A Note on Identifying Strategic Risk

Competing in any industry entails risk. However, the more aggressive and fast-paced the business and its management, the greater the potential for a misstep. In this note, we consider the different types of strategic risks that can imperil the firm. Then, we illustrate how to use the risk matrix—a diagnostic tool to identify organizational pressure points that could cause these risks to rise to dangerous levels. Finally, we discuss the conditions that could cause individual employees to willfully expose the business to risk.

Sources of Strategic Risk

A dictionary defines risk as the possibility of suffering harm or loss[1]. In a business setting, managers must be sensitive to conditions that can cause specific categories of risk to become dangerous. These conditions are a function of the business strategy chosen by top managers.

To effectively manage their business, all managers must assess *strategic risk–an unexpected event or set of conditions that significantly reduces the ability of managers to implement their intended business strategy.* **Figure 1** highlights the focus of our analysis. Business strategy—at the center of the figure—is our starting point. Working outward from the center, we consider three basic sources of strategic risk that potentially affect every business: operations risk, asset impairment risk, and competitive risk. If the magnitude of any of these risks becomes sufficiently large, the firm becomes exposed to franchise risk.

Sources of Business Risk

Operations Risk

Operations risk results from the consequences of a breakdown in a core operating, manufacturing, or processing capability. All firms that create value through manufacturing or service activities face operations risk to varying degrees. Things can (and do) go wrong in the operating core of the business. Defective products can be shipped, maintenance can be neglected leading to

[1] The American Heritage Dictionary of the English Language, 3rd ed., Boston: Houghton Mifflin, 1992.

Professor Robert L. Simons prepared this note as the basis for class discussion.

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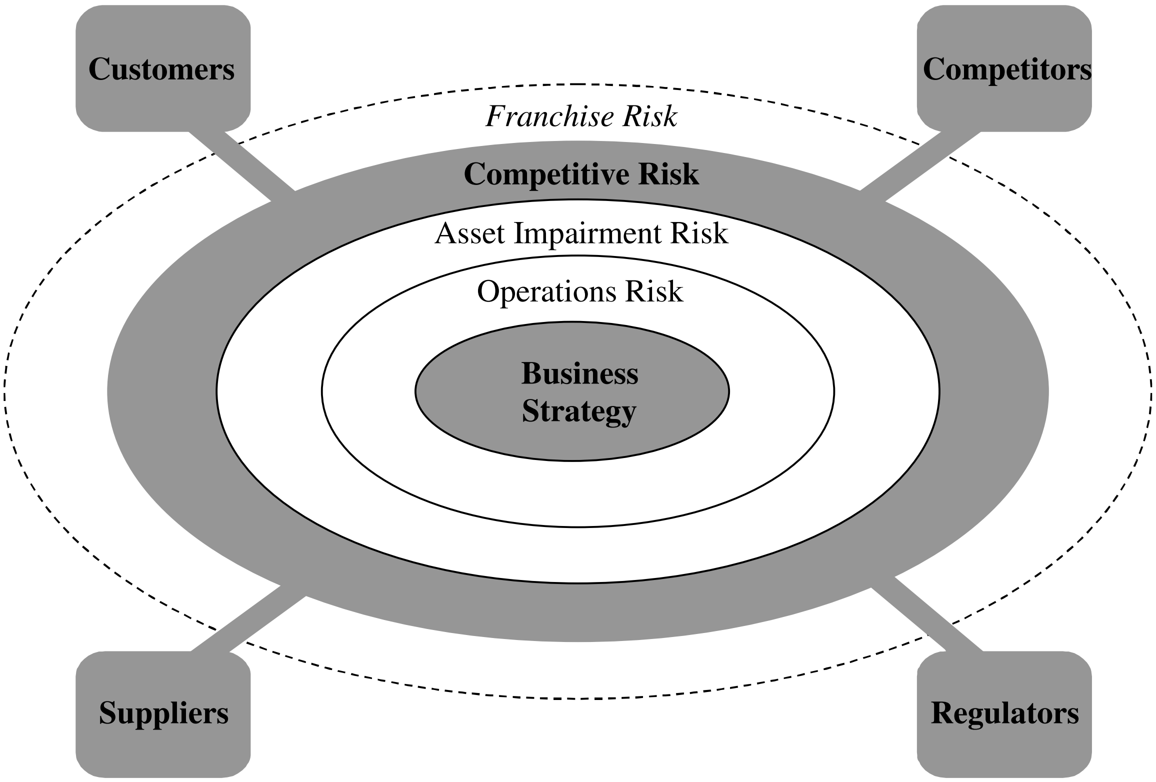
breakdowns, customer packages can be lost, transactions can be erroneously processed. Any operational error that impedes the flow of high quality products and services has the potential to expose the firm to loss and liability.

Figure 1 Sources of Business Risk



Operations risk becomes a strategic risk in the event of a critical product or process failure. In a food or drug manufacturer, for example, operations risk is encountered if a toxic substance is inadvertently mixed in with a product formulation. For a financial institution, operations risk is encountered if trades are not executed properly, or if a transactions clearing system fails. Fidelity Investments, for example, processes over one million transactions each day in its mutual funds business. With more than $400 billion invested, customers expect their transactions to be processed promptly and accurately. Any failure of processing technology would be devastating to the business.

