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# How Risk Management Can Turn into Competitive Advantage

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# How Risk Management Can Turn into Competitive Advantage

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COLLEGE OF MANAGEMENT

# How Risk Management Can Turn into Competitive Advantage

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In light of the occurrence of many disruptive events since the beginning of this millennium, we can observe a change in the way risks and uncertainties are being viewed in the business world. To put this change into perspective we compare the evolution in the companies' perception of risk management with the evolution in how companies look at their supply chain management. The main driver behind the change in the way companies view risk management is the increased level of uncertainties. There are many evidences that suggest the current very high level of volatilities in the business world is going to get worse in years and decades to come. This trend of increasing uncertainties and the resulted risks for businesses, demand a strategic-level attention to risk management. This strategic-level attention is warranted not only by the high level of risks which threatens a business (a defensive view), but also by the fact that proper risk management capabilities can lead to competitive advantage (an offensive view). This article does not intend to focus on how proper risk management capabilities can be acquired. Rather, it tries to show how risk management capabilities, when a company managed to acquire them, could lead to competitive advantage.

## Risk management: An evolving discipline

... we are supposed to be taking risks. So, we don't think of risk management as trying to minimize risk. That's actually the way to prevent creativity. Rather, is to do risky things and then when they go in some unpredictable path, to be able to respond to it.

Says Ed Catmull, the co-founder and president of Pixar and the president of Disney Animation, in an interview<sup>1</sup> when he explains how Pixar fosters collective creativity [1].

This modern and progressive perspective of risk management, which gives it a strategic role, is in contrast with its traditional perspective which looks at risk as an unavoidable and costly evil. This contrast is analogous to the contrast between the modern and traditional perspectives

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<sup>1</sup> The interview can be found at

<http://blogs.harvardbusiness.org/ideacast/2008/08/harvard-business-ideacast-109.html>



of supply chain management and how our perspective of this discipline has evolved during the twentieth century.

Originally, manufacturers and retailers looked at inventories and shipments as nothing but sources of cost. This was the dominant mindset when most manufacturers served local markets and mass production was not a common practice. As manufacturers found out how they could benefit from the economies of scale by mass production of products, they started serving multiple geographical markets and at the same time sourcing from suppliers in many different regions. Producing in larger volumes and having operations extended to more geographical locations, manufacturers eventually realized that they could minimize handling, inventory, and transportation costs by using techniques from a discipline called logistics, a discipline which eventually evolved to supply chain management.

It wasn't, however, until around three decades ago when pioneers like Wal-Mart started to view their supply chain management not as a cost minimizing tool but as their core competencies. Nowadays, we can see many major companies (Dell, Amazon.com, UPS, and Zara, just to name a few among many others) whose supply chains play a key role in their competitive position in the market. Their primary goal is not necessarily minimizing the logistical costs. These companies exploit their novel supply chain designs and practices to satisfy their customers' need better than their competitors, and hence gain competitive advantage and higher profits.

A similar evolutionary change of perspective is happening to risk management. Traditionally, companies used to look at risks in their operations simply as an extra source of cost. This means, you have to incur the unexpected costs when you get unlucky. It should not be difficult to find companies who still have this perspective. Nowadays, we can see a trend which shows that companies look at risk as something that can be managed to reduce the cost of unexpected events. Of course, using insurance policies to mitigate financial or hazard (fire, natural disasters, etc) risks is not a new trend. However, managing other types of risks like operational or strategic risks has received little attention until recently.

A 2005 research by Conference Board reports, through interviewing 271 executives, that “more than 90% of the executives say they are building or want to build enterprise risk



management (ERM)<sup>2</sup> processes into their organization but only 11% report they have completed their implementation...The survey results indicate that more than two-thirds of both boards of directors and senior management staff consider risk management to be an important responsibility” [12]. Although ERM promotes a more strategic consideration of risk, as Slywotzky and Drzik suggest, many of these early adaptors treat their enterprise risk management as an extension of their audit or regulatory compliance processes [13]. As we will discuss later, compliance driven risk management can hardly play a strategic role or lead to a competitive advantage.

