

Managing Business Risk

Introduction

In a dynamic business environment, risks abound. These risks must be managed effectively for a company to do well. At a very broad level, the risks a company faces can be divided into two categories: *Business* and *Financial*. Business risk refers to the possibility of the firm being unable to generate the revenues and operating cash flows it would ideally target. Either the firm may not be able to sell enough of its products and services or it may find it difficult to sell at the right price or both. Financial risk refers to the uncertainty associated with changes in interest rates, foreign exchange rates, defaults, etc. Much of the focus of risk management has traditionally been on financial risk, ie fluctuations in interest rates, exchange rates and stock indices and hazards. But risk management should not be equated with treasury management or insurance. Reputation risks, operational risks and strategic risks are some of the risks which will increasingly seize the attention of top managements of companies across industries in the coming years. Risk management should also not be equated with hedging. While hedging concentrates on the downside, risk management looks at the upside too.

Towards integrated risk management

Risk management has undergone a paradigm shift in the past two decades, thanks to the growing complexity of the business environment. Companies should not only identify risks carefully but also deal with them systematically. Risks should not be dealt with in a piecemeal fashion. Traditionally, within the same company, different functions such as finance, treasury, human resources and legal, have covered risks independently. An organisation-wide view of risk management can generate synergies by examining the correlation among various types of risk and ensuring that the company takes the optimal amount of risk. That is why many companies are taking a serious look at integrated risk management or Enterprise Risk Management (ERM), which addresses some fundamental questions:

- What are the various risks faced by the company?
- What is the magnitude of each of these risks?
- What is the frequency of each of these risks?
- What is the relationship between the different risks?
- How can the risks be managed to maximise shareholders' wealth?

Many surveys conducted in recent years indicate that:

- More and more companies are using ERM.
- ERM helps companies feel more confident about dealing with risk.

- Many companies are convinced that ERM can result in clear benefits for the shareholders, by increasing the Price-Earnings Ratio and reducing the cost of capital.
- The importance of non traditional risks like customer loyalty, competition and operational failures is increasing.
- Implementation of ERM needs various structural measures to align risk management, strategic planning, information systems and organisational culture.
- Few companies aggregate their risks across the entire organization.
- Current quantification methods are inadequate to measure many intangible risks.

As we mentioned a little earlier, risk management is as much about dealing with the upside as about the downside. According to Brian Nocco and Rene Stultz¹, by measuring and managing risks consistently and systematically, and by giving business managers the information and incentives to optimize the tradeoff between risk and return, a company can ensure that cash flows are available to carry out the strategic plan. “By hedging or otherwise managing risk, a firm can limit (to an agreed-upon level) the probability that a large cash shortfall will lead to value destroying cutbacks in investment. And it is in this sense that the main function of corporate risk management can be seen as protecting a company’s ability to carry out its business plan.”

Barrick, the Canadian gold mining company is a good example. Peter Munk, the architect of Barrick’s success had little experience in gold mining. So he pursued a strategy of growth² by acquisitions. Takeovers required steady and predictable cash flows. So Barrick introduced a novel hedging scheme that sold future production at a fixed price. This in turn led to superior and steady cash flows, when compared to competitors.

Nocco and Stultz also add that by reducing risk, a company can reduce the amount of expensive equity capital needed to support its operating risks. Effectively, risk management acts as a substitute for equity capital. Indeed, an important part of the job of the top management is to evaluate the tradeoff between more active risk management and holding a larger buffer stock of cash and equity.

Holding excess capital only makes sense, when there are serious difficulties in understanding and measuring risk and the level of uncertainty is high. That seems to be clearly the case during the recent sub prime crisis. Many of the leading banks have rushed to the markets to mobilize more capital. But in more normal situations, risk

¹ Journal of Applied Corporate Finance, Fall 2006.

² “Jolly gold giant,” The Economist, April 19, 2008, p. 76

management creates value by reducing the need for equity and consequently the cost of capital.

Integrated risk management is all about the identification and assessment of the risks of the company as a whole and formulation and implementation of a company wide strategy to manage them. In the past, a systematic and integrated approach to risk management was more an exception than the rule. Now the scenario is changing. The cumulative experience of the past few decades in managing risks, development of management and probability theories, powerful computer software and the availability of a wide range of financial instruments has made ERM much easier to conceptualise and implement.

At the outset, we need to appreciate that ERM combines the best of three different but complementary approaches to managing risk. The first is to *modify the company's operations* suitably. Here the company holds the risk but makes adjustments to the systems and processes to cope with the risk. The second is *to reduce debt in the capital structure*. Equity is a general purpose cushion against risk. Equity helps a company to tide over tough times. Equity is particularly useful when it is difficult to pinpoint clearly or measure a risk. As we mentioned a little earlier, this argument applies to the sub prime crisis. Banks are falling back on increased capital to inspire the confidence of shareholders. The third is *to use insurance or financial instruments like derivatives* which essentially transfer risk to a party for a fee. The scenario here is that the party which bears the risk has greater expertise to deal with the risk than the company itself.