Basic business strategy affects any firm's exposure to operations risk. For example, on-line service provider America Online (AOL) has followed an aggressive growth strategy, lowering its prices and providing free access software to capture market share from competitors. However, failures in the ability of its server network to handle growing demand, caused by insufficient modem and network processing capacity, resulted in lawsuits and embarrassing public scrutiny of its service capability. In the food products industry, Odwalla Inc., a manufacturer of bottled apple juice attempted to differentiate its products through superior freshness and flavor. To ensure maximum flavor, managers made a strategic decision not to pasteurize their juice. Unfortunately, the operating risk resulting from this strategy led to severe consequences when the company inadvertently shipped tainted product that resulted in sickness and death. Operations risk exposed the business to criminal charges, lawsuits, and loss of confidence by consumers. The company's survival was placed in jeopardy.[2]

In most industries, there are some competitors who knowingly choose strategies in which the safety and/or quality of operations are critical to success—thereby assuming significant operations risk. This is true for an electric utility that chooses to generate power using nuclear power, instead of purchasing bulk power from another provider. The strategy of entering the generation business—backward integrating—coupled with the decision to generate power using nuclear energy rather than fossil fuels, increases operations risk significantly.

In high technology businesses, where certain aspects of operations are "mission critical" to the implementation of strategy, any error or downtime can be sufficiently serious to threaten the viability of the business. We have discussed already the substantial operations risk at large financial institutions like Fidelity Investments. Consider the operations risk at the Kennedy Space Center. Any failure in operations can imperil the safety of the space shuttle and its crew. Because managers rely on complex technologies, NASA has assumed significant operations risk.

The consequences of operations risk are often triggered by employee error. Most of these errors are unintended and/or accidental. Occasionally, however, employees may consciously decide to cut corners in quality or safety to meet performance targets or receive bonuses. For example, the horrific nuclear accident at Chernobyl in the former Soviet Republics was caused by operators and managers who intentionally falsified performance indicators to ensure that they would achieve production targets and earn desired bonuses.

Applying The Inputs-Process-Output Model

Applying the inputs—process—output model is critical for identifying and controlling operations risk, especially when technology failure can lead to inefficiencies and breakdowns.

Analyzing operations according to the inputs—process—outputs model provides guidance about what key processes should be standardized and controlled tightly to assure safety and quality. This is a first step in the assessment of operations risk. Standardization and scalability are appropriate for critical internal processes that lie at the core of a business's operations. The inputs—process—outputs model should be used in all critical parts of the organization to identify points where system errors could damage key operations or impair important assets. Standardization and practices such as total quality management (TQM) based on best practice, benchmarking, and engineering studies can then be used to ensure that inefficiencies and breakdowns do not create significant operating risks for the business.

Asset Impairment Risk

Moving outward from the core of **Figure 1**, the second source of strategic risk is asset impairment risk. An asset is a resource owned by the firm to generate future cash flows. An asset becomes *impaired* when it loses a significant portion of its current value because of a reduction in the likelihood of receiving those future cash flows. Like other risks, asset impairment risk is largely a function of the way that managers have chosen to compete.

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[2] P. Belluck, "Juice Maker Pleads Guilty and Pays $1.5 Million in Fatal Poisoning Case," *The New York Times* (July 24, 1998): A12.

Asset impairment can become a strategic risk if there is deterioration in financial value, intellectual property rights, or physical condition of assets that are important for the implementation of strategy.

Financial Impairment

Financial impairment results from a decline in the market value of a significant balance sheet asset held for resale or as collateral. An asset becomes impaired when the future cash flows accruing to the firm are no longer sufficient to support the asset's balance sheet valuation (computed as the net present value of those future cash flows). For example, firms holding significant Mexican assets found these assets impaired when the government devalued the peso in late 1994. Russian assets became impaired in the same way in 1998. In both of these cases, currency devaluation decreased the expected value of future cash flows. Similarly, the value of a long-term bond portfolio may sink dramatically with a rise in market interest rates (which increases the discount rate used in the net present value calculation).

All firms that sell goods or service on credit face the possibility that accounts receivable—a financial asset on the balance sheet—will prove uncollectable. *Credit risk* occurs when a creditor becomes bankrupt or insolvent and is unable to pay contractual obligations as they become due. All businesses that extend payment terms are exposed to credit risk, although some strategies expose the business to more credit risk than others. Managers must balance risk and reward as they choose the conditions and terms under which they are willing to grant credit. Most businesses can increase sales and revenues if managers are willing to offer more liberal credit terms to customers who are poor credit risks. Long pay-back periods coupled with low levels of collateral, increase the risk and cost of default. Alternatively, managers can minimize credit losses by turning away sales on account, but at the cost of foregone revenue. Similarly, they can insist on marketable collateral to secure loans or can withhold the legal transfer of title until payment is made in full.

Depending on the strategy of the firm, creditors may be individuals, businesses, or even governments. At the extreme, a business may be exposed to risk at the national level (called *sovereign risk*) when a foreign government becomes unable or unwilling to repay its debts. Sovereign risk is greatest, of course, when a business follows a strategy that results in significant cross border financial exposure in politically unstable countries. Instability in Indonesia and other Asian countries in 1998 increased sovereign risk for many firms.

Financial trading firms—those that routinely buy and sell financial securities—often enter into agreements to buy or sell assets on specified dates in the future. These agreements are called forward contracts. Such firms are exposed to a special type of credit risk known as *counterpart*y risk—the risk that the other party to the agreement may be unable to honor its contractual obligation due to insolvency or inability to deliver what was promised. This risk can become substantial if a large number of transactions and forward contracts are concentrated with a small number of counterparties, or if failures of specific financial institutions can lead to a general market insolvency.

For financial trading businesses such as banks, retail stock brokers, and mutual funds, specific business strategies determine how much financial impairment risk the business is exposed to. Firms following high risk strategies often hold unhedged assets such as global derivatives and other highly leveraged securities whose value can change rapidly and erratically. More conservative competitors may choose strategies that limit their financial impairment risk: they eschew highly leveraged instruments in favor of more easily controlled investments.