There are very few companies, however, who tend to use their abilities to manage risks as a source of competitive advantage. These companies go beyond compliance or cost-controlling defensive approaches and take a more aggressive stance toward risk. They have realized that their risk management capabilities can be leveraged as a source of competitive advantage. There are different ways through which risk management capabilities can turn into competitive advantage. We will discuss these ways in the last section of this article.

The View Point	Logistics / Supply Chain Management	Risk Management
An inevitable cost to pay	Just pay for transportation, inventory, ...	Pay the cost when a harmful event happens
A cost that can be minimized	Find innovative ways to minimize the logistics cost	Use risk management to minimize the costs of unexpected events
A potential source of competitive advantage	Use the supply chain design to gain competitive advantage	Use your abilities to deal with risk as a competitive advantage

Figure 1 – Evolution in supply chain management and risk management

Figure 1 compares the evolutionary trends of supply chain management and risk management disciplines. Although looking at risk management from a strategic point of view is not new in insurance and financial companies, this perspective is not common in other industries.

<sup>2</sup> Enterprise Risk Management (ERM) has a holistic approach which intends to integrate all the risk management efforts of an enterprise into a coordinated organization-wide plan.

Nevertheless, one can find examples of how risk approaches of exceptional companies have served them as a source of competitive advantage.

A good example is the famous case of Nokia vs. Ericsson<sup>3</sup>, two major cell phone manufacturers at the beginning of the new millennium. When their shared supplier, Royal Philips Electronics, disrupted by a fire on March 17, 2000, the different approaches of these two companies toward the same realized risk resulted in two very different outcomes. After both Nokia and Ericsson were notified of the disruption, Ericsson trusted Royal Philips that the supply would be resumed in a matter of a week. After all, the supply disruption, as it was claimed by Royal Philips, did not seem to be a major problem. Nokia, however, took this threat signal much more seriously and jumped into action. The company immediately started to closely monitor the development of the recovery process in Royal Philips. Soon it realized the supply would not be resumed as it was promised or even close to it. Nokia quickly booked all the available capacities of other potential suppliers. By the time Ericsson found out the real magnitude of the disruption, it was too late. There was not nearly enough available capacity in the market to produce the components for Ericsson. Ericsson reported that the fire and component shortages had caused a second-quarter operating loss of \$200 million in its cell phone division. The vows of the company continued and in 2001 Ericsson merged its cell phone division with Sony; hence the Sony-Ericsson brand [2]. On the other hand, proper response of Nokia to this realized risk not only protected the company from any long term damage, but also resulted in an increase in its market share. Nokia's market share increased to 30% up from 27% a year earlier, while Ericsson's market share dropped to 9% down from 12% a year earlier [3].

## **Uncertainty, risk, and risk management**

Since there is no general consensus on how to define or classify risk and uncertainty, we define these terms to make our discussion throughout this article both clearer and smoother. There are many different definitions presented for risk and uncertainty in the literature. In this article we consider risk to be “the uncertainty of the happening of an unfavorable contingency” [4]. This

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<sup>3</sup> This case has been reported many times in different contexts in the business literature. The reason that it has been introduced here is that it almost perfectly exemplifies how different responses to the same realized risk can change the competitive position of companies.

definition assumes risk and uncertainty to be the same concept. One can also think of risk as a consequent of uncertainty. For a literature review on different definitions of risk and uncertainty and how they can be related see the paper by Samson et al (2009) [5].

By risk management, in this article, we mean the full range of activities that a company performs in order to deal with potential and realized risks. These activities start with early steps of risk assessment and stretches all the way to final measures a company takes to recover faster when it is hit by a realized risk. Needless to say, risk management also includes all the organizational efforts to make the company more resilient to risks by reducing the probability or the impact of risks. Exhibit 1 shows a list of capabilities that a company needs in order to establish a proper risk management. As the exhibit emphasizes, these capabilities are most effective when they are embedded (in a systematic and integrated way) in the structure, culture, and the operational processes of the organization.

Risk management capabilities include the abilities of:

- Recognizing risks (the list of all potential risks)
- Detecting an evolving or happening risk
- Assessing the likelihood of each risk
- Assessing the impact of each risk
- Prioritizing risks
- Transferring/Sharing risks
- Preventing/Reducing the probabilities of risks
- Mitigating the impact of risks
- Reducing the sensitivity of the organization to risks through flexibility and agility
- The ability to recover fast from a realized risk
- Observing and grasping the opportunities that might come along the risks

These capabilities should be embedded, in a systematic and integrated way, in the

- Organizational structure,
- Processes and Procedures, and
- Organizational culture.