An example will illustrate the point. The software giant³, Microsoft operates in an industry where technology keeps changing rapidly. The company manages its risk by maintaining low overheads and zero debt. In other words, Microsoft balances its high business risk with low financial risk using equity. But Microsoft also has organizational mechanisms to deal with risk. The capacity of a software development company is for all practical purposes, the number of software engineers on its pay rolls. Excess capacity can create serious problems during a downturn. So Microsoft believes in maintaining a lean staff. It depends on temporary workers to deal with surges in work load from time to time. This not only reduces the risk associated with economic slowdowns but also results in greater job security for its smaller group of talented, permanent workers.

A few more points need to be emphasized here. The risks a company must hold or transfer depend on the principle of comparative advantage. Usually, companies do not

³ Lisa Melbrouek, “

have a comparative advantage in dealing with financial risks. Mostly financial institutions have this capability. But companies usually have a comparative advantage in handling business risks. As Nocco and Stultz mention⁴, companies are in business to *take strategic and business risks*. “The recognition that there are no economical ways of transferring risks that are unique to a company’s business operations can serve to underscore the potential value of reducing the firm’s exposure to other, “non-core” risks. Once management has decided that the firm has a comparative advantage in taking certain business risks, it should use risk management to help the firm make the most of this advantage. Which brings us to a paradox of risk management: By reducing non-core exposures, ERM effectively enables companies to take more strategic business risk—and greater advantage of the opportunities in their core business.”

This article focuses more on how business risks can be dealt with by modifying operations. Use of derivatives and modification of capital structure will be dealt with in a separate article, “Financial Excellence: A risk management approach.”

Exploding some myths about risk management

Risk is an integral part of life. As Aswath Damodaran mentions in his recent book, “Strategic Risk Taking – A frame work for risk management,” without taking risk, human civilization would not have made progress. Discoveries and inventions resulted only because someone was willing to take risk and challenge the status quo. Let us clear away some common misconceptions about risk.

Risk Management is not something new. One of the earliest examples of risk management appears in the Old Testament of the Bible. An Egyptian Pharaoh had a dream which Joseph interpreted as seven years of plenty to be followed by seven years of famine. To deal with this risk, the Pharaoh purchased and stored large quantities of corn during the good times. As a result, Egypt prospered during the famine. Similarly in the Ramayana, Lord Hanuman managed risk by carrying an entire mountain on his shoulders as he was not sure which of the plants was the Sanjeevani herb, needed to cure Lakshmana, who was lying seriously wounded on the battlefield. In his Matsya Avataar, Lord Vishnu advised Manu to carry one of each species in a large ship to ensure that life would return to normal after the deluge.

Risk can neither be avoided nor eliminated completely. The aim of risk management is not to eliminate risk. Indeed, without taking risk, no business can grow. As mentioned earlier, companies are in business to take risk. Without taking risk, returns cannot be

⁴ Journal of Applied Corporate Finance, Fall 2006.

generated and without returns, capital will flee, leaving the company insolvent or bankrupt. The Pharaoh in the earlier example was obviously taking a risk in that his investment would have been unproductive had there been no famine. As Damodaran mentions⁵, "For much of early history, though, physical risk and material reward went hand in hand. The risk taking caveman ended up with food, and the risk averse one starved to death."

A modern day example is Goldman Sachs, the well known investment banker. A 2006 article in the Economist⁶ explained how Goldman assumes more risk than its rivals by depending on proprietary trading for an increasing share of its profits. As the article mentioned, Goldman has increasingly moved away from being an agent to a principal, as a trader and direct investor. Goldman's value-at-risk, the amount it can lose on a single bad day, has increased. "Its trading desk has more losing days than any of its Wall Street rivals. Despite its volatile trading revenues, Goldman makes more profits than its rivals." And during the recent sub prime crisis, Goldman has come out relatively unhurt while some of its seemingly conservative and risk averse rivals have bitten the dust. As the Economist mentioned, "Goldman seems more confident that it can take more risks than its competitors do."

Risk management is all about making choices and tradeoffs. These choices and tradeoffs are closely related to a company's assumptions about the external environment. The word risk has its origins in the Italian word, *risicare*, which means 'to dare.' So, risk management is about making choices in a proactive manner, rather than waiting passively for events to unfold. Both Nicholas Piramal and Dr Reddy's Laboratories are leaders in the Indian pharma industry. Nicholas believes in partnering with the global pharmaceutical companies. On the other hand, Dr. Reddy's has not hesitated to challenge the patents of global pharma majors. The two companies have made clear choices about how they want to compete in the industry. An integral part of these trade offs is deciding where to increase the risk exposure and where to minimise it.