Financial impairment is often due to unpredictable changes in financial market variables. However, like operations risk, assets may sometimes become impaired by the willful actions of employees. Consider these examples:

- A bank vice president wished to improve the asset position of her balance sheet at year-end. Accordingly, she sold a portfolio of mortgage loans to a friendly bank. She did not inform anyone of the agreement to re-purchase the mortgage portfolio in six months time.

- A bond trader lost $1 million dollars on currency market trades. He instructed accounting personnel to post the loss to a suspense account. He explained that he would offset the loss against an open position that was guaranteed to generate a sizable profit.

In cases such as these, employees expose a business to asset impairment risk in their attempts to achieve performance targets and/or cover-up previous losses.

Manufacturing and service firms are not immune from financial impairment risk. When excess cash is invested in short term financial assets, any business may be exposed to financial impairment risk. For example, managers of industrial or consumer products companies may be tempted to bolster their short-term profitability by taking unhedged financial positions that pay off if financial market moves in predicted directions. As a result of this type of gamble, Procter & Gamble lost millions of dollars in highly leveraged derivative positions. This financial speculation also caused the much publicized municipal insolvency of Orange County, California in the mid 1990s.

Impairment of Intellectual Property Rights

For many companies today, intangible resources such as intellectual property and proprietary customer information are far more valuable than the tangible assets on the firm's balance sheet. Many software and Internet firms are good examples. The huge market value of firms such as Microsoft, Amazon.com, and Netscape is not a function of the size of their balance sheets, but rather reflects the estimated value of future cash flows related to their intangible intellectual resources. Similarly, the value of ethical drug manufacturers such as Merck and Pfizer resides primarily in their research capabilities, patents, and trade secrets.

For these firms, the potential for loss or impairment of these intellectual property rights creates significant strategic risk. Impairment may be due to unauthorized use of intellectual property by competitors (e.g., patent infringement), unauthorized disclosure of trade secrets to a competitor or third party (e.g., leaking of proprietary computer code, manufacturing procedures, or formulas), and failure to reinvest in intellectual capital as asset quality deteriorates over time (e.g., failure to upgrade information-based assets or invest in employee training).

Physical Impairment

Assets can also become impaired by the physical destruction of key processing or production facilities. This impairment may be due to fire, flood, terrorist action, or other catastrophe. Managers whose business depends on large scale data centers must ensure that processing can be switched to back-up facilities without significant loss of operating capacity. Risk managers are typically responsible for ensuring adequate coverage for insurable physical destruction risks and the implementation of fail-safe back-up plans to protect against mission-critical processing failures.

Competitive Risk

So far, we have considered strategic risks due to defective transaction flows (operations risk) and impaired value of significant balance sheet assets and intangible resources (asset impairment risk). The third source of strategic risk has to do with the risks inherent in market competition.

Competitive risk results from changes in the competitive environment that could impair the business's ability to successfully create value and differentiate its products or services. Examples of competitive risks that could impair the ability of a business to create value include the actions of *competitors* in developing superior products and services (e.g., compact disks displacing vinyl records); changes in *regulation* and public policy (e.g., regulators requiring electric utilities to sell off their generation facilities); shifts in *customer* tastes or desires (e.g., fashion fads); and changes in *supplier* pricing and policies (e.g., preferential pricing for "super" retailers). (**See Figure 1**)

Competitive risk, by definition, is faced by all businesses that compete in dynamic markets. Regardless of the industry in which a business competes, so long as it has active competitors and demanding customers, it is exposed to competitive risk. The five-forces analysis, [3] provides a starting point to consider the direction from which these risks can emanate:

- intense rivalry from existing competitors can change the basis of value creation
- demanding customers may choose to switch suppliers
- suppliers may choose to limit availability or increase the cost of critical inputs
- new competitors may enter the industry with new technologies and products
- substitute products or services may become available with superior costs or attributes

Managers must be constantly alert to the risk that they will fail to anticipate and react to these competitive risks quickly, thereby allowing the rules of the competitive game to turn against them. But competitive risk can also be created by the actions of employees.

Employees can inadvertently damage the franchise in their attempts to maximize short-term profit. These kinds of risk are created when employees act inappropriately in dealing with customers, suppliers, and competitors. For any given strategy, a series of questions can reveal those employee behaviors that could imperil the strategy.

Customers *What employee actions could drive customers away?*

- A small consulting firm competed by offering specialized services to an elite group of demanding clients. Employees in a branch office provided consulting services to the competitor of a large and important client. As a result of a perceived conflict of interest, the large client severed relationships with the firm.

Suppliers *What employee actions could cause important suppliers to stop supplying the firm?*

- A beer distributor relied on a national brewer for the majority of its business. Employees became complacent and allowed relationships with the supplier to deteriorate. Because of poor service, the brewer awarded distribution rights to a competing wholesaler.

Substitute Products *What employee actions could cause customers to switch to competing products or services?*

[3] Michael E. Porter, *Competitive Strategy* (New York: The Free Press, 1980).

- To obtain commission bonuses in an electronic instrumentation business, salespeople pushed obsolete products that were stockpiled in inventory. Customers wishing to purchase the latest technology placed orders with new suppliers who were trying to build market share.

New Entrants *What employee actions could cause new competitors to enter the industry?*

- In a cable television business, abuses in customer service caused regulators to increase competition by licensing new competitors.