Exhibit 1 – Risk Management Capabilities



There are many different ways that we can categorize different types of risks. Here, we present two different classifications that will help us to show how strong risk management capabilities can lead to competitive advantage.

A company may face two major types of risks: *rewarded risks* and *unrewarded risks*. Rewarded risks are those risks associated with an expected benefit. These are risks we take with the hope of creating more values, e.g. when we enter a new market, or develop new products or processes. Therefore, rewarded risks are direct or indirect consequences of our own decisions. When we intentionally seek higher rewards of a risky business, one might arguably say that we intentionally seek the accompanying risks as well. Of course, this does not mean that we should not try to minimize these risks or get ready to deal with their consequences. For more discussion on this topic see the article by Gilbert and Eyring [17].

On the other hand, unrewarded risks are those risks imposed usually by external forces with no potential value in them. Natural disasters, industrial accidents, theft, pandemics, etc. are all examples of unrewarded risks. We always try to avoid or mitigate these risks.

We can also categorize risks according to their magnitudes and impacts on an organization: *disruptive risks* versus *non-disruptive risks*. Disruptive risks are those risks which interrupt the main operations and services of the organization and threaten the market position or even continuation of the business. On the other hand, non-disruptive risks are those risks which businesses deal with on a day-to-day basis. Although each non-disruptive risk does not threaten the market position or existence of an organization, the ability to effectively deal with them as a whole bears an important impact on the performance of the organization, and hence on its competitive position.

### **The rightful position of risk management in the new global order**

The need for implementing risk management in a company and the level of its involvement (operational, planning, or strategic) depends on the level of uncertainties the company faces. In a perfectly predictable world with no uncertainty, obviously, there is no need for risk management. However, as the level of uncertainties and their impacts on our business increases, our need for managing them and the level of attention they require rises as well.



Today's business world seems to face a trend of ever increasing uncertainties and risks. We can distinguish five major drivers for this trend (see also exhibit 2):

- 1- **Faster pace of change.** Boosted by the advent of information and communication technologies, product life-cycles are getting shorter and business models change much faster than before. This limits our ability to predict the future, which makes our forecasts less accurate. With less accurate forecasts, businesses face higher levels of uncertainties and more risks. In addition, increasing pace of change in the business world shortens the time available for companies to plan for possible changes or respond to unforeseen ones, which in turn, can intensify the impact of the risk.
  
- 2- **Increasing complexity.** New technologies facilitate more complicated business processes and practices. The higher level of complexity in processes and practices makes it more difficult to see different types of risks that threaten the businesses. One of the root causes of the financial system collapse in 2007 is debated to be the fact that the complexity of financial products outgrew our ability to assess the real risks involved in those products. As another example, the increasing complexity of supply chains – a byproduct of off-shoring and outsourcing trend – has turned the supply chain risk management into a challenging issue during the recent years. Bonabeau [14], in his 2007 paper on understanding and managing complexity risk, shows examples of how complexities in business processes, legal contracts, software, networks have led to business failures or major disruptions in different industries. He argues that the internal flaws in a complex system of a business usually remain hidden until the business is strained by an outside trigger, e.g. a supply disruption or an economic downturn. In other words, complexity risks are interlinked with, and can be amplified by, other types of risks.
  
- 3- **Multi-polar global order.** The emergence of new economic powers, are signs of a trend toward a multi-polar world order. When we have greater number of influential powers around the globe, we can expect more unexpected events to happen due to the interaction



and rivalry between these powers. Here is how experts predict the long-run global trend of uncertainties from this point of view:

The International System – as constructed following the Second World War – will be almost unrecognizable by 2025 owing to the rise of emerging powers, a globalizing economy, a historic transfer of relative wealth and economic power from West to East, and the growing influence of non-state actors... Historically, emerging multi-polar systems have been more unstable than bipolar or unipolar ones... the next 20 years of transition to a new system are fraught with risks.

