CEO personally committed to enterprise risk management. By looking at the second cadre's responses to the issues explored earlier (full implementation, barriers, and benefits), the survey can demonstrate that this too is an outstanding group that gains notable benefits from enterprise risk

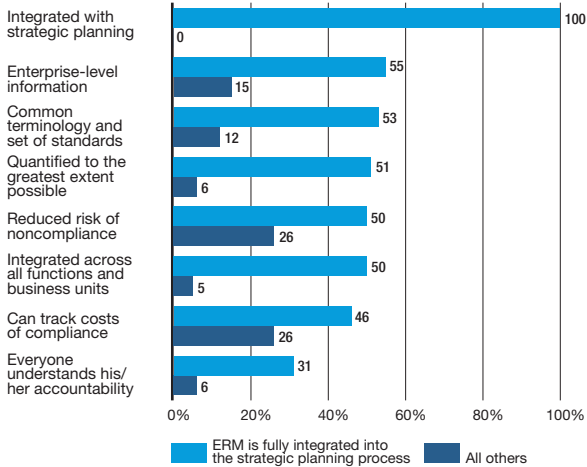
management, although, like the previous cadre, it has its share of problems and challenges. The findings about the second cadre, arrayed in **EXHIBITS 20** and **21**, show at a glance that by most measures they are substantially ahead of the previous cadre. More, it seems, can be achieved when key planning and decision-making members of the organisation commit to enterprise risk management.

While the survey cannot tease apart or perhaps even detect all of the threads connecting the first cadre with the second, the message across them is consistent: if the CEO is highly committed to enterprise risk management and/or the high-level function of strategic planning is integrated with enterprise risk management, then the benefits gained from enterprise risk management will be substantially greater—often by a wide margin.

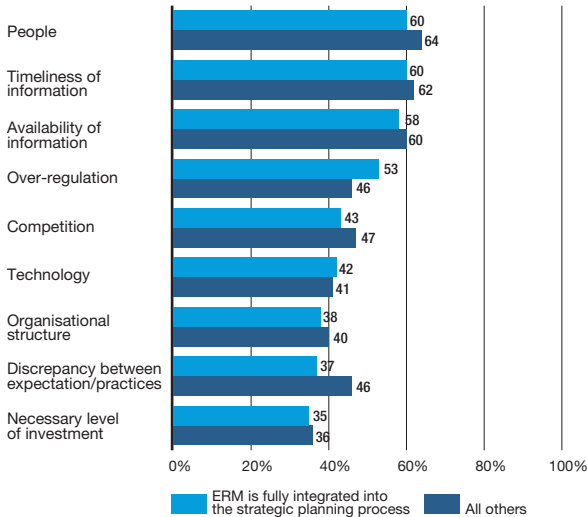
With regard to **EXHIBIT 20**, the key comparison is not so much internal, although that is revealing, as it is to the findings in **EXHIBIT 17**. A glance from one to the other shows that when enterprise risk management is integrated in the strategic planning process, many of the other elements of full implementation are much higher and point to the existence of a reasonably mature enterprise risk management framework. The most notable exception lies in the difficult matter of organisation-wide individual accountability, where just 31 percent of the CEOs represented in **EXHIBIT 20** strongly agree that all is well. Nonetheless, the parallel percentage in **EXHIBIT 17**—20 percent—is much weaker.

Challenges and barriers, inventoried for this second cadre in **EXHIBIT 21**, remain much what they are for all other CEOs and their companies; the differences in percentages are not that significant. As **EXHIBIT 18** demonstrated for the first cadre, the difficulties of implementing enterprise risk management are very real, and even the most efficient and committed organisations encounter them.

**EXHIBIT 20 ■ FULL ERM IMPLEMENTATION**  
**When ERM is integrated in strategic planning**  
Percentage reporting strong or considerable positive impact

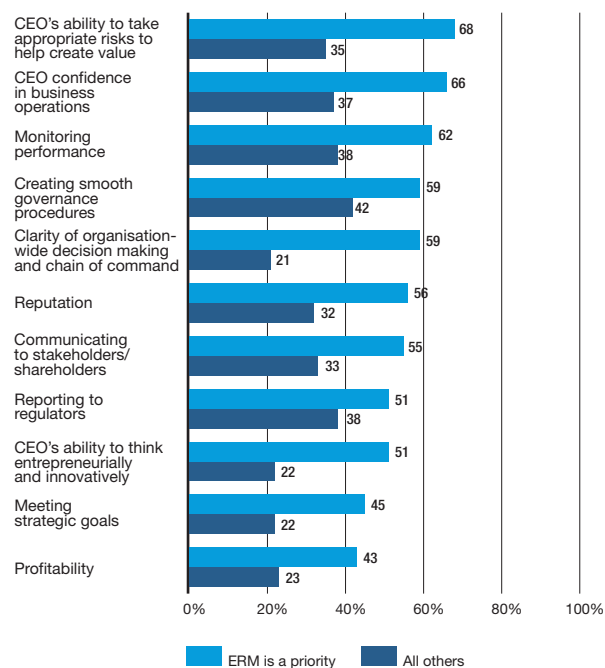


**EXHIBIT 21 ■ CHALLENGES**  
**When ERM is integrated in strategic planning**  
Which of the following are key challenges that restrict your organisation in identifying and managing enterprise-wide risks?



**EXHIBIT 22 ■ BENEFITS OF ERM**  
**When ERM is integrated in strategic planning**

Percentage reporting strong or considerable positive impact



Taking the same comparative approach to the findings in **EXHIBIT 22** is fruitful. Parallel findings for the first cadre are found in **EXHIBIT 19**. CEOs in companies in which enterprise risk management is integrated into strategic planning are more likely than their peers in the other cadre to see enterprise risk management as helping the organisation create value and helping themselves personally to act more entrepreneurially and in a way that favours innovation. In addition, their organisations will be more effective in certain key respects. Meanwhile, internal comparison in **EXHIBIT 22** between this second reasonably advanced cadre and all others shows that companies in the second cadre are well ahead of other surveyed companies in terms of capturing the benefits of enterprise risk management.

In summary, isolating and interpreting the results for these two samples of capable implementers of enterprise risk management shows that the difficulties of implementation are much the same for all companies, whether or not they have a personally committed CEO or good integration. This is the bad news—or, strictly speaking, the realistic news. On the other hand, the benefits of enterprise risk management are substantially greater in companies that have a committed CEO, and greater still in companies that have integrated enterprise risk management into the strategic planning process. This is the good news, no less realistic.