All risks cannot be attributed to external factors. Many of the risks which organizations assume have more to do with their own strategies, internal processes, systems and culture than any external developments. For example, the collapse of Global Trust Bank, a few years back, had more to do with the reckless attitude of the top management than any external factors. The same holds good for the collapse, in 2001 of the US-64 scheme of the Unit Trust of India. The collapse of the investment bank, Barings was

⁵ Strategic Risk Taking – A framework for risk management.

⁶ "Behind the brass plate," The Economist, April 29, 2006, pp. 69-71.

again due to the failure of internal systems and processes more than any other factors. And the recent sub prime crisis has been precipitated partly at least by the actions of traders and poor risk control mechanisms in some of the leading global banks. One of the leading investment banks recently admitted that it made losses mainly because senior leaders believed their traders and did not challenge them sufficiently enough about their trading positions in mortgage securities. The traders took full advantage of the situation and created a facade of the risks being well under control, when they were actually not.

Defining risk

Definitions of risk are many and varied. Let us examine a few of the simpler and better ones. Glyn Holton⁷ mentions that risk implies uncertainty about potential outcomes from an experiment with these outcomes affecting the well being or wealth of the people involved. Damodaran draws a distinction between risk and probability. Risk is not just the probability of things going wrong but also the resulting impact. Risk must also be distinguished from threat. A threat is a low probability event with large negative consequences but the probability is difficult to assess. A risk, on the other hand, is a higher probability event, with enough information to assess both the probability and consequences. Damodaran emphasizes that we must look at both the upside and downside while describing risk. “For too long, we have ceded the definition and terms of risk management to risk hedgers, who see the purpose of risk management as removing or reducing risk exposures. In fact, all the most successful businesses of our time... have risen to the top by finding particular risks that they are better at exploiting than their competitors.”

Types of risk

What are the various risks a company can face?

The Economist Intelligence Unit divides risks into four broad categories.

- *Hazard risk* is related to natural hazards, accidents, fire, etc. that can be insured.
- *Financial risk* has to do with volatility in interest rates and exchange rates, defaults on loans, asset-liability mismatch, etc.
- *Operational risk* is associated with systems, processes and people and deals with areas like succession planning, human resources, information technology, control systems and regulatory compliance.

⁷ “Defining Risk,” Financial Analysts Journal, Vol. 60, No. 6, pp. 19-25, November/December 2004.

- *Strategic risk* stems from an inability to adjust to changes in the environment such as changes in customer priorities, competitive conditions and geopolitical developments.

While this is a useful and standard way of grouping risks, the method of classifying risks is not as important as understanding and analysing them. The very nature of uncertainty implies that it is difficult to identify all risks, leave alone classify them. Each company should carefully examine its business and its own value chain and come up with its own way of categorising the uncertainties associated with its important value adding activities. Then, it can quantify these uncertainties to the extent possible and decide which risks to hold and which to transfer. Let us examine some of the business risks a company faces.

Capacity expansion

Many firms would like to expand their operations and capture more market share. But capacity expansion involves risks. If demand does not rise with capacity, the company may find itself burdened with overheads. At the same time, if capacity is not built in time, competitors may move ahead and grab market share. So, capacity expansion decisions have to be made carefully. One useful tool in this context is game theory. Companies can put themselves in the shoes of competitors and try to outguess them (See Box Item). At the same time, capacity expansion may sometimes be possible in increments. Companies can keep studying the business environment and learn before they decide to make more investments in capacity. Here, real options is a valuable tool (See box item).

The risk associated with capacity expansion is largely due to uncertainty regarding the following factors:

- i) Future demand – quantity and price realisation
- ii) Future prices of inputs
- iii) Technological advances
- iv) Reactions of competitors
- v) Impact on industry capacity

Capacity expansion is often narrowly applied to manufacturing activities. In many businesses, manufacturing is a trivial or non-existing activity. So, capacity needs to be understood in terms of the investments made in the most critical area of the value chain. Thus, in the pharmaceutical industry, capacity has to be defined in terms of scientific

manpower and sales force. In a software development company, capacity has to be understood in terms of the number of programmers employed.

Industry over capacity is one of the important risks which companies have to consider while expanding their individual capacity. The risk of excess capacity is particularly high in commodity type businesses. In such industries, since products are not differentiated, firms tend to add capacity to generate economies of scale and cut costs. Risk is also high when capacity cannot be increased in incremental amounts, but only in big lumps. Excess capacity may also result in industries characterised by significant learning curve advantages and long lead times in adding capacity. When there is a large number of players, when there is no credible market leader, and when firms expand indiscriminately, excess capacity usually results.

A pre-emptive capacity expansion strategy, which aims to lock up the market before competitors, can pay rich dividends but it is also quite risky. This strategy requires heavy investments. The firm should have the capacity to withstand adverse financial results in the short run. If competitors do not back down or demand does not rise as expected, the firm can land in big trouble. A firm adopting this strategy should have a certain degree of credibility. Pre-emptive expansion of capacity is generally not advisable when competitors have non-economic goals, consider the business to be strategic in nature and have substantial staying power.