This is an excerpt from the executive summary of “Global Trends 2025: A Transformed World”, a report by National Intelligence Council [6]. To see the trend of increasing risks and uncertainties on a closer horizon, one can refer to “Global Risks 2010”, a report by the World Economic Forum [7]. The risk map in this report (Figure 4) shows a higher concentration of risks in the high-probability high-severity region. Comparing this report with the similar report for 2009, we can see an increase of more than 50% in the number of risk categories in the upper-right quarter of the map, that is the high-probability high-severity risk region<sup>4</sup>. This prospect of strengthening risks (the severity, the probability, or both) could be due to the trend of fast changing and more complicated products and processes as well as the trend toward a multi-polar world order.

- 4- **Globalization.** In addition to strengthened risks, the increasingly interconnected business world can turn any local risk into a global one. Although major disruptions are rare in any specific location, the possibility of having a major disruption somewhere around the globe is not rare anymore. Globalization trend means businesses around the world are more and more interlinked. As a result, a disruption in any place spreads out quickly to many more regions, which means a business is hardly safe from a major disruption that happens elsewhere around the globe.

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<sup>4</sup> In this report the intensity of risk is measured by the product of the probability of the risk and its negative (financial) impact.

5- **Increasingly interconnected risks.** In addition to globalization trend which facilitates the quick spread of any local disruption, the increasing interconnection of different types of risks makes the matter even worse. That is, different categories of business risks are not independent of each other. One type of risk might evolve into other risk categories. Here is how the “Global Risks 2010” report emphasizes this intensified aspect of risk:

We are in a world with unprecedented levels of interconnectedness between all areas of risk ... the increase in interconnections among risks means a higher level of systematic risk than ever before. Thus, there is a greater need for an integrated and more systematic approach to risk management and response by the public and private sectors alike.

This report provides a “risk interconnection map” (RIM) which shows the connection strength between different categories of global risks as well as their impact and likelihood. For instance, figure 5 shows the interconnection between the pandemics risk and other global risk categories. An interactive version of this map can be found on the World Economic Forum website<sup>5</sup>.

These drivers picture the outlook of an increasingly more uncertain business world. In this volatile business world with a prospect of even more uncertainties in the future, the rightful position of risk management, at least for most large companies, is beyond the position of a discipline for controlling the costs of unexpected events. This high level of uncertainties can have a major impact on the competitive position of companies and hence warrants a strategic-level attention. This means, in such a volatile world, top executive should set company’s strategies to acquire proper risk management capabilities. The company can then exploit these capabilities not only to control risk costs, but also as a means to protect or even gain competitive advantage.

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<sup>5</sup> The Risk Interconnection Map (RIM) for 2010, which is a network diagram showing an overview of all risks and their connections, can be found at <http://www.weforum.org/documents/riskbrowser2010/risks/#>

Businesses, in general, are experiencing a trend of increasing risks and uncertainties (even higher than what they face now). This is because of:

**1- Faster pace of change;**

When things change faster, it is more difficult to predict what happens in the future. Hence, businesses face more unexpected events and less time to respond to them.

**2- Increasing complexity;**

Business processes, technologies, and products are increasingly becoming more complex. As a result, there is a higher chance for the existence of hidden flaws or appearance of unforeseen outcomes.

**3- Multi-polar global order;**

The world is transferring toward a multi-polar global order with multiple major political and economical players. The interaction and rivalry between these players create a more uncertain business environment.

**4- Globalization;**

The globalization trend means that businesses have more interactions and interdependencies with other businesses all around the world. Therefore, the impact of any risk at any location spreads quickly among many other regions all over the globe.

**5- Increasing interconnected risks;**

Interdependency of different types of risks is increasing. One type of risk can evolve into many other types of risks.

Exhibit 2 – Major drivers behind the trend of increasing risks and uncertainties

It is worth noting that some of the abovementioned drivers not only increase uncertainties, but also provide better risk management opportunities. For example, globalization can provide more sourcing alternatives in case our supplier fails to deliver. The information and communication technology has increased the pace of change in the business world, but at the same time these technologies provide better opportunities for monitoring, forecasting, and fast response. There is, however, a difference between the drivers' impacts on increasing uncertainties and their impact on the opportunities they provide for stronger risk management. The emergence of these drivers bring along the increasing uncertainties whether we want them or not. The benefits of their opportunities, however, materialize only when a business takes the trouble to deliberately and consciously pursue them. This pursuit, when it is performed through an integrated strategic approach, can lead to a proper set of risk management capabilities, which in turn can lead to competitive advantage.