## Advanced Practitioners: The Most Committed CEOs and Their Companies

The preceding discussions have focused on the sizable proportions of companies—respectively, 40 percent and 27 percent of the entire sample—whose CEOs report either a high level of personal commitment to enterprise risk management or its integration into strategic planning. When the CEO personally commits to enterprise risk management, his or her company is more likely to be well along in achieving full implementation and gaining greater benefits from doing so. Similarly, and to a somewhat greater degree, when enterprise risk management is integrated into the organisation's core strategic planning process, full implementation and benefits are likely to be more impressive.

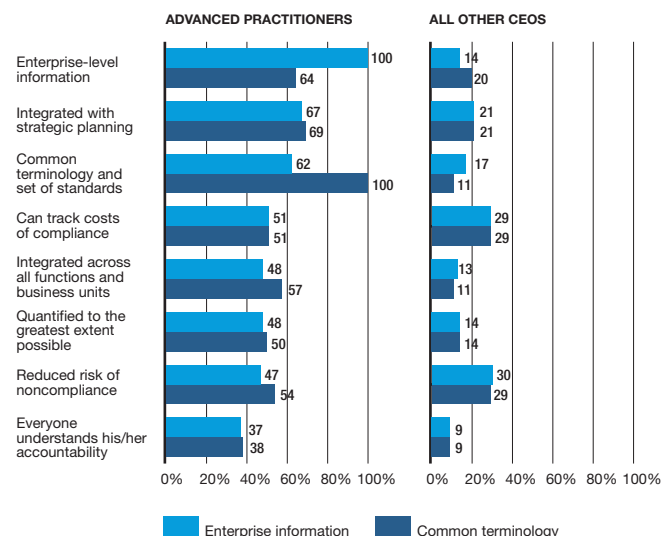
Each of these cadres, as noted earlier, is a relatively large sample of the total survey population. Because they are large, they demonstrate that enterprise risk management at a reasonably sophisticated and effective level is within reach: considerable percentages of the surveyed CEOs report that they are making progress and receiving noticeably positive benefits. But the survey data show something more: there are two smaller cadres of CEOs and companies within these samples that can justly be identified as advanced practitioners. Their levels of implementation and benefits are unmistakably different from those of all other companies. The balance of this discussion concerns these advanced practitioners.

The key finding can be summarised as  $X + Y$ . What this means is that when the CEO is personally committed *and* his or her company is effectively implementing at least one of two critical elements of full implementation, then advanced performance is achieved. Identically, when the organisation has integrated enterprise risk management into its strategic planning process *and* the company is effectively implementing at least one of two critical elements of full implementation, then advanced performance is achieved:  $X + Y = \text{Advanced Performance}$ .

Considerable percentages of the surveyed CEOs report that they are making progress and receiving noticeably positive benefits. But the survey data show something more: there are two smaller cadres of CEOs and companies within these samples that can justly be identified as advanced practitioners.

**EXHIBIT 23 ■ FULL ERM IMPLEMENTATION**  
**CEO priority advanced practitioners**

Percentage reporting strong or considerable positive impact



Readers will recall that the survey showed earlier (see **EXHIBIT 11** and related discussion) that two critical elements for full implementation are the availability of enterprise-wide information to the CEO and the use of a common terminology with a related set of standards. It is difficult to argue with the premise that enterprise risk management relies on the CEO's having the information necessary for managing risk. Similarly, how could there be effective enterprise-wide risk management if each function and business unit develops its own language and standards for managing risk?

When the formula  $X + Y$  is applied to the two larger samples just studied, approximately 200 CEOs, or 15 percent of the total survey population, make the cut in each case. These are the cadres of advanced practitioners. The distinguishing feature of the first of the two cadres is that the highly committed individual CEO has seen to it that an important, programmatic, organisational action toward full implementation has occurred. The distinguishing feature of the second cadre is that the integration of enterprise risk management into strategic planning, supported by either enterprise-wide information or a common terminology, proves to be enormously effective in helping senior management make strategic choices.

**EXHIBITS 23** through **26** put quantitative measures around these observations. The exhibits contrast the achievements of the two advanced cadres with the performance levels reported by all other CEOs. For each of the two advanced cadres in turn, the exhibits look at the eight elements of full implementation and then at the benefits.

Regarding the first cadre (committed CEOs who have one of two critical elements strongly in place), **EXHIBIT 23** shows in most instances wide gaps between their companies' performance on each of the eight elements of full implementation and the performance of all other companies in the survey. Two points stand out in the exhibit.

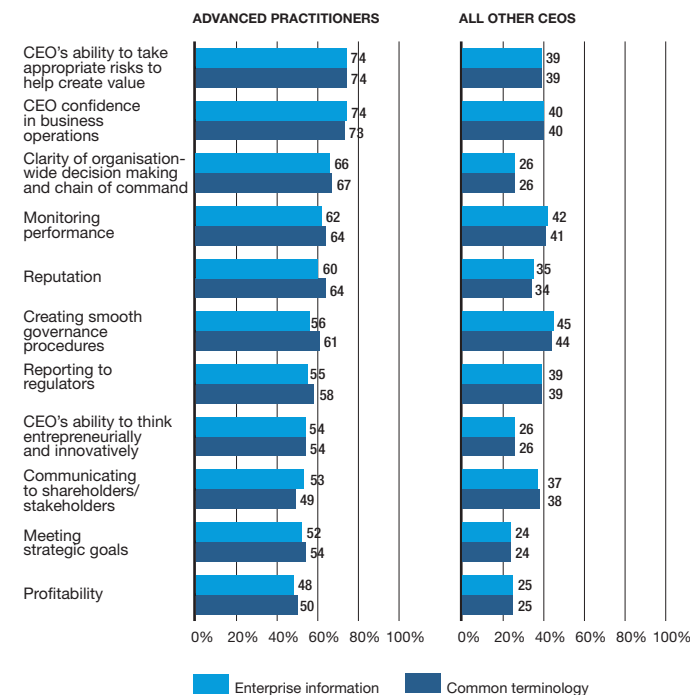
- Information made available to the CEO at the enterprise level for managing risk and a common terminology and set of standards are equally effective in improving the organisation's effectiveness in the other elements of full implementation.
- The differences between the advanced practitioners and all other CEOs are enormous—up to a factor of four. For example, while 62 percent of those with enterprise information also have a common terminology, this is true for only 17 percent of the rest of the population. Nearly one-half (48 percent) of these advanced practitioners have quantified enterprise risk management to the greatest extent possible, while only 14 percent of all other CEOs' companies have done so.