Texas Instruments (TI) has a unique way of adding capacity without taking undue risk. As demand is cyclical, excess capacity built during the good times becomes a liability during a recession. At Dallas, TI manufactures a wide range of products – low cost DRAM memory chips, customised and expensive microprocessors and sophisticated integrated circuits. Much of the production process, which involves placing transistors in silicon chips, is common across products. Only in the final stages, do the customised chips undergo refinement. TI runs the plant at full capacity, but cuts back on production of cheaper DRAM chips and increases that of more sophisticated items when required.

Solectron specialises in the manufacture of circuit boards for various customers whose demand can fall or rise from time to time. Solectron uses computer software to manage capacity in a flexible way. By reprogramming robots and other machinery, the Milpitas factory can make different types of circuit boards for different customers on the same production line.

The Japanese are masters in the use of flexible manufacturing systems. In 1992, Toyota⁸ built a new plant in which the entire assembly process could switch to a different model in just a few hours. The plant cost much more than a traditional plant where a switchover would have taken weeks. But Toyota was able to add value and minimise risk by generating more options in the same plant.

Vertical Integration

To what extent must a company integrate vertically? This is a crucial strategic issue for most companies. Vertical integration reduces uncertainty and helps to control costs if the company is holding a large market share and individual suppliers are many and fragmented and do not enjoy economies of scale.

Reliance, India's largest private sector company has pursued a strategy of vertical integration. Starting off in textiles, it moved into polyester staple fiber, yarn, petrochemicals, oil refining and oil exploration. In the process, Reliance has also moved into more profitable parts of the industry value chain.

Jindal, the steel manufacturer has also been integrating backward in recent years. The company recently acquired eight iron ore mining concessions in Chile and is now negotiating with Australian and Canadian⁹, firms for strategic stakes in coking coal mines. These moves are aimed at reducing the company's dependence on external suppliers for iron ore and coal, the two key raw materials used in making steel.

Tata Steel too is following a similar strategy. After its acquisition of Corus, Tata Steel's dependency on outsourced raw materials has increased significantly. The company has invested \$88.2 million in a coal project in Mozambique and announced an investment of \$1 – 1.5 billion over the next 3-4 years in a joint venture in Ivory Coast. Tata Steel believes through this backward integration, profit margins will increase sharply.

In contrast, let us take up an example of a company which decided to take the outsourcing route and ended up burning its fingers. To jumpstart its personal computer project, IBM decided to outsource the development of the operating system to Microsoft. Over time, it became clear that the real value in personal computing lay in software. Even as Microsoft went from strength to strength and established a stranglehold in the PC software market, IBM's competitive position as a PC assembler

⁸ The new manufacturing model, where small quantities of different items can be made using the same production facilities, is leading towards mass customization, where customers can get the special features they are looking for at the price of a mass-manufactured product.

⁹ Roy Pinto, "On the fast track," Business India, March 9, 2008, pp. 49-54.

eroded rapidly. A couple of years ago, IBM sold off its PC business to Lenovo, the Chinese computer manufacturer.

Most companies find it difficult to decide to what extent they must adopt vertical integration. How can they resolve this dilemma? Vertical integration can make management tasks more complicated. Not only that, by vertically integrating, a company gives up the opportunity to tap the specialized expertise of suppliers. Outsourcing increases flexibility, but if relationships with external partners are not managed carefully, coordination becomes a big problem. Moreover, the outsourcing partners might start exercising great bargaining power.

A general rule is that the resources or capabilities on which the present or future competitive advantage of a firm depends, should be developed in-house. For example, the research efforts of global pharmaceutical companies involve tremendous risk, but cannot be outsourced. This is because research forms the basis for competition in the pharmaceuticals business. Or as Drucker puts it, this is a risk which is built into the very nature of the business. Such risk must be held and managed actively, not transferred to an external entity.

On the other hand, it may make sense to outsource non core activities. However, excessive dependence on suppliers can sometimes make the firm vulnerable. Where there is only a small number of suppliers who enjoy tremendous bargaining power, outsourcing can be a risky strategy. Vulnerability to suppliers can also be pronounced if vendors are selected too early in the procurement process.

While evaluating vertical integration projects, it is important to consider the big picture. As Michael Porter¹⁰ puts it, “The essence of the vertical integration decision is not the financial calculation itself but rather the numbers that serve as the raw material for the calculation. The decision must go beyond an analysis of costs and investment requirements to consider the broader strategic issues of integration versus use of market transactions as well as some perplexing administrative problems in managing a vertically integrated entity that can affect the success of the integrated firm. These are very hard to quantify.”