In addition to high and increasing level of uncertainties and risks, which necessitates risk management more than ever, there are also other forces that require companies to adopt risk management practices. These forces include regulators, major suppliers and customers, creditors, rating agencies, institutional investors, etc. Many companies adopt risk management practices just to comply with these requirements. Although compliance driven approaches to risk management could be a good start, and might be used as a cost controlling means, it could hardly be used as a source of competitive advantage. Complying with the minimum risk management requirements is usually common to a company and its competitors. So, it is hardly an edge to compete with the rivals. In addition, when risk management remains at a compliance level, it rarely receives a strategic-level attention. To turn risk management capabilities into a competitive advantage, a company should design and support these capabilities at a strategic level and through an integrated approach.

### **Leveraging risk management to gain a competitive edge**

Now, the question is how risk management could possibly be used as a source of competitive advantage. Michael Porter [15, 16] argues that there are two major ways that a company can gain competitive advantage over its competitors: cost advantage, and differentiation. Risk management capabilities can dramatically affect both a company's costs and the value it creates for its customers (differentiation).

Depending on the risk category, we distinguish four different ways that a company can either reduce the costs, or create higher values, or both. In other words, there are four major ways that a company can turn its risk management capabilities into a source of competitive advantage. These are (see also figure 2):

1. **Keep serving when others cannot** – *dealing with disruptive unrewarded risks*

There are disasters that hit everybody. Those who can avoid or manage the crisis better, or recover faster than the others are winners of the market. Natural disasters, pandemics, economic crises, changes in regulations are examples of disruptions that might hit, simultaneously, many companies and organizations in a given region or industry. Those who can handle the disruption better than their rivals can not only survive the disruption

but also thrive by gaining market share. In other words, they can differentiate themselves from their competitors. Therefore, if a company has stronger capabilities in managing risks, it should be able to grow faster in more uncertain business environments.

This is a defensive approach to disruptive risks. However, if you can do it better than your competitor who is hit by the same disruption, your defense automatically turns into an offence (differentiator) which can let you win the market.

Example 1: The case of Nokia vs. Ericson exemplifies how faster response to the realized risk can turn the disruption into an opportunity to gain market share.

Example 2: Bain & Company, in an eight-year study, analyzed the performance of more than 250 companies [8]. They showed that the number of firms which managed to improve their position from the worst-performers quartile to the best-performers quartile during the 2001 recession was 24 percent more than the number of firms that managed to have the same jump during the subsequent (more stable) period of economic growth. They concluded “[economic] downturns present *strategic* opportunities as well as risk.” This result emphasizes when everybody is hit by the downturn, those who can manage the risks and uncertainties better than the others can leverage this capability to improve their market position, an opportunity which is more difficult to find during stable conditions.

## 2. **Seeking riskier businesses** – *dealing with rewarded risks, disruptive & non-disruptive*

There are higher potential profits in riskier venues. When you can handle risks better than your competitors, you can enter riskier ventures with higher potential profits, ventures which your rivals might hesitate to enter. If risk management capabilities justify taking the extra risk, seeking riskier businesses can be a great differentiator.

Example 1: Ed Catmull<sup>6</sup> explains that the Pixar’s ability to take controlled risks and respond properly to unpredictable outcomes is their way of boosting creativity, which is the most crucial element of their business. In other words, to be more creative, they have to have a risk-taking mindset and seek riskier approaches. How much risk can they take?

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<sup>6</sup> Referring to his interview which is mentioned at the beginning of this article.

Or, as a filmmaker might put it: How deep can they go in the rabbit hole? It depends on how strong they are in dealing with unexpected outcomes.

Example 2: As another evidence of how taking controlled risks can turn into competitive advantage, one can point to the success story of the movie *Avatar* (2009). *Avatar* has been the most successful movie ever made in terms of its box-office revenue. By making *Avatar*, the movie maker James Cameron broke his own record of the largest box-office figure which belonged to *Titanic* (1995) with \$1.83 billion world-wide. Cameron's recent Sci-Fi extravaganza generated more than \$2.7 billion of box-office revenue worldwide. However, this huge success was not without taking considerable risks.