By comparing the numbers for advanced practitioners in **EXHIBIT 23** with the larger sample of all CEOs for whom enterprise risk management is a priority, background survey analysis has also shown large differences—typically in the range of 15 percent to 20 percent. The additional benefit of having either enterprise information or a common terminology in place is quite significant, even when compared with the relatively select group of CEOs who regard enterprise risk management as a high priority.

**EXHIBIT 24** provides a similar comparison for the first advanced cadre across 11 of the most important benefits. Again, enterprise information and a common terminology are equally effective for such benefits as taking risks to create value, adding clarity to organisation-wide decision making, creating smooth governance procedures, and monitoring performance. The percentages of advanced practitioners obtaining those benefits of enterprise risk management are much higher than among all other CEOs. Differences also exist between this advanced cadre and the CEOs among whom enterprise risk management is a priority, although the differences are not as great as for the elements of full implementation.

**EXHIBIT 24 ■ BENEFITS OF ERM**  
**CEO priority advanced practitioners**

Percentage reporting strong or considerable positive impact

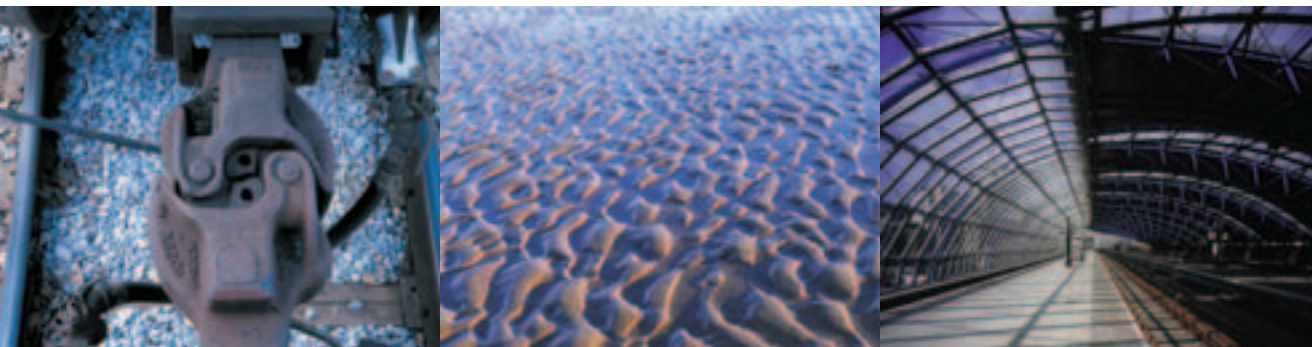


Similar findings emerge for the second cadre of advanced practitioners: the strategic planning advanced practitioners represented in [EXHIBITS 25](#) and [26](#). This cadre is, in fact, slightly more advanced than the first with regard to the elements of full implementation ([EXHIBITS 23](#) and [25](#)). For example, 60 percent of this strategic planning elite have quantified enterprise risk management to the greatest extent possible, compared with 48 percent of the first cadre. Virtually identical to these figures are the percentages for integration across all functions and business units: respectively, 61 percent and 48 percent. Only in the especially challenging area of people's roles in enterprise risk management ("Everyone understands his/her level of accountability") are the two cadres quite

close, with a roughly 6 percent gap.

No important differences exist between the two advanced cadres in terms of benefits ([EXHIBITS 24](#) and [26](#)), suggesting that each represents an effective strategy for achieving the same ends. It may be that the largest constraint on their ability to achieve still greater benefits is the issue of people's understanding of their level of accountability: as noted earlier, it

is difficult to embed complex information and behaviours of this type from the top to the bottom of the organisation. Also worth noting is that there are no significant differences between the two advanced cadres and all other CEOs in terms of barriers to implementation and reporting practices. However skilled a company may be in implementing enterprise risk management, it faces the same challenges and its CEO is likely to assess those challenges much as CEO peers do in other companies.



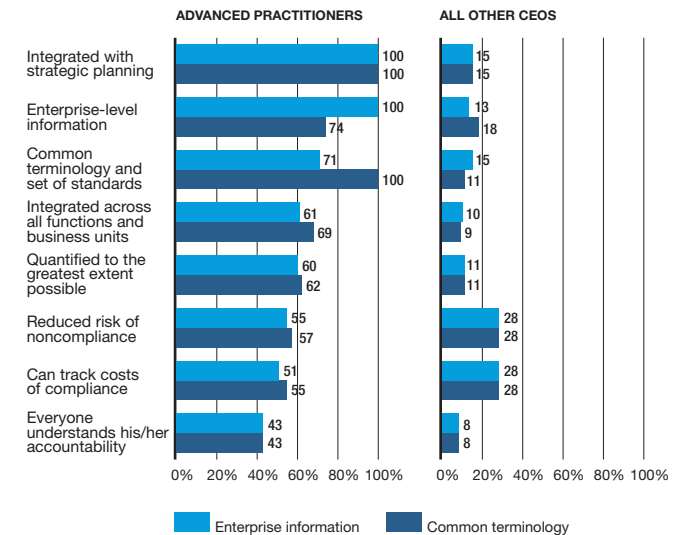
What do the advanced practitioners teach? First, even in companies in which the CEO regards enterprise risk management as a high priority or in which it has been integrated into strategic planning, much greater improvements and benefits flow from having in place either enterprise-level information available to the CEO or a common terminology. Achieving these goals is a prosaic and demanding task, involving countless details and robust technology. Yet the survey findings show the importance of this work and justify the related effort and expense.

Second, even advanced practitioners can gain further ground in terms of completing the elements of full implementation, overcoming barriers, and reaping the full benefits of enterprise risk management.

Despite these cautionary points, the survey has uncovered clear evidence of excellence, all the more important because it did not deliberately set out to find excellence. The purpose of the survey, modest though demanding, was to characterise in depth the current state of enterprise risk management as perceived by the world's CEOs. Yet the evidence, fully assembled, points to the existence of CEOs and companies that are doing exceptionally well in this relatively new, decidedly challenging, and tangibly rewarding management discipline.