Interactive controls systems are essential to monitor competitive risks in a culture that could potentially create barriers to impede the free flow of information about emerging threats and opportunities.

Franchise Risk

Unlike the three sources of risk enumerated above (operations, asset impairment, and competitive risk), franchise risk is not in itself a *source* of risk. Instead, it is a *consequence* of excessive risk in any one of these three basic risk dimensions. *Franchise risk* occurs when the value of the entire business erodes due to a loss in confidence by critical constituents. Franchise risk occurs when a problem or set of problems threatens the viability of the entire enterprise. In the worst case, customers stop buying a business's products or services because they lose confidence in the company's ability to deliver what it has promised. But loss of confidence by other constituents—suppliers, regulators, or business partners—can be equally devastating (**Figure 1**).

Loss of confidence in either a brand or the entire corporation—the hallmark of franchise risk—can result from any of the risks previously enumerated. Consider the following examples:

- *Operations risk*—following its well-publicized fatal crash in Florida, AirTran (formerly ValuJet) managers were unable to restore public confidence that flight operations and safety procedures at the airline were adequate. The market share of other discount-fare regional competitors also eroded as the public lost confidence in the safety and reliability of low cost operators.

- *Asset impairment risk*—during the Savings & Loan crisis, the public lost confidence that besieged banks, reeling from losses in real estate collateral, had sufficient resources to repay depositors. The "run-on-the-banks" that occurred at several institutions required federal agencies to step in and guarantee deposits as a means of restoring confidence.

- *Competitive risk*—the disastrous slide in market share at Apple Computer, reflecting competitive forces and eroding technological leadership, caused many in the industry to lose confidence in Apple's ability to support its products. As a result, software suppliers declined to invest in Apple applications, and customers abandoned Apple computers in favor of competitors' products.

Franchise risk—sometimes known as *reputation risk*—occurs when business problems or actions negatively affect customer perceptions of value in using the business's goods or services. The intrinsic value of a business (i.e., its value proposition) is based on customers' willingness to pay for a known set of attributes and quality. Any significant breakdown in operations, impairment of assets, or erosion of competitive strength can negatively influence public perception and drive away customers.

For any firm operating in a competitive market, reputation is critical to the ongoing ability to create value. When customers have a choice about which firms' products to buy, reputation risk must be a major concern for managers. Franchise risk is acute, however, for any firm that depends on its reputation for integrity as a critical competitive resource in attracting and maintaining customers. For example, public accounting firms, defense contractors, airlines, and pharmaceutical firms (among many others) hold a public franchise that depends fundamentally on the public's faith in the integrity and trustworthiness of their business. What are the effects of a story that appears in the morning newspaper describing how managers of a mutual fund have been manipulating published figures to deceive investors? How long will the franchise of that business last? A damaged reputation can destroy the franchise—and ultimately the business—literally overnight.

Many of the pitfalls of risk management can be avoided if early warning systems are in place to warn managers of impending problems. Diagnostic exception reports that focus on key indicators can alert managers if risk levels are unacceptable. Examples of some common risk indicators are:

Operations Risk

- System downtime
- Number of errors
- Unexplained variances
- Unreconciled accounts
- Defect rates / Quality standards
- Customer complaints

Asset Impairment Risk

- Unhedged derivatives on balance sheet
- Unrealized holding gains / losses
- Concentration of credit or counterparty exposure (e.g., total debt due from specific financial institutions)
- Default history
- Drop off in product sales

Competitive Risk

- Recent competitor product introductions
- Recent regulatory changes
- Changes in consumer buying habits reported in trade journals
- Changes in distribution systems

Franchise Risk

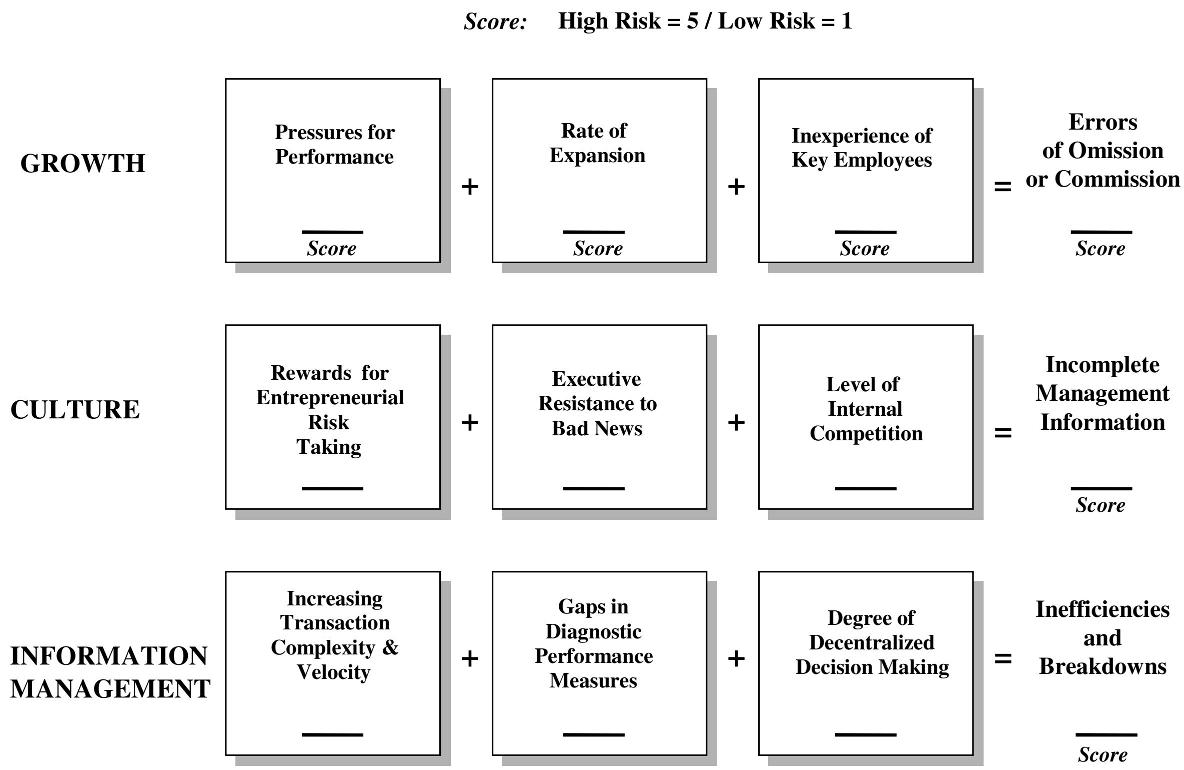
- Customers / bids lost to competitors
- Unfavorable news coverage
- Pending lawsuits / legal actions
- System downtime
- Competitor business failure