Initially, the Twentieth Century Fox movie studio was hesitant to make such a risky investment on a movie with an unusually high cost: \$237 million. Filmmaking is usually a collaboration between different entities. It is the movie studio, however, who has to take the major risk. Since *Avatar* was too much of a risk for Twentieth Century Fox to bear, to initiate the project, studio managers and Cameron managed to transfer portions of this risk to other entities through risk sharing mechanisms.

To convince the studio, Cameron stepped out of a Hollywood tradition which says: "Never sink your own money into a movie." [9] He and his partner invested around \$10 million to build the revolutionary cameras which Cameron needed to make the *Avatar*. He also agreed to cut his usual director's fee into half and lowered his share of profit if the movie did not generate good revenue. In this way, Cameron shared a portion of studio's risk.

On the other hand, the studio managed to find partners who were willing to share the investment risk. "We consider all filmmaking a dangerous game," says Rupert Murdoch, chairman and CEO of News Corp., which owns Fox. "And we always lay off [risk] to the film funds when we can. This time we laid off more than usual." [9]

Example 3: In November 2009, the consortium led by Exxon Mobil Corp. won the right to develop one of the world's largest oil fields in Iraq. The consortium reached an agreement with the Iraqi government while the country was suffering from continued political instability [10]. The ability of Exxon Mobil Corp. and its partner Royal Dutch



Shell PLC to set forth a winning offer depended, in part, on their capabilities to manage their operations under the threats of severe sectarian violence and political instability in the region.

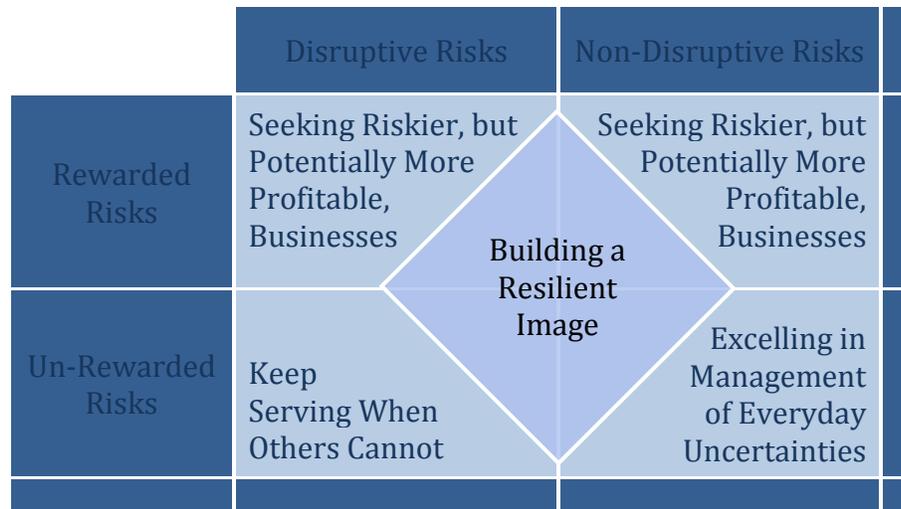


Figure 2 – How risk management capabilities can turn into competitive advantage

3. **Excelling in everyday performance** – *dealing with non-disruptive unrewarded risks*

In risk management, we mostly focus on risks which can have a major impact on the company (disruptive risks). To excel in managing disruptive risks, however, a company should develop and establish certain qualities which not only serve the company well when a disaster hits, but also help the company to compete more effectively and in more sustainable ways during the stable periods. These qualities include:

- Flexibility in operations,
- Responsiveness and agility,
- Good relationship and partnership with suppliers and customers,
- More decisive managers and more empowered employees,
- Good communication, both internally and externally.

Internalizing these qualities in the structure, operations, and culture of a company makes it more resilient to disruptive risks<sup>7</sup>. When a company is equipped to deal with large scale disruptive risks (through internalizing these qualities), it is naturally less vulnerable to everyday market fluctuations or minor disruptions which happen more frequently. In other words, these qualities can help a company gain competitive advantage by reducing the uncertainty costs (e.g. safety inventory costs) and creating higher values under uncertainty (e.g. consistent on-time delivery). As a result, such a company has a better chance of outperforming its competitors even in more stable times.