One of the tricky issues in vertical integration is striking a balance between the need to have control over crucial elements of the value addition process and the need to tap the

¹⁰ In his classic book, *Competitive Strategy*.

specialized technological expertise of suppliers: According to Hayes and Abernathy,¹¹ where the basic raw materials are commodities, backward integration can help in cutting costs, but where they are sophisticated components, sourcing from specialised suppliers makes more sense. If parts are made in-house, the company may not only be locked into an outdated technology, but also distracted from its core job. This argument is counter intuitive as there is a widespread notion that critical components should always be made inhouse.

A point often overlooked, when moving up or down the value chain, is that the dividing line between vertical integration and unrelated diversification is very thin. Different activities along the value chain may need different competencies and managerial styles. For example, manufacturing and retailing very obviously demand different sets of managerial skills. As Porter puts it¹², “Organisational structure, controls, incentives, capital budgeting guidelines and a variety of other managerial techniques from the base business may be indiscriminately applied to the upstream or the downstream business. Similarly, judgements and rules that have grown from experience in the base business may be applied in the business into which integration occurs.”

Vertical integration: Doing a Cost-Benefit Analysis

Benefits

- Bringing different elements of the value chain together can generate efficiencies.
- The cost of scheduling and coordinating transactions can be lowered.
- The need for collecting various types of information from the external environment is reduced.
- Upstream and downstream stages can develop more efficient and specialized procedures for dealing with each other than would be possible with independent suppliers/ customers.
- Expertise in the technology associated with upstream and downstream businesses can be tapped.
- Uncertainty about supply of parts/raw materials and demand for finished goods is reduced.
- The bargaining power of suppliers and customers can be reduced.
- By controlling a larger segment of the value chain, there is greater scope for differentiation.
- In some cases, entry barriers can be raised.
- Forward integration can help generate better price realisation.

¹¹ Harvard Business Review, July-August 1980.

¹² Complete Strategy.

- Backward integration can help protect proprietary knowledge.

Costs

- Different segments of the value chain demand different competencies.
- By increasing the fixed costs, business risk is also increased.
- The firm's ability to change partners is reduced as in-house suppliers cannot be asked to close at short notice.
- Greater capital investments, more debt and consequently greater risk are involved.
- Opportunity to tap the latest technology from specialized suppliers may be lost.
- Maintaining a balance between different stages of production may be difficult.
- Because of captive relationships, the incentives for upstream and downstream businesses to improve may be limited.

For John Hagel III and Marc Singer¹³, the key point in vertical integration is the coordination of different players involved in a value chain activity. When the interaction costs can be reduced by performing an activity internally, a company will vertically integrate rather than outsource. The emergence of information technology in general and the internet in particular has dramatically lowered interaction costs. So, the chances are that in the years to come, specialized players will hold the aces.

Hagel and Singer argue that there are three different core processes which are integral to any business and the competencies needed to manage them are quite different. These are *customer relationship management*, *product innovation* and *infrastructure creation*.

Customer relationship management focuses on attracting and retaining customers. It involves big marketing investments that can be recovered only by achieving *economies of scope*. A wide product range and a high degree of customisation to suit the needs of different customers are the critical success factors in customer relationship management.

Product innovation attempts to bring attractive new products and services to the market in quick succession. *Speed* is important because early mover advantages are often critical. Small organizations with an entrepreneurial style of management are often better at innovation than large bureaucracies.

¹³ Harvard Business Review, March – April 1999.

Infrastructure creation is necessary to handle high volume repetitive transactions efficiently. *Economies of scale* are vital for recovering fixed costs. Standardisation and routinisation are the essence of this process.

When these three processes are combined within a single corporation, conflicts are bound to arise. *Scope, speed and scale cannot be achieved simultaneously*. So, many industries like newspapers, credit cards and pharmaceuticals are splitting along these lines. Consultants like BCG call this the *deaveraging of the value chain*.

Once a company decides which of the three processes to handle in-house, it will have to divest the other two. Then, scale or scope will have to be built by mergers and acquisitions. In other words, restructuring will take place through a process of unbundling and rebundling. Companies may find opportunities to build scope or scale in one industry and then stretch it across other industries.

Once interaction costs start falling rapidly, reorganization of the industry will ensue at a rapid pace. Under such circumstances, the sources of strength of a vertically integrated player can turn into sources of weakness overnight. This is precisely the type of risk which needs to be avoided.

Other risks

Excessive dependence on a single or few products, or a single or a few regions for generating revenues results in risk. A diversified product portfolio or geographical base can stabilise revenues and profits. When the existing business is underperforming or reaching a point of saturation, it may make sense to look for new business opportunities in a related area. At the same time, *diversification* also makes management tasks more complex. There is always the danger of straying too far away from the core. So understanding the risks associated with diversification is extremely important. We shall deal with diversification in more detail in a separate article.

Technology risk has become important in this age of rapid innovation. Companies which cannot cope with changing technology will find themselves at a severe disadvantage. But laying bets on a new technology is not an easy decision. The pay offs from a new technology in its early stage of evolution are difficult to quantify. The key decision in technology risk management is whether to move early or to wait and see the impact of a new technology as it emerges.