Assessing Internal Risk Pressures

We have now outlined the types of strategic risk that all firms potentially face. As described above, managers must assess their exposure to these risks based on their specific business strategy.

Now we move to the second step of the analysis by attempting to understand how strategic risks may be exacerbated by the context in which the organization operates. Based on a variety of factors, firms competing in the same product markets may be exposed to very different levels of risk. The *Risk Exposure Calculator* (illustrated in **Figure 2**) analyzes the pressure points inside a business that can cause strategic risks to "blow-up" into a crisis. Some of these pressures are due to *growth*, some are due to management *culture*, and some are due to *information management*. Collectively, these forces can "surprise" management in the form of operating errors, impairment of assets, and crises of customer confidence.

Figure 2 Risk Exposure Calculator



The risk exposure calculator is a diagnostic tool to estimate the magnitude and type of "pressures" that might lead to a substantial failure or breakdown. As suggested by **Figure 2**, the nine pressure points that we discuss below are additive. One pressure feeds upon the other. If the pressure builds too high, operations risk, asset impairment risk, and competitive risk can cause irreparable damage. Let's look at each of the pressure points in turn.

Risk Pressures due to Growth

Growth is a fundamental goal of most high performing businesses. Yet, success in achieving market-driven growth can bring risk for three reasons. The first reason relates to the *unrelenting pressure for performance* that is a hallmark of high growth companies. High growth companies typically have very high performance expectations for their managers and employees. Goals are set at demanding levels. Employees are informed that they are expected to deliver results (or else risk punishment or possible replacement). Incentive rewards and bonuses are linked directly and explicitly to performance. Under these circumstances, some people may feel intense pressure to succeed at all costs and may therefore engage in behaviors that invite risk. They may, for example, take unacceptable credit risks by selling goods and services to customers with a poor credit rating, or they may cut corners to speed operations. Or, they may be tempted to bend revenue recognition rules to book profits before full completion of a sale. If pushed hard enough, some employees may even consider misrepresenting their true performance to cover up any temporary shortfalls.

Rapidly expanding scale of operations is another sign of successful growth. Successful companies grow bigger. However, rapidly increasing scale can also bring undesirable levels of risk. Resources become strained to the limit as people and systems work beyond their normal capacity.

Infrastructures designed for a small operation quickly become inadequate. New production, distribution, and service facilities must be brought on line and integrated into overall operations. As a result, of rapidly expanding operations, mistakes and breakdowns may occur. Operations errors are likely to creep into the system. New customer accounts may increase credit risk. Product or service quality may suffer, increasing franchise risk.

Growth also means hiring large numbers of new people to staff operations. Competitive advantage cannot be achieved by waiting until all the right people are in place before launching new products and services. Sometimes, in the rush to staff new positions, background checks may be waived and minimum performance standards and educational qualification may be lowered. Newly hired employees may lack adequate training and experience and, as a result, not fully understand their jobs. *Decreasing experience* can, therefore, result in increased possibility for inadvertent error. Bad business decisions may expose the firm to asset impairment risk and franchise risk.

These risks are increased significantly when a business *lacks consistent values*. Consistent and strong core values are an essential foundation in any highly competitive business. In new, start-up businesses that have not had time to allow consistent values to emerge and take hold, managers and employees may make very different assumptions about organizational purpose and acceptable behaviors. In larger, more diversified businesses, different business units within the same firm may have very different core values. This occurred, for example, when General Electric—an industrial company—purchased and attempted to manage Kidder Peabody, a financial brokerage firm. The core values in these businesses were so different that it was difficult to communicate a consistent set of corporate-wide beliefs about acceptable risks and behaviors. What was seen as an acceptable credit or operations risk in one business was completely unacceptable in another business, and vice versa. Confusion about values and beliefs invites individuals under pressure to engage in behaviors that increase risk—especially impairment risk and franchise risk.

These three pressure points—unrelenting drive for performance, expanding scale of operations, and decreasing experience and shared values—operate together in a multiplicative fashion to increase the possibility of *errors of omission and commission*. Quite simply, people under pressure make mistakes. An error of *omission* occurs when an employee inadvertently omits to perform an action that is necessary protect the franchise and/or assets of the business. An error of *commission* occurs when an employee purposefully follows a course of action that increases risk, impairs assets, or otherwise endangers the business.

Paradoxically, it is success and growth that creates the potential for errors of omission and commission. Performance pressure, increasing size, and the hiring of new people generally indicate a healthy, vibrant company. Yet, these same forces can easily become catalysts for significant risk and error.