Note that a company might not necessarily acquire the abovementioned qualities for the sake of better disruptive risk management. Many companies try to achieve these qualities to improve their regular performance, which is another way of saying to improve their performance in dealing with day-to-day uncertainties – something that is not usually referred to as risk management. Nevertheless, when a company acquires these qualities, regardless of its initial intention, it will be stronger in dealing with disruptive risks as well as dealing with non-disruptive risks which leads to stronger regular performance. The following example intends to show this observation.

*Example:* Toyota is a company famous for being excellent in almost all abovementioned qualities. It is widely believed that these qualities strongly contributed to its outstanding performance in auto industry. Toyota has also shown its resilience in the face of disruptions.

In the early hours of Saturday February 1, 1997, a fire disrupted the production of P-valves<sup>8</sup> at Aisin Seiki Co. in Kariya, Japan. Aisin was responsible for supplying 99% of the P-valves used in Toyota's entire car production. It took only a couple of days (using the parts on the in-bond trucks) to bring to a halt all Toyota plants which were running on just-in-time systems. This was a very bad time for any Japanese car manufacturer to be disrupted. Since Japanese sales tax was going to increase on April 1<sup>st</sup> of that year, car

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<sup>7</sup> This is in contrast with keeping redundant resources (inventories, capacities, and suppliers), which is a more traditional way of hedging against disruptions. Redundant resources are usually external to the main operations, and hence, a possible drag.

<sup>8</sup> P-valves (proportional valves) are small parts used in the rear brakes of cars

manufacturers expected a hike in demand in the months before the tax increase. Toyota production facilities were already running at 115 percent of their normal production volumes before they were disrupted by the fire at Aisin.

However, Toyota's *fast response* and *good supplier relationship* minimized the impact of this disruption. In the afternoon of the same day (only around 12 hours after the incident), Toyota and Aisin managed to gather all the potential P-valve manufacturers in a conference room along with the technical details of the P-valves. Because of Toyota's close relationship with suppliers and the mutual trust between them, suppliers (some of them had not manufactured any p-valve before) quickly responded to Toyota's call and raced to manufacture the P-valves. In only 9 days, all Toyota's Japanese plants were back to normal operation and the company was saved from a major market loss. Interestingly, no price negotiation or contract exchange happened during this collaborative race. It all happened simply based on mutual trust [11].

#### 4. **Building a resilient image** – *all sorts of risks*

When a company manages to gain others' trust in having strong risk management capabilities, and hence being resilient in the face of volatilities and disruption, it can play more competitively in the marketplace. This can be because

- the company can attract more business compared to its competitors since its potential customers are confident that it can deliver (differentiation).
- a resilient image brings greater negotiation power (differentiation).
- better risk management capabilities can lower risk transfer costs – lower insurance policy costs (cost advantage).
- a resilient image reduces the probability of intentional risks. The image of being flexible and agile, as well as having a strong security system, legal system... can prevent others from harmful attempts (cost advantage).
- a resilient image provides the opportunity of offering credible guarantees, which in turn gives the power to ask for premium prices (differentiation).

- a company with strong risk management capabilities might have access to cheaper loans (lower interest rate) because of lower risk for the lending organization (cost advantage).
- a resilient company performs better in the stock market. Hendricks and Singhal [18] show how lack of proper risk management can have a negative impact on the long term shareholders' value. They show how share prices can be affected by supply chain disruption.

On the other hand a resilient company is usually treated more favorably by the stock analysts, and hence it has a stronger stock performance. This can result in easier access to cash through stock offerings. It also makes the company's stock-options more valuable which can help in attracting and maintaining top talents (cost advantage).

\* \* \* \* \*

In today's volatile business world with a prospect of even more uncertainties in the future, risk management deserves executives' attentions at a strategic level. When a company seeks risk management capabilities from a strategic point of view, these capabilities can be leveraged to gain competitive advantage. This can be done by either being stronger in dealing with a disruption when it hits everyone, or seeking riskier businesses with higher potential profits, or dealing more effectively with day-to-day fluctuations during more stable times, or creating a resilient image. A summary of what this article intends to convey can be found in figure 3.