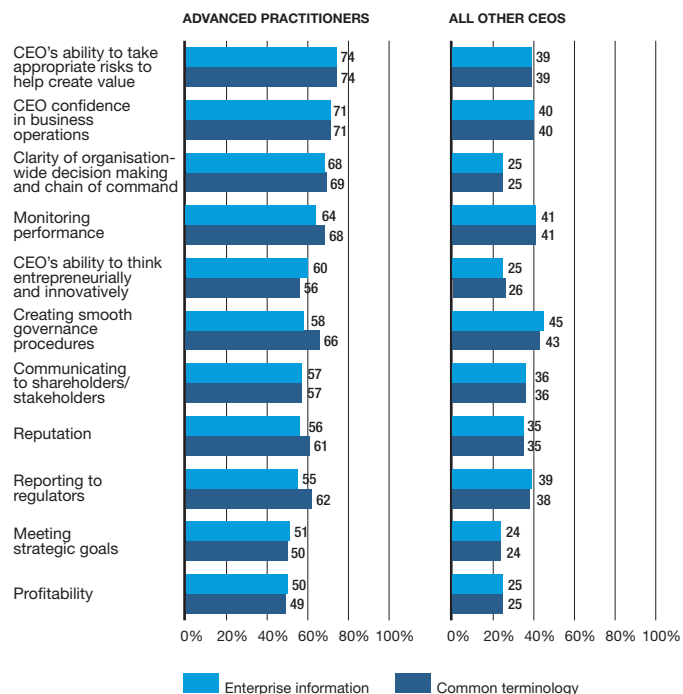
**EXHIBIT 25 ■ FULL ERM IMPLEMENTATION**  
**Strategic planning advanced practitioners**

Percentage reporting strong or considerable positive impact



**EXHIBIT 26 ■ BENEFITS OF ERM**  
**Strategic planning advanced practitioners**

Percentage reporting strong or considerable positive impact



Other CEOs should consider following the lead of their more advanced peers, even as the latter continue to develop and refine their enterprise risk management practices. Many companies have the potential to reap the benefits already achieved by the advanced 15 percent. Enterprise risk management is certain to be high on the list of what leading companies must do to meet the challenges of a risky world, replete with positive and negative events. Companies that manage the impact of those events and find opportunity within them will prosper. Those that do not will lose ground in a competitive world that has little patience with losers.

PricewaterhouseCoopers trusts that this report will help the survey participants and all who read it to better understand enterprise risk management. The survey will have served its purpose if readers gain insight into benchmarks applicable to their own companies and discover how to implement enterprise risk management more thoroughly for the benefit of their shareholders and other stakeholders.





► **Featured Interviews:**  
Risk Management in  
Personal Perspective

The preceding survey aggregates the views of nearly 1,400 CEOs worldwide. Deliberately anonymous and systematic, it reveals patterns across a broad swath of issues and strategies—patterns that could be uncovered in no other way. But there is another source of insight: individual discussion with acknowledged leaders. Herewith, three such discussions on three continents.







## TAKING THE RIGHT RISKS

### Henrique Meirelles

President, Banco Central do Brasil

Henrique Meirelles is president of the Banco Central do Brasil. Before accepting this government post, Mr. Meirelles had a long and successful career in commercial banking. Educated as an engineer and holding an MBA, he joined BankBoston in Rio de Janeiro as a manager in 1974. Ten years later, he became chief executive of the bank's Brazilian unit. During the 12 years he was in charge of the bank in Brazil, from 1984 to 1996, its assets grew from \$70 million to \$4 billion.

In 1996 Mr. Meirelles moved to Boston to become BankBoston's president and chief operating officer. In 1999 BankBoston merged with FleetBank and Mr. Meirelles became president of Wholesale and Global Banking of FleetBoston Financial, the seventh-largest bank in the United States, with assets amounting to \$220 billion and 55,000 employees in 32 countries. Then Mr. Meirelles decided to leave the financial world to enter public life in Brazil. After a brief stint as the representative of his native region of Goiás, in 2002 he was tapped by the incoming administration of Luiz Inácio Lula da Silva to head the Banco Central do Brasil.

**PwC:** You had a long and distinguished career at BankBoston before returning to Brazil. Do the lessons of risk management that you learned leading a major commercial bank carry over into the world of a central bank?

**Mr. Meirelles:** The guidelines are about the same. You are talking about markets and you are talking about prices. The consequences for a corporation are somewhat different from the consequences for a country, but at the end of the day the same set of principles and guidelines applies.

**PwC:** At BankBoston you measured your success by profitability. How do you measure success in your current position?

**Mr. Meirelles:** In a corporation you basically weigh your revenues against risk. In a country you are looking at GDP growth versus risk, and one of the main risks is inflation. So if you equate inflation with financial losses in the corporation, and if you equate GDP growth with revenue growth, you then apply the same type of guidelines.

**PwC:** Can you elaborate a little on what those guidelines and principles are as you've applied them?

**Mr. Meirelles:** The first question is to define what you cannot afford in a downside situation. Then you have to determine what kind of risks you can afford, which is also true for corporations. Some problems that corporations face come from taking risks that cannot be taken. It's like walking over a wire. Technically there is not that much difference if the wire is one meter high or 50 meters high. Technically it's the same—but there is still a big difference. So you have to have that kind of discrimination. Some countries can afford to have 20 percent inflation temporarily and some countries can't.

**PwC:** How do you go about creating a sustainable business model for a country so that your economy is neither hyperinflating nor stagnating?

**Mr. Meirelles:** The model has to be developed for a specific country. You need a model which starts where you are and then takes you in the direction you want to go. For instance, you have the Keynesian model, which was popular in this part of the world for decades. It says that government expenses favour growth. That's true—to

some extent. That model also says that if you have idle capacity, if you are in a recession, you can expand spending temporarily in favor of growth, as in the US in the 1930s through the New Deal. But if you are working at full capacity and that full capacity is at a low level for lack of past investment, then you are not growing. If you are in that kind of situation and at the same time the government is highly in debt, then if you spend more, you have to borrow more. If you borrow more, interest rates will go up, so that's not a good solution. You get into a trap of borrowing more to spend more. This is what I mean by applying the model to a specific situation. An alternative model is to use government expense reduction to generate more money to be available for investment by private capital.

**PwC: When you took over, inflation was high, the currency had been devalued, and there was a great deal of nervousness about what the Lula administration would mean for business. How did you face that set of circumstances?**

**Mr. Meirelles:** By analysing and diagnosing what the problems were. The markets were very nervous, that's true, but there were good reasons for that. There was a concern about the new government's commitment to fiscal and monetary stability. So it was necessary to make a very clear

statement about fiscal and monetary stability. Brazil had a primary surplus, but it was not stable because there was a growing social security deficit. In addition, a good portion of the primary surplus in the year before had been a result of one-time revenues, which were not repeatable, and there was a large portion of tax collections that must be approved every year by the congress. The government had to address those issues up front: to stabilise and decrease the social security deficit and second, to publish a budget with no one-time revenues, which this government did. And third, to propose a tax reform approving a longer period—four years, rather than one—for those taxes that generate the primary surplus. Those measures are in the process of being approved by the congress.