Risk Pressures due to Culture

The culture of any organization—determined by its history and top management leadership style—is the second major cause of risk pressures in many businesses. For example, many organizational cultures encourage *entrepreneurial risk taking*. Individuals are motivated to be as creative as possible in finding and creating market opportunities. Although this is usually healthy, there is always the danger that individuals may pursue or create opportunities that significantly increase strategic risk. In a culture of entrepreneurial risk taking, investments may be made in risky assets, deals may be struck with counterparties who have a limited ability to honor their contracts, commitments may be made that are difficult to fulfill, or employees may engage in behaviors that damage the reputation of the business.

Culture also influences the willingness of subordinates to inform superiors about potential risks in the business. Early warning signs about impending problems are often evident to employees who are in day-to-day contact with operations, customers, suppliers, and competitive markets. Too often, however, this critically important early warning information is not communicated upward to senior managers. In some organizations, this reluctance arises from a well-founded *fear of bearing bad news*. In businesses where senior managers have a low tolerance for dissent, or are known for "shooting the messenger," information barriers are inevitable. People become afraid to voice their concerns for fear of sanction or other personal repercussions. As a result, the communication of early warning information breaks down, and top managers can be caught off-guard when problems surface unexpectedly.

Additionally, some cultures foster a spirit of *internal competition*, which brings a unique set of issues relating to risk. In these cultures, top managers often knowingly foster a sense of competition among subordinates vying for bonuses and/or promotion. Since private information often brings power and rewards to the holder, individuals jealously guard information. This tendency is exacerbated in a culture where advancement is perceived as a zero-sum game. To advance their own careers, employees may increase business risk by gambling with business assets, credit exposure, and firm reputation in attempts to enhance short-term performance. Unfortunately, the pay-offs and costs from these behaviors are asymmetric. If the gamble pays off, the individual is rewarded with large bonuses and promotions. If the gamble results in a substantial loss for the firm, however, the worst that can happen to the employees is losing his or her job. The business is forced to absorb the sometimes significant financial or reputation loss.

These three cultural factors—entrepreneurial risk taking, fear of bearing bad news, and internal competition—feed off each other to create forces that lead to *incomplete management information*. In organizations where these pressures are intense, managers may, as a result, be uninformed about dangers that lurk in their businesses. Employees will take unwarranted risks, hold back bad news, and resist sharing information. Accordingly, managers may unknowingly increase performance pressures and ramp up the scale of the business with little understanding of the potential risks.

Risk Pressures Due to Information Management

The final category of risk is due to information processing technology, which can create risk in several ways. First, *transaction velocity*—created by high transaction volume and increased processing speed—can increase the possibility of operations risk. In 1991, for example, Fidelity Investments processed 250,000 transactions per day; by 1998, the business processed over one million transactions per day. If information technology had failed to keep pace with this intense ramp-up in processing demand, operational errors would be inevitable. Accordingly, Fidelity has made massive investments in technology to ensure that support is adequate as the business grows. Still, operations risk is a continuing concern for Fidelity's managers. America Online, by contrast, suffered the consequences of information processing risk related to increased transaction velocity when its processing infrastructure was unable to keep pace with increased demand.

Transaction complexity also increases risk. As transactions become more complex, fewer people may fully understand the nature of these transactions and how to control them. Crossborder agreements in international operations, creative financing of customer purchases, and elaborate consortium arrangements can all produce highly complex contracts. Without full understanding of contractual obligations and the nature of contingent cash flows, asset impairment risk increases substantially. The increase in complexity due to highly leveraged derivative financial products (i.e., financial instruments whose value fluctuates based on changes in the values of other underlying assets) has caused more than one well-managed firm to sustain substantial losses.

Inadequate management information systems (MIS) and lack of formal early warning systems also increases risk. If managers are unaware of potential problems, they cannot take remedial action to contain the risk. All types of risk need appropriate diagnostic systems to track current risk levels and serve as warning indicators. Operations risk indicators; financial and credit risk indicators; and systems that provide early warning about changes in competitive risk and franchise risk should be in place (we discuss these indicators later in the chapter). These diagnostic indicators often require specialized information processing systems that can consolidate information across dispersed operations; if these systems are fragmented or inadequate to supply information about problems, the consequences of risks can become greatly magnified.

Finally, highly *decentralized decision making* can increase risk. In decentralized businesses, individuals are encouraged to make decisions autonomously and create opportunities without constant monitoring and oversight by superiors. This structural configuration is appropriate when top managers wish to focus attention and decision making on local markets. Because of the freedom created by decentralized structures, however, fewer operating rules and constraints are likely to be imposed on operating managers. Consequently, they may be able to engage in activities that increase risk without requiring approval from corporate-level managers. Moreover, when several independent businesses within the same firm are acting independently, understanding the aggregation of risk across business unit becomes important. For example, aggregating credit risk across several businesses in the same firm may be important if those businesses are all making risky loans to the same customer. By decentralizing credit approval, the concentration of credit risk is greatly magnified.

These three pressure points—transaction velocity and complexity, inadequate information systems, and decentralized decision making—can lead to lapses in diagnostic information and *inefficiencies and breakdowns* in transaction processing. Such inefficiencies and breakdowns can, in turn, significantly increase operations risk, asset impairment risk, and franchise risk.

The nine pressure points listed in **Figure 2** provide a window into a business to calibrate the potential for significant risk and loss due to employee or management error, systems breakdown, and bad information. Once identified, managers can estimate the magnitude of the strategic risk exposure and ensure that organizational attention is devoted to controlling significant risks.