Finally, we should keep in mind that before we can use risk management capabilities as a source of competitive advantage, we first need to acquire these capabilities and align them with the company's strategy. This could be a challenging task requiring enterprise-wide efforts coordinated by an integrated risk strategy and supported by top executives.

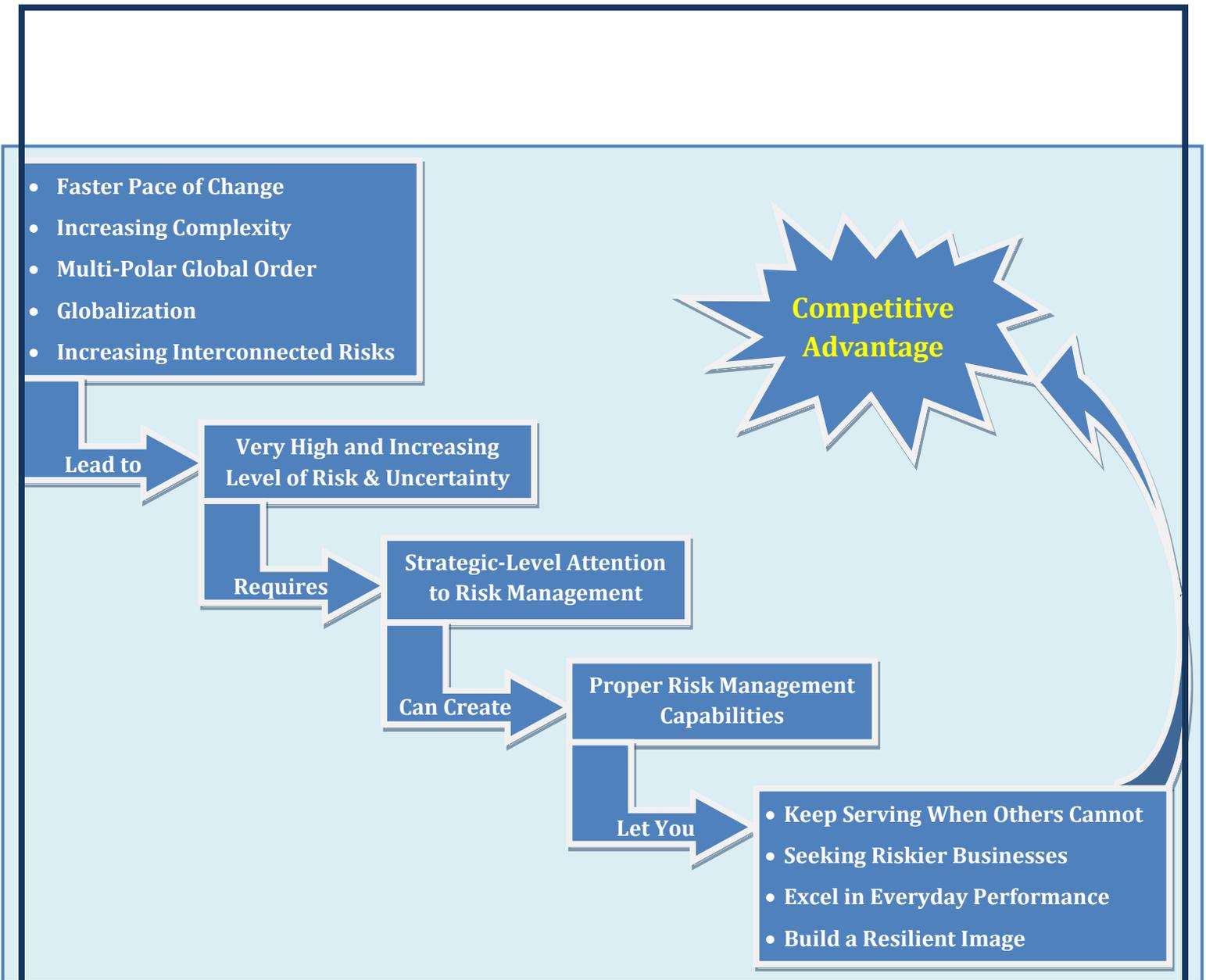


Figure 3 – Risk Management Could be a Source of Competitive Advantage