We also had to apply a very severe monetary policy in order to leave the markets in no doubt that we are serious about achieving the inflation targets. We pursue that relentlessly. When we took over, the expected inflation for the year 2003 was 12.2 percent. We announced a target of 8.5. For the year '04, we set a target of 5.5 percent; for the year '05 it's 4.5 percent, and in the long run the price of stability for a country like Brazil is inflation of 4 percent. That's an average for emerging markets.

**PwC: It still sounds huge in the European context, where the target is 2 percent.**

**Mr. Meirelles:** Do you know what the average inflation rate was for Brazil from 1985 to 2003? Average annual inflation for 1985 to early 2003 was 646.43 percent. There were years with 2,000–3,000 percent. In Brazil, 1995 was the first year since 1979 with inflation below 100 percent. That's the reason we were so quick to bring inflation down now: we can't afford it. We can't afford to return to that situation.

**PwC: High interest rates tame inflation, and this should promote more investment, but they tend to restrain production and employment. Is it a balancing act?**

**Mr. Meirelles:** It's a balancing act practised by every central bank in the world. The secret is to be tough enough to bring inflation down as fast as possible and then start growing from a stable price system. And this is already happening in Brazil. Inflation came down to our target around May-June, the Central Bank began to lower rates by June-July, and the economy is already growing. The worst thing you can do is to be hesitant and be stuck fighting inflation for a long time. You have to bring it down and kill it as quickly as you can. ■



## BALANCING SUSTAINABILITY AND RISK

### Travis Engen

President and Chief Executive Officer, Alcan Inc.

Travis Engen is president and chief executive officer of Alcan Inc., a global aluminum and packaging company that, through its recent acquisition of the French company Pechiney, has nearly doubled in size and is now a \$25-billion company with 88,000 employees and with operations in 63 countries. Mr. Engen has been at the forefront of the movement for sustainability in business as cochair of the World Business Council on Sustainable Development's Accounting and Reporting work group and as chairman of the World Economic Forum's Water Initiative.

**PwC:** Let's talk about sustainability and risk. In your main area of business—the production of aluminum—you have exposure in both areas. How do you think about these two highly charged subjects?

**Mr. Engen:** First, I don't spend a lot of time thinking about risk. This doesn't mean that we don't have risks in our business. We clearly do, and we have many, many processes in place to help us understand these risks and deal with them. We think quite a bit about the vulnerability of complex machinery in our facilities and about how we must prepare to handle power disruptions. We think about the risks associated with our information systems. As a result, we have many processes in place that are part of our daily behaviours and are aimed at identifying and assessing whether or not we have properly prepared ourselves for certain risks. But I view risk as just another element that you have to

think about when leading a business. It's not a special category unto itself. If you focus too much on risk, you can end up not doing many of the things you ought to be doing.

**PwC:** If risk is just another category in your overall business, how do you weigh it when making decisions?

**Mr. Engen:** The sheer breadth of our enterprise is such that the impact of single risks is diminished. Still, there are so many different categories of risk. We operate in 63 countries, so there are always political risk and the threat of instability of some sort in some part of the world. In addition, since we do business under the same name around the world, problems in one country or region could end up being a problem for the entire company.

As a result, when I think about risk, I like to consider it in the context of what I'm engaged

in at that moment—for example, a new project in some part of the world in which we are trying to assess financial risk, or the risk of completing a project on time and in the right way in a remote region.

But not all risks are physical or financial. Sometimes the biggest risks are to a company's values. In some cases, we even have business ideas that come forward where it's clear that the basic business premise is not aligned with our company's values. This means we have to think long and hard about whether this would compromise the values of our company. We do this because our values are essential to our brand. Even so, we don't have a company-wide risk checklist. It never has been and won't be a special category.

**PwC:** Do you have confidence that your messages regarding risk are being effectively communicated across different countries and different regions?

**Mr. Engen:** Yes, I do. But, again, I wouldn't focus on the word *risk*. It's much broader than that. Of course there are classic risks to all businesses, but I want people thinking about the range of possibilities, not the risks, and how they deal with them.

**PwC:** A lot has been written about sustainability. It is thought of in two broad ways: doing business in a manner that maintains the long-term viability of the enterprise and doing business in a way that positively affects the communities in which a company operates. How do these definitions fit with your views?

**Mr. Engen:** There is a strong business case for sustainability. An enterprise cannot be a success over the long term without being high performance in many respects; in fact, I think it's virtually impossible for a company to be high performance in only one dimension. That just doesn't happen.

Three years ago, we merged with algroup. This roughly expanded our company by 50 percent—about the same increase in our industrial activities as the acquisition of Pechiney. At the time of the algroup merger, we went through a process of thinking about where the company was going, and we adopted a strategy of maximising value, which became our company's overarching objective. We believed at that time, and we still do, that economic success creates the resources to enable our investment and development in other areas that are important to be successful, including environmental performance, investing in and developing people, investing in new products, and customer support. All these are essentials to sustaining and

building market presence. It's a virtuous cycle that is very holistic, since you can't be successful financially without happy customers, good employees, and so on.

**PwC:** You said that Alcan's emphasis is on creating value. How does sustainability create value?

**Mr. Engen:** First, let me define *value* very clearly: it's money. There's nothing ambiguous about that. We are an economic enterprise, and we will not succeed and we will not survive if we don't create economic value.

The problem I see is that most businesses are preoccupied with executing what they've described as their business plan. And that is usually quite challenging. There are many, many things they must think about. However, our jobs are broader than that. It's not just to execute the business plan but to manage the plan to create economic value. This translates into a set of processes that enable you—as you execute your plan—to periodically step back in some structured way and ask yourself, Is the plan right? Am I doing the right things? Should I be doing something else? Is there an opportunity outside what we've already put on the table? So that leaves leaders with two jobs: one is managing the plan or the budget and the second is managing the value of the plan or budget or, in my case, the full enterprise.

That enables leaders to think about the things that could change the value of the enterprise. So you brainstorm and select the two or three higher-value elements. At times you have the ability to calculate value impact with great precision, but sometimes you begin with only a rough idea. Then you start exploring ideas, developing alternatives, coming up with options—with many levels of management—to try to identify how to implement the plan. Within this process, a fundamental operating tenet for us is sustainability; it's not an overlay but an integral part of what we think about and everything we do.