Misrepresentation and Fraud

We have discussed strategic risks and the pressures that heighten these risks. But there is one special case—misrepresentation and fraud—which must be considered separately. Sometimes, because of the pressures identified above, managers and/or employees may knowingly subject the firm to unacceptable levels of risk. Employees may misrepresent their performance (or that of their business), or misappropriate company assets. Bad decisions can be covered up and expose the firm to loss of valuable assets. In most instances, the amounts involved are small. Sometimes, however, these actions have severely damaged—or even destroyed—the businesses in which these people worked.

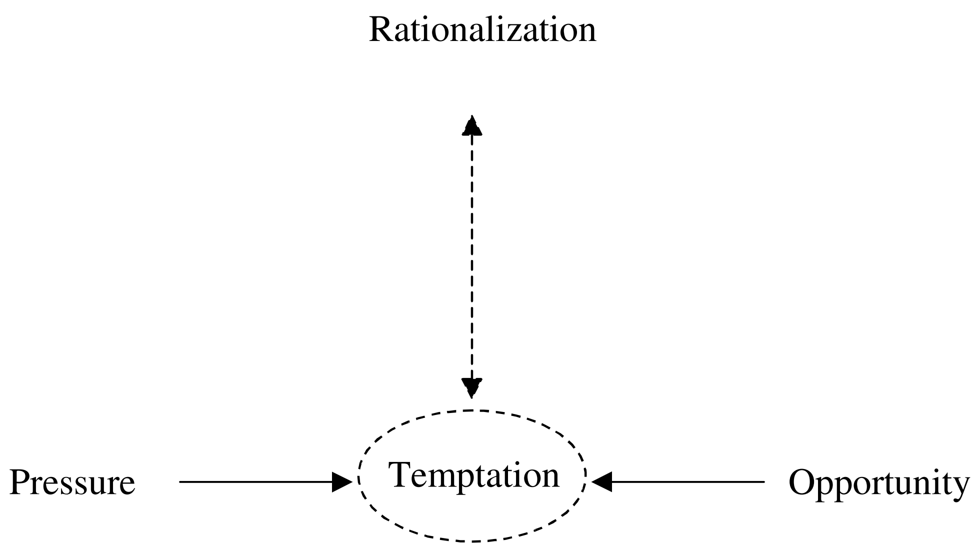
In all too many of these cases, senior managers were unaware of the risks to which employees had exposed the business. Employees had either covered up their actions (to the extent they had contravened stated policies), or failed to report information to superiors that would have given early warning about potential problems. The destruction of Barings Bank by trader Nick Leeson was a chilling reminder to all managers of the types of risks that they must guard against.

Accordingly, we must analyze the forces that can cause individuals to willfully misrepresent or alter data, engage in fraud, or otherwise expose the business to unacceptable levels of risk.

A Dangerous Triad

Generally, people employed by business and non-profit organizations do not start out to do bad things. Most often—even in blatant cases of misrepresentation and fraud—an individual starts down a "slippery slope," starting with a small misdeed that, over time, gains momentum and grows in magnitude. Soon, the subterfuge becomes too large for the employee to control. The risk that employees may engage in wrongful acts that expose the business to risk—including misrepresentation and fraud—is greatest *if three conditions exist simultaneously*. These three conditions—pressure, opportunity, and rationalization—are illustrated in **Figure 3**. As we shall discuss, all three conditions are necessary before most individuals will start down the slippery slope.[4]

Figure 3 A Dangerous Triad



1. Pressure

The pressures to achieve profit goals and strategies are intense in any high performing organization. The Risk Matrix highlights many of these pressures. Sometimes, the combination of extrinsic and intrinsic forces will create pressure to manipulate accounting records and/or misuse company assets for personal gain. Extrinsic pressures are due largely to the *performance goals and incentives.* High performing organizations are typically high pressure organizations. Employees are often under significant pressure to meet difficult performance goals. Success in meeting these performance goals can bring substantial financial rewards, including salary increases, bonuses, and possible promotion. Pressure to meet goals may be enhanced by the desire for recognition of success—by superiors, subordinates, and peers. Correspondingly, failure to meet performance goals can often result in loss of prestige, reduction in compensation, and, sometimes, dismissal. Together, the potential for rewards and the fear of failure can create a high level of pressure to succeed, sometimes at all costs.

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[4] These prerequisites for fraud have been eloquently described by Peter A. Humphery, vice president at Fidelity Investments, in his presentations on risk management.

Pressures to bend the rules, or otherwise misuse company assets or resources for personal gain, can also be due to *personal problems* that originate outside the work place. Debts, addictions, or other personal crises may create severe pressures to engage in fraud or misrepresentation to take advantage of an employer or misappropriate company assets.

2. Opportunity

The second necessary condition for willful error and fraud is *opportunity*. Even if someone is under great pressure to bend the rules to achieve performance goals and/or misappropriate assets, they can only engage in wrongful acts if the opportunity to do so exists. In other words, they must have access to valuable assets and/or be able to manipulate accounting and performance measurement systems to their advantage so that their actions are undetected. Thus, control systems must be sufficiently flawed that any misdeeds will not be detected.

We must remember, however, one of the fundamental tensions of management: there is too much opportunity and too little management attention. Employees are surrounded with opportunity, especially in high innovation organizations that rely on the creativity of empowered employees. Yet management attention is limited: there is simply not enough time or attention to monitor all the activities of every employee.

When performance pressure is coupled with opportunity to use company assets for personal gain or inflate performance measures, a dangerous situation is created. Any individual in these circumstances will feel *temptation*—temptation to secure rewards and/or use weaknesses in control systems to their advantage. Notwithstanding this great temptation, however, there is one additional prerequisite that must occur before most people will engage in wrongful acts or misdeeds that put the company at risk. They must believe that what they are doing is not really creating risk for themselves or the business.