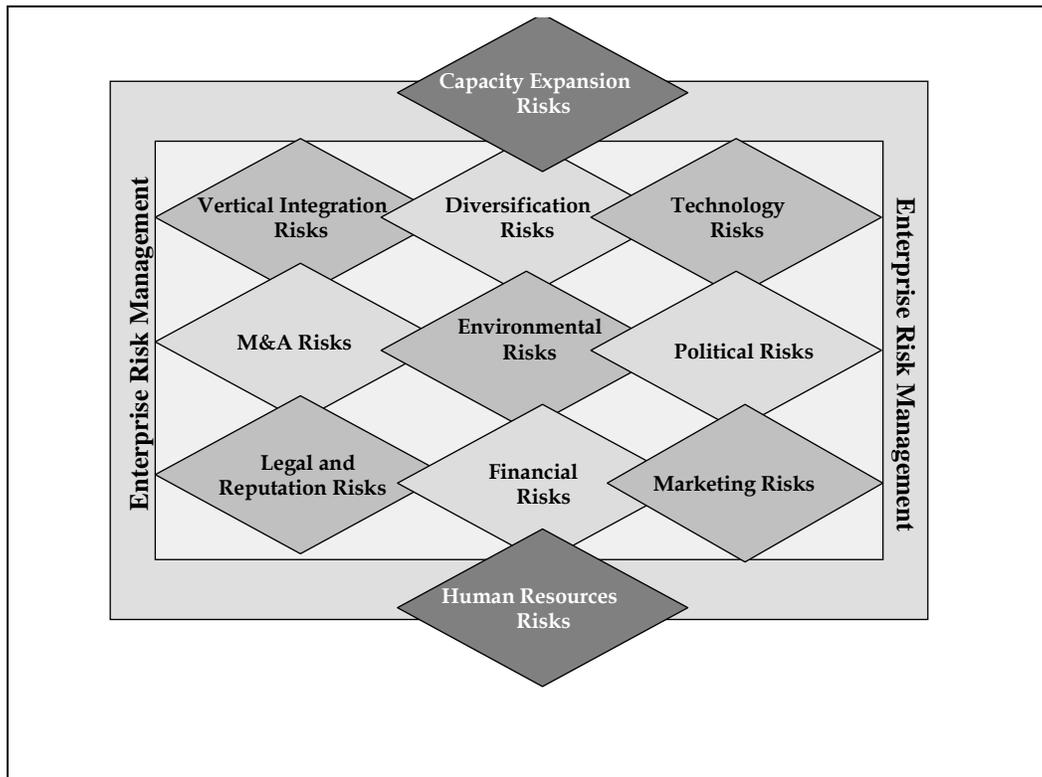
Many companies today look at *mergers and acquisitions* (M&As) as a way of generating fast growth by gaining quick access to resources such as people, products, technology and facilities. But, M&As have to be planned and executed carefully, to ensure that the integration of the pre-merger entities takes place smoothly and the projected synergies are realised. Otherwise, they may prove to be a severe drain on the existing resources and even ruin a company in some cases. The key issues in M&As are valuation and post merger integration. Valuation in turn depends on the potential synergies. If synergies are overestimated, the acquirer may end up paying an excessive premium. Post merger integration involves special challenges especially if there are cultural differences between the acquiring and acquired entities. Integration can take up much of the attention and time of top management. Going by media reports, that certainly seems to be so in case of the Tata Corus merger.

Another type of risk faced by many companies is *environmental risk*. Companies must ensure that their operations do not have an adverse impact on the natural environment and the local community. In some cases, poor environmental performance may even threaten the very existence of the company, as illustrated by the example of Union Carbide in Bhopal. In other cases, such as the Exxon Valdez oil spill in Alaska, the reputation of the company can be severely damaged.

Political risks also need to be managed carefully. Governments may suddenly change their policies or may intervene in the company's operations. Understanding the nature of political instability and anticipating problems is important, especially for multinational corporations operating in emerging markets. The Indian software services company Polaris faced a crisis a few years ago, when CEO Arun Jain was arrested in Indonesia. Similarly, a senior executive of another leading Indian software company, iflex (now a part of Oracle) was held in the Netherlands. Though reasons were given by the authorities to justify the arrests, there is little doubt that political considerations played an important role. Sometime back, we saw a backlash against Indians in Malaysia. And more recently, Indian IT services companies are coming under attack from American politicians for the jobs lost due to offshoring.

In recent times, *legal risks* have also become important. Product liability class action suits by employees or shareholders can pose grave problems. Similarly, anti-trust proceedings by the government can take a company's attention away from its core business. In the early 2000s, a significant proportion of senior management's time at Microsoft was consumed by the anti-trust suit. Our own ITC was embroiled for a long time in a major excise duty dispute in its cigarettes business. Only now has the issue

been finally resolved. Merck the global pharma company found itself in a crisis because of the side effects of its pain killer drug, Vioxx. More recently, a group of small investors got together using the social networking website, Facebook and with the help of a lawyer, successfully forced a number of financial firms to repay the millions of dollars they had lost on their investments in asset backed commercial paper.