**PwC:** Can you give us a specific example of how this process works?

**Mr. Engen:** Sure. We smelt aluminum. Aluminum is made in very, very large tubs lined with carbon. As the aluminum is produced, concentrations of other elements, including fluorine, are left behind. At some point in time, you have to replace these linings. But the linings, because of the concentration of these other elements, are now waste that must be managed. Historically, waste has been put in landfills and things of that sort, although it's clearly not the way that you would deal with it today. In Quebec, for example, we've been stockpiling this waste for over 20 years, and we've been trying to find the best way to deal with it going forward. In the last three years, as a

result of our brainstorming and thinking about this issue from a value standpoint, we developed a whole new set of technologies to process the waste in a closed loop. We can now process the waste in a way that makes it 100 percent recyclable—no more landfill or anything like that. We have developed a fully sustainable process that also lowers our cost. And we got there by pushing, iterating, thinking. We now have a process that is economically and environmentally better.

**PwC: Do your shareholders give you credit for that kind of initiative?**

**Mr. Engen:** I would say that most shareholders don't even think about it. But there is undoubtedly an unconscious, unstated set of expectations on the part of shareholders—certainly in Europe and in North America—that the norms they see around them in their society are the norms that the companies they invest in are practising everywhere. To the extent that's not true or it becomes apparent that it's not true, shareholders become disappointed, and that's why share prices drop when there is a disaster or a problem in one part of the world, ultimately affecting the entire company.

In our case, all of our internal standards, our best practices, are applied globally. In addition, what we've found, especially in the environmental area, is that the life cycle cost—or the net present

value—of doing the right things at the beginning is much lower in cost than dealing with something much later in time.

It's not that easy, though. After all, many of the best practices of the 1950s and 1960s are now known not to have been good ideas. So, going back to your questions about risk, there is a risk here that comes from not knowing today what you might find out in the future. How do you deal with that? You do so by being overly cautious today. Although we're talking about the environmental side, the same argument holds true in areas that are strictly economic.

**PwC: How do you put that kind of thinking into practice?**

**Mr. Engen:** Sustainability carries over into all levels of our business. It affects all of our employees. We see that in our annual employee surveys. Without exception, the highest-rated area in the annual employee surveys is sustainability. Operating as a sustainable business is important to our people.

**PwC: How do you explain that?**

**Mr. Engen:** There is an incredible alignment between the private, personal lives of people and their community with respect to environmental health and safety performance. Simply put, our people live in local communities and are con-

cerned about making sure that our industrial practices aren't somehow destroying the area in which they and their families and friends live. On the other hand, we have implemented performance measures—for example, metrics with regard to accident rates—which we use to make our facilities safer. We see real progress in these performance measures because no one wants to be associated with an enterprise that's going in the wrong direction.

**PwC: As your company has become increasingly global, it has also become increasingly complex. Has this created a riskier business?**

**Mr. Engen:** Maybe the difficulty people have in understanding how complexity is managed in large enterprises is that they still think of organisations in a Soviet style, with everything centrally planned and all decisions coming from the corporate centre.

That's not the way I manage this organisation, and it's not the way other organisations I've been involved with have operated. I deal, obviously, with major issues, but my primary focus is on people. I believe I am capable of knowing a great deal about the 150–200 people I work with. And I rely on their having similar networks throughout our organisation. I put a great deal of energy into understanding this top group—their thought

processes, their values, how they behave, and how they represent themselves and our organisation to other people. And, again, my hope is that they are doing similar things with respect to the groups around them.

I also put a premium on communication. When I learn something, my first question is, Who else ought to know about this? And then, Where can I get better insights? More facts. This is in sharp contrast to some organisations I've known where people come forward with ideas only when they've got everything detailed, with all the answers. That's OK if it works, but I'd rather see people come forward with their ideas and ask for help. Knowing people well and communicating with them goes a long way toward making a complex organisation simpler.

**PwC: When you speak about communication, are you also talking about values?**

**Mr. Engen:** Values are transmitted by behaviours. When I'm in a meeting, everyone takes great notice of my reactions to certain things. If I were not focused on financial performance or our safety performance, you probably wouldn't see much focus on that in our organisation.

Leadership has many styles, but the most important is behaving in a way that people want to emulate and can respect. How you behave—and what you focus on—are very

important. For me that means being very visible. For example, I spend quite a bit of time at our training programmes. It's a way to touch and connect with our people.

**PwC: What about metrics?**

**Mr. Engen:** Oh, we have a lot of them! I conduct business reviews every three months with our major segments. And we try to schedule these in the middle of a quarter, so the focus isn't only on financial results. I want to talk about environmental health and safety performance, too. And we have long-term targets for improvement in performance. We also spend a lot of time talking about where we are, how things are going, new ideas, and ways we're managing all of these things. Remember, the management techniques for environmental health and safety performance are exactly the same as for other aspects of the business—problem identification, brainstorming, developing an action plan, managing the action plan, and doing it all over again.

It's true: this organisation is complex. If, for example, I had an objective of visiting all of the Alcan plants and offices around the world, I would never achieve that objective. The same thing is true about all the other dimensions of the business. You focus on a critical few, and you really focus on people.

**PwC: Have Sarbanes-Oxley and other developments in the regulatory environment added to the complexity of your organisation?**

**Mr. Engen:** First of all, with respect to Sarbanes-Oxley, I've been a CEO now of two companies: one in Canada and one in the US, and with the acquisition of Pechiney I'm also chairman and CEO of a large French public company. I've never felt that, in any way, shape, or form, I needed to be reminded about my responsibilities by regulation. I really believe in doing the right thing. That's a core value of Alcan.

So where do we find ourselves with Sarbanes-Oxley? We've put a great deal of time into documenting the process but have not found that we needed to change the process. Here at Alcan, we've always had a very open style. I've been quite accessible to the public and the board. We have a lot of meetings involving our directors and our senior management team, and I think it's all incredibly powerful. Management isn't monolithic. Nor is the board. We have a richness in our discussions and in our points of view that could never be conveyed through a single pipeline, the CEO.

Since we've found ourselves with very good practices in place, I've begun to think about the next tidal wave of regulation. What do we need to do to be well positioned for that? I don't have the answers yet, but I like to think about it. ■





## AN ELECTRIC MIND

### François Roussely

Chairman and Chief Executive Officer, Electricité de France

After a distinguished career in the upper echelons of the French government, providing leadership in departments ranging from the National Accounting Office to the Ministry of Defence and the French Atomic Energy Commission, François Roussely was appointed Chairman and CEO of Electricité de France (EDF) in July 1998. A graduate of the Institut d'Etudes Politiques and of the Ecole Nationale d'Administration, he brings to EDF exceptional breadth of vision, technical knowledge, commitment to public service, and a capacity for innovation in an era of fundamental change in the European economy. EDF is a state-owned company and one of Europe's leading energy groups. PricewaterhouseCoopers met with Mr. Roussely at the Paris headquarters of EDF.