3. Rationalization

Employees—even those experiencing great temptation and pressure—are unlikely to succumb and engage in wrongful actions unless they can find rationalizations for their aberrant behavior. Employees know the difference between right and wrong and typically will not engage in actions that contravene generally accepted moral codes of our society. A variety of studies has shown that when employees engage in damaging or unethical behaviors, they will do so only if they can justify their actions with one or more of the following excuses:

- the action is not "really" wrong—employees may convince themselves that many other people do similar things, and/or the action is not serious enough to warrant concern. For example, an auditor may routinely underreport the hours worked by subordinates in an attempt to meet client budget targets.

- the likelihood of being caught is small—because people often have the opportunity to manipulate company records to cover up their acts, they often believe that they will never be found out. Thus, they may have little fear that their behavior will ever be discovered.

- the action is in the organization's best interest—employees may convince themselves that misrepresenting performance or manipulating data can advance the firm's interest. For example, an employee may lie to a government investigator because she believes that the investigator is an "enemy" of the business who is trying to hurt it.

- if exposed, senior management would condone the behavior and protect the individuals involved—to the extent that employees believe they are working to protect or further the company's interests, then their rationalization often takes the next logical step. They convince themselves that if they are caught and forced to explain what they did and why they did it, their superiors would understand, support them, and stand by them.[5]

Managers of all high performing businesses—where there is typically a great deal of both performance pressure and freedom—must ensure that employees cannot easily fall back on these rationalizations.

All three of these conditions—pressure, opportunity, and rationalization—must be present before employees or managers can be expected to abuse their access to information or assets for personal gain. If only two of the three prerequisites are present, there is unlikely to be significant risk. For example, opportunity and pressure without rationalization will cause most employees to avoid actions that they know to be wrong, even in the face of temptation. Their conscience will intervene. Similarly, rationalization and opportunity by themselves are unlikely to lead to problems if there is no external or internal inducements to bend the rules. Why take any risks if there are no pressing reasons? Finally, pressure and rationalization—a potentially dangerous combination—can be contained effectively if employees do not have the opportunity to engage in actions that could put the business at risk. Control systems and safeguards must be sufficient to deny unauthorized access to accounting records and/or valuable assets.

Thus, to control the risks that employees may engage in willful misrepresentation or fraud, managers must remove at least *one* of the three prerequisites.

Learning What Risks to Avoid

Unfortunately, the most common, but painful, way of learning about risk is to suffer the consequences first-hand. For example, the manipulation of revenue numbers to hit performance targets can cause acute embarrassment, and even lawsuits. The reputation damage can be substantial. If misstatements are material, financial statements must be restated and the indiscretion must be reported to regulatory authorities (and will likely to be picked up by the business press). In these cases, two results are almost certain. First, the managers involved in the indiscretion will be disciplined—probably fired along with their superiors who will be held accountable for poor leadership and oversight. Second, top managers will install new controls—clearly specifying the consequences to those who are tempted to cross the line—to ensure that this damaging behavior will never happen again.

Vicarious learning occurs when managers witness a failure or mishap in another business and realize that the same thing could easily happen in their own business ("There, but for the grace of God, go I"). For example, when brokerage firm Kidder Peabody and Barings bank were fatally damaged because of the unsupervised activity of individual traders, managers of similar Wall Street firms rushed to install new control systems in an attempt to avoid the actions that had caused the demise of these businesses.[6]

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[5] S.W. Gellerman, "Why 'Good' Managers Make Bad Ethical Choices," *Harvard Business Review*, 64 (1986): 85-90.

[6] John R. Dorman, "Brokerage Firms Take Action to Detect Potential Rogue Trades in Their Midst," *The Wall Street Journal*, (November 29, 1995): C1

To determine strategic risk, a look at failures can be revealing. One technique—followed by a successful U.S. construction company—is to annually review all projects that have *failed*—i.e., those that were significantly over budget or failed to meet client expectations. A series of intense meetings is then devoted to discussing the causes for these failures and attempting to learn from them to ensure that they will not recur. Thus, over time, managers have learned that there are certain types of projects that do not fit their core competencies, and should be subject to special controls and management attention. For example, they have learned that they have a poor track record at successfully building sewage treatment plants and have, accordingly, declared these types of projects out-of-bounds.

Summary

Strategic risk comes in many different forms. Managers must assess the nature of the risks facing their business based on the ways that they have chosen to compete in the market. The primary forms of risk are operations risk, asset impairment risk, and competitive risk. If any of these risks become severe, the franchise of the entire business may be at stake.

There are nine pressure points that managers should analyze in determining the potential level of risk inside their businesses. These pressures are due to growth, culture, and information processing technology. In combination, these pressure points can lead to errors, incomplete management information, and inefficiencies and breakdowns.

Risk often leads to adverse consequences because of the actions or inactions of employees. Most often, these actions are inadvertent. But, sometimes, they may be willful. Whatever the cause, employee actions are more likely to cause risk when pressure is high inside the organization.

Individual employees may sometimes create risk by engaging in wrongful acts—either misrepresentation or fraud. This is most likely if three conditions exist: (1) pressure to bend the rules; (2) opportunity to access valuable assets and/or manipulate accounting records; and, (3) rationalization that these actions are "not really wrong."

Managing risk effectively means utilizing specialized control tools and techniques. All managers must understand how to control these risks, since nothing less than the survival of the business may be at stake.

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