Enterprise Risk Management: A Holistic Perspective

There are various *marketing risks* which companies have to deal with carefully. A careful understanding of the marketing activities and the associated risks is extremely important. Branding, pricing, distribution and product development have all become very complex in the contemporary business environment. Unless the marketing mix is carefully managed, customers may switch over to competitors. Brands have to be

managed carefully. Pricing strategy must be consistent with the image of the product and the paying power of the customers. The distribution network must deliver goods in a reliable and cost effective easy to customers. New products may have to be developed cost effectively as the market needs change.

Risks associated with *human resources* too need to be managed effectively. Top management succession planning is probably the most strategic of these risks. Even such well known companies like Coca Cola and Procter & Gamble have struggled in the recent past due to ineffective succession planning. In India, Thermax faced a crisis after the death of founder, Rohinton Agha. Other challenges in human resources management include attrition and shaping a high performance corporate culture that aligns individual aspirations with the company's goals.

Operational risks have to be handled carefully. Typically, these are risks which are small but which occur frequently. They arise because of the inherent nature of the business and the way the operations are organized. As Nocco and Stultz mention¹⁴, operational risks typically cannot be hedged. These risks can be insured, but companies often choose to deal with these risks by changing procedures and technologies. The individuals who are closest to these risks are generally in the best position to deal with the firm's exposure to them. So decisions to manage such risks are best left to line managers whose decisions are based on their knowledge of the business, and supplemented by technical experts where appropriate.

Systems & processes

Systems and processes are needed to enable managers to know what business risks are being taken, quantify them and assess whether they are within prescribed limits. Systems help in defining performance standards, measuring actual performance and taking corrective action on a regular basis. Systems and processes must help align individual goals with corporate objectives and discourage excessive risk taking. But systems and processes should not create bureaucracy and cause executives to miss the woods for the trees. This certainly seems to have happened in the case of one bank at least during the recently sub prime crisis. The bank's risk management process was equated by a reputed financial daily to mopping up a few drops of spilt milk on the deck of the Titanic even as it was going down!

Involvement of the top management
--

¹⁴ Journal of Applied Corporate Finance, Fall 2006

The board and the senior management team should play an active role in the following areas:

- a) *Understanding the Risk Profile:* The top management should clearly understand the risks to which the company is exposed, decide which risks are acceptable and which must be eliminated through the use of hedging techniques.
- b) *Setting Policy:* The top management should prepare policy guidelines, including the corrective action to be taken when things go wrong.
- c) *Establishing Controls:* Steps should be taken to ensure effective implementation of policies. An independent risk management unit is desirable. It is a good practice to make risk managers report to people one level higher than those who execute and approve various investment decisions.
- d) *Setting up systems:* An integral part of ERM is consolidation and integration of data from a number of different systems across the company's operations. This is especially important while dealing with operational risks.
- e) *Checking compliance:* The risk manager should send reports regularly to the senior management to monitor compliance with policies and procedures and various trading positions.
- f) *Periodic Review:* The top management must make it clear to managers that any violation of policies, guidelines or controls will be punished.
- g) *Aligning incentives:* Control systems should discourage excessive risk taking. For example, the annual bonus of a managers should not be based solely on the profits he or she generates. It should take into account the riskiness of the activities undertaken.

The role of culture

Along with systems and processes, it is also important to shape the culture of the organization and check dysfunctional tendencies. The 'right' culture encourages entrepreneurial risk taking but discourages gambling. It ensures that employees do not put the future of the company at stake in their drive to achieve results.

A company's culture is nothing but the shared beliefs, values and perceptions held by its employees. In a strong culture, these values and beliefs are shared widely by employees and evoke strong commitment. Culture facilitates control by developing a sense of group loyalty and by reducing dissonance. Indeed, self control through the acceptance of common values can be a very effective control system. However, strong cultures can also create problems while managing change. People might go into a state of denial. That is why a company like Intel believes in a paranoid culture.

In cultures, where the 'boss knows best' and the top management does not take bad news or constructive criticism in the right spirit, things can go seriously wrong all of a sudden. If there is a tendency to keep looking at employees who report bad news, as trouble makers and poor team players, problems will remain hidden under the carpet. Over a period of time, such an attitude will have a significant negative impact. Reputed Fortune 500 companies like General Motors and Kmart have all run into problems at some point of time or the other because of the shoot-the-messenger syndrome.

When employees perceive their career progression as a zero-sum game, unintended consequences often result. Poor information sharing and lack of coordination are quite common in such situations. Not only that, in their determination to get ahead of their peers, employees may try to improve their short-term performance by doing things which may harm the company in the long run.