**PwC: Massive blackouts swept the United States and Italy during the summer. How does EDF anticipate and mitigate the risk of outages, and what lessons have been learned from the difficulties you faced in France after the severe storms of December 1999?**

**Mr. Roussely:** Risk management is obviously a key focus for the EDF Group. Our public service commitments, which include guaranteeing equal access for all as well as competitive pricing, oblige us to prioritise continuity of service. Given the nature of our business, we take a long-term approach to risk management. EDF has two strategic objectives. The first is to achieve critical scale. Electricity cannot be stockpiled, so we have to maintain sufficient generation capacity to meet present and future demand. At the

same time, we operate in deregulated markets. Therefore, our second objective is to generate a satisfactory rate of return on capital.

The two issues are linked. Deregulation and the growing emphasis on preventing the abuse of dominant positions have made the question of critical scale all the more important. Indeed, energy companies can only afford to invest in idle capacity if they are big enough to spread costs efficiently. This runs contrary to the widespread view that "small is beautiful." But it's the case. Let me remind you that competition law does not outlaw a dominant position but rather the abuse of such a position. Energy providers must be able to achieve critical mass in order to be able to bear the cost of built-in system redundancies.

**PwC: Is vertical integration required to maintain critical scale?**

**Mr. Roussely:** Experience shows that we need a much more integrated organisation—one that is vertically integrated both in its domestic market and internationally. When discussing this with journalists outside France, I always take pains to point out that vertical integration does not imply monopolistic power. The major guarantee EDF offers in terms of risk management is our comprehensive management vision that runs across our core generation, transmission, distribution, and supply businesses, right through to research and development. This approach ensures the accountability of each link in the chain, and it is the reason why we were able to respond so well to the exceptional heat wave last summer in France.

Building Chinese walls and unbundling activities make it more difficult to coordinate effectively in an emergency. Indeed, I believe that legislators, perhaps at the European level, should make provisions for greater coordination between electricity producers and suppliers. As we learned during the storms in Britain in autumn 2002, Chinese walls can be a barrier to informing customers adequately.



The combination of critical mass, vertical integration, and an environment in which markets and oversight bodies provide clear signals to utility operators is vital in order to promote capital-intensive investment and average levels of profitability over the long term.

The reason why 65 million Americans were deprived of electricity for 24 hours or more in 2003 was simply because necessary investments hadn't been made a decade earlier, or even two or three years earlier when, faced with the choice of investing in the transmission grid or in telecommunications, "smart" investors preferred to plough money into telecommunications.

In other words, energy risk management requires long-term vision, and hence an appropriate regulatory environment. On top of this, you need a system framework that prevents chain reaction effects when one part of the network is disrupted for whatever reasons.

**PwC: What is the impact of energy market deregulation?**

**Mr. Roussely:** I recently took part in an international conference on energy market deregulation and the break-up of utility monopolies—which is something we welcome—into separate generation, transmission, and distribution entities and

regional energy companies. We came to the conclusion that the key difficulty with the present system is that, in the event of a power crisis, you have to deal with an array of independent energy companies with limited possibilities for exchange of technical information. This makes it much more difficult to respond quickly and efficiently.

All of the elements that led to the current situation were apparent 10 years ago during the debates over the deregulation of the electricity sector. We knew then as we do now that building high-tension networks, developing nuclear energy plants, or building dams are long-range planning decisions. Obtaining approval for a major production plant takes 10 years, plus a further 10 years before the plant comes on stream. Nuclear plants have an operating lifetime of around 50 years, while dams operate over a period of 100 years. However, this kind of long-term planning is no longer consistent with the time imperatives of today's economy.

What is really needed is an effective mechanism for risk management, and this is lacking at a European level today. The key lesson to be learned from the power cuts in Italy and the United States is that Europe must reinforce interchanges between power networks, and that achieving this goal requires interconnections that

are independently managed and of sufficient size.

Considering the gap between reality on the ground and the original intent of the promoters of deregulation of the electricity sector, one would expect that events such as the Enron debacle, the California energy crisis, or the situation of British Energy would spark a political response at the European level or, at very least, discussion on whether we're headed in the right direction.

Unfortunately, no such debates have taken place. We seem to be ignoring the problems and continuing regardless. I'm not arguing that it was wrong to deregulate, but the notion that deregulation could apply across all markets and countries from Brazil to Britain, China to South Africa, without regard for local conditions, was unfounded and disproved by facts.

**PwC: Your call for EDF to remain an integrated electricity utility appears inconsistent with the objectives of the European Union's liberalisation directives, which include unbundling and the legal separation of transmission from other activities.**

**Mr. Roussely:** I wouldn't say so. As demonstrated by our transmission operator in France, RTE, juridical independence is perfectly compatible with vertical integration. RTE is a division of the

EDF Group. Its budget is controlled by an independent regulatory authority and is a component in the company's overall operating budget, which is adopted by the board of directors. The key requirement is to have a legal framework that guarantees third-party access to the transmission grid, and which provides competitors with advance notice of tariff changes, while also ensuring the confidentiality of certain data so that the transmission company of the incumbent operator does not have an unfair advantage.

I am convinced that it is possible to create a vertically integrated utility that complies fully with regulatory requirements for transmission and distribution and which is able to obtain information in an emergency and deliver appropriate responses. In a power crisis, the most important task for a utility operator is to maintain public service and ensure continuity of supply. This notion of public service is unfortunately often neglected or taken for granted. EDF is committed to guaranteeing security of supply. The record heat wave of summer 2003 cost us around 300 million euros. That is the price we had to pay for continuity of service.

Naturally, we could have introduced rolling outages, as did a number of our counterparts in the rest of Europe, purchasing electricity at high wholesale power prices or trying to mobilise

additional resources. This additional expenditure will ultimately affect our year-end bottom line. However, it reflects our commitment to public service or "best customer service." I believe that public service at this level is entirely consistent with a fully deregulated market structure.

**PwC: Can EDF's integrated business model remain viable once partial privatisation moves ahead?**

**Mr. Roussely:** The real problem for EDF is that our shareholders' equity is insufficient. If our majority shareholder, the French state, decided to recapitalise EDF there wouldn't be any need to open up the company to outside capital. However, my job is to sustain EDF's long-term leadership in the electricity sector, and the state has not invested any money in the company for the last 20 years, even though we operate within a very capital-intensive industry. As from July 1, 2004, 70 percent of the electricity market will be opened to competition, and this will have a considerable impact on our operating profitability as well as our debt-to-equity ratio. These are issues that will have to be addressed. Opening up the capital of the company is simply a means to an end. In other words, if our shareholder isn't willing to solve our equity needs, we must go to the markets to do so.