Concluding Notes

Risk management is all about identifying, aggregating and managing risks in the most optimal way. An integrated approach to risk management minimizes transaction costs and more importantly creates confidence in the company's managers to deal with uncertainties in the environment. Such an approach is not easy. It needs a new mindset which encourages people to take calculated risks but not become gamblers. Companies which can implement such an approach effectively will be able to generate a sustainable competitive advantage and create value for shareholders.

References:

1. Peter F Drucker, "Managing for results," *William Heinemann*, 1964.
2. Tom M Apostl, "Calculus," Volume II, 2nd edition, *John Wiley & Sons*, 1969.
3. F Milliken, "Three types of perceived uncertainty about the environment: State, effect and response uncertainty," *Academy of Management Review*, 1987, Vol. 12, pp. 133-143.
4. O E Williamson, "Transaction Cost Economics," *Handbook of Industrial Organization*, 1989, Volume I, pp. 135-182.
5. Robert S Kaplan and David P Norton, "The Balanced Scorecard – Measures that drive performance," *Harvard Business Review*, January–February, 1992, pp. 71-79.
6. Kenneth A Froot, David S Scharfstein and Jeremy C Stein, "A framework for risk management," *Harvard Business Review*, November–December, 1994, pp. 91–102.
7. Joseph L Bower and Clayton M Christensen, "Disruptive Technologies: Catching the Wave," *Harvard Business Review*, January – February, 1995, pp. 27-37.
8. Mathew Bishop, "Corporate Risk Management Survey," *The Economist*, February 10, 1996.
9. James M Utterback, "Mastering the Dynamics of Innovation," *Harvard Business School Press*, 1996.
10. P Bradley and T Louis, "Bayes and Empirical Bayes Methods for data analysis," *Chapman & Hall*, 1996.
11. Heidi Deringer, Jennifer Wang and Debora Spar, "Note on Political Risk Analysis," *Harvard Business School Case No. 9-798-022*, September 17, 1997.
12. Hugh G Courtney, Jane Kiruland and S Patrick Viguerie, "Strategy under uncertainty," *Harvard Business Review*, November-December, 1997.
13. Mark L Sirower, "The Synergy Trap," *The Free Press*, New York, 1997.
14. Clayton M Christensen, "The Innovator's Dilemma," *Harvard Business School Press*, 1997.
15. Patric Wetzal and Oliver de Perregaux, "Must it always be risky business?" *The McKinsey Quarterly*, 1998, Number 1.
16. Peter L Bernstein, "Against the Gods," *John Wiley & Sons*, 1998.
17. Harold D Skipper, Jr., "International Risk and Insurance: An Environmental-Managerial Approach," *Irvin McGraw-Hill*, 1998.
18. Robert Simons, "How risky is your company?" *Harvard Business Review*, May – June 1999, pp. 85 – 94.

19. Clayton M Christensen and Michael Overdorf, "Meeting the challenge of disruptive change," *Harvard Business Review*, March – April, 2000, pp. 66-76.
20. Guido A Krickx, "The relationship between Uncertainty and Vertical Integration," *International Journal of Organizational Analysis*, Issue 3, 2000, pp. 309-329.
21. Forest L Reinhardt, "Down to Earth," *Harvard Business School Press*, 2000.
22. D G Prasuna, "Scanning for De-risking," *Chartered Financial Analyst*, July 2001, pp. 23-31.
23. Fredrick F Reichfield, "Lead for Loyalty," *Harvard Business Review*, July-August 2001, pp. 76-84.
24. "The new enemy," *The Economist*, September 15, 2001, pp. 15-16.
25. "Taking stock," *The Economist*, September 22, 2001, p. 59.
26. Chris Lewin "Refining the art of the probable," *Financial Times Mastering Risk Volume I*, 2001, pp. 35-41.
27. Kiriakos Vlahos, "Tooling up for risky decisions," *Financial Times Mastering Risk Volume I*, 2001, pp. 47-52.
28. Peter L Bernstein, "The enlightening struggle against uncertainty," *Financial Times Mastering Risk Volume I*, 2001, pp. 5-10.
29. "Enterprise Risk Management – Implementing New Solutions," *The Economist Intelligence Unit Research Report 2001*.
30. Dan Borge, "The Book of Risk," *John Wiley & Sons*, 2001.
31. N Johnson & S Kotz, "Encyclopedia of Statistical Sciences," *John Wiley & Sons*, New York, pp. 197-205.
 - Holton Glyn, "Defining Risk," *Financial Analysts Journal*, Vol. 60, No. 6, pp. 19-25, November/December 2004.
 - "On top of the world," *The Economist*, April 29, 2006, pp. 11-12.
 - "Behind the brass plate," *The Economist*, April 29, 2006, pp. 69-71.
 - Mahesh Nayak, "Dancing with an elephant," *Business Today*, March 9, 2008, pp. 86-93.