**PwC: Is partial privatisation compatible with the company's public service values?**

**Mr. Roussely:** I think so, and our future depends on it. While we appreciate the fact that shareholders seek optimal returns on their investment, we also have to consider the fact that EDF has built a unique relationship with its customers over the last 50 years in France and is replicating this model overseas, with ENBW in Germany and EDF Energy in London. Of course, there will always be those who take an exclusively short-term view and who would be delighted if we replaced our nuclear plants with combined-cycle gas turbines in order to boost our profits within five to six years. The same kind of short-term logic would have us cut expenditure on network maintenance to a minimum and even eliminate our 450-million euro annual research budget.

If the objective is to guarantee supply security, ensure competitive pricing, and have zero greenhouse gas emissions, you have to be ready to invest over the long term. Ninety-five percent of EDF's generation fleet already meets these objectives, which constitute essential public goods. We have not only succeeded in transforming a company with a long tradition of monopoly into one of the world's leading energy groups, but have also surprised the world by developing one of the most successful companies in terms of its industrial strategy, corporate policies, price performance, and security of supply.

EDF has the lowest outage time of any utility operator. I am confident that, in a fully deregulated, interconnected European market, EDF will continue to demonstrate to private shareholders that it is capable of delivering value over the long term. This being said, no one would dream of recommending the energy sector as a speculative holding; it is essentially a defensive investment. In increasingly volatile international markets, I believe that EDF has much to offer investors who pursue a balanced investment approach.

**PwC:** Nuclear energy is the subject of widespread debate. France appears to be going against the trend in other countries, some of which plan to decommission their nuclear facilities. How does this fit into the group's risk management policy and how do you respond to calls for the non-renewal of EDF's nuclear plant licenses?

**Mr. Roussely:** France is a textbook case of a country where there has traditionally been strong support for nuclear energy. This position has evolved over time but has not changed dramatically. Support for nuclear energy is not as massive as in the past, due to the fact that we're seeing the emergence of new generations with different priorities and expectations.

**PwC:** How do you address the exposure in this area?

**Mr. Roussely:** First, by constantly striving to report transparently on operating conditions and incidents as they arise. Second, by developing and implementing robust technical safety mechanisms. One of the major reasons for the new EPR reactor is to increase the level of reliability and safety of our electricity network. In addition, part of the price paid by customers per kilowatt-hour is set aside to fund the back end of the nuclear fuel cycle (waste storage and treatment), and another part to cover decommissioning costs.

On the wider question of nuclear waste treatment and storage, let me say that nuclear energy faces challenges akin to those of other "high-risk" industries such as chemicals and steel. However, I do not believe that those industries are subject to the same degree of scrutiny as the nuclear energy sector, which has to comply with agency oversight, international regulations, and peer reviews—all of which, I would add, we welcome.

There is also the issue of high-level, long-lived waste. This accounts for just 2 percent of our total waste volume, or 2 grams per inhabitant of this country per year. So when one puts things into perspective and assesses this issue in an

objective and dispassionate way, it is clear that there are more important sources of hazardous waste than nuclear energy. Toxic industrial waste and heavy metal emissions do more harm to the planet than nuclear waste.

Despite this, people persist in believing that nuclear energy is more dangerous. EDF has initiated long-term programmes for the reprocessing of nuclear waste, and there is every reason to believe that in due course we will perfect an appropriate method for reprocessing. Pending that, we must use reversible storage solutions. No system for producing energy is flawless. Dams create a number of problems and are subject to climatic factors. Fossil fuels produce greenhouse gases and require cooling water. Wind turbines rely on moving air and cannot supply electricity continuously. Photovoltaic cell modules raise a number of difficulties in terms of end-of-life management.

Above all, we must be realistic: we cannot expect major technological breakthroughs in the next 50 years that will allow us to abandon nuclear energy, fossil fuel, or renewable energies. What's more, I think we can safely say that the contribution from these first two sources will by far outweigh the contribution from renewable energy.

**PwC: Terrorist threats are on the minds of many nowadays. Has this modified your view of the company's risk landscape?**

**Mr. Roussely:** As I said earlier, no industry is subject to more controls or is more protected than the nuclear industry. Further, I think that it is a mistake to believe that nuclear plants are more vulnerable to attack. The security of the civil nuclear industry is second to none, and its mechanisms rely upon the principle of redundancy. As well, it seems to me that the concern for transparency sometimes expressed about certain measures that have been taken runs totally counter to the need for ensuring the security of strategic industries such as electricity production. As for what we are doing to ward off the specific threat of terrorism—in this case, the less said the better.

**PwC: Can you tell us a little about your commitment to sustainable development?**

**Mr. Roussely:** This is a subject that particularly interests me. Sustainable development, a crucial global concern, is founded upon three pillars: economic growth, social responsibility, and environmental responsibility. As chairman of EDF over the past six years, my experience in developing and implementing corporate sustainability

initiatives has made me acutely aware of the need for governments, NGOs, and the private sector to work together and co-ordinate their efforts. No single actor on its own can deliver sustainability. For companies, the key issue is to demonstrate the strength of their commitment to sustainability. They must show that their efforts are genuine, not merely window-dressing. Social and environmental rating agencies can play a key role in this regard by providing the tools to measure these commitments.

Let me illustrate what I mean on the question of co-ordination. When you examine the projects that EDF has launched in Africa, or what the NGO *Electriciens sans frontières* is doing, such as bringing electricity to homes in remote villages in a South African province, you quickly see that such projects can easily fail for a number of reasons—for instance, when there are no people available to maintain photovoltaic units or wind generators or because of literacy problems or skills shortages. These private projects only get off the ground if they are supported by UN institutions because they do not generate an immediate financial return. So you need all three actors in the equation: public bodies, companies contributing know-how, and NGOs providing hands-on experience.

We must move beyond the current deadlock whereby each actor refuses to acknowledge the legitimacy of the other two. On one side, you have government agencies saying: “Just give us the resources and we will deliver.” The NGOs are saying: “We will not be duped into working with companies seeking publicity.” And companies are saying: “Leave it to the experts.” It's time to abandon this fruitless debate. We need dialogue and a co-ordinated response from all three actors.

At the same time, we all have collective responsibilities. Companies can do a great deal to promote a brighter common future. EDF, for instance, has proposed that the international community set itself the objective of guaranteeing access to electricity for every person on the planet within the next 30 years. This would benefit two and a half billion people who presently lack access. The estimated cost would be some ten billion dollars annually. In the global context, this is a small price to pay, given the enormous impact it would have on people's lives. ■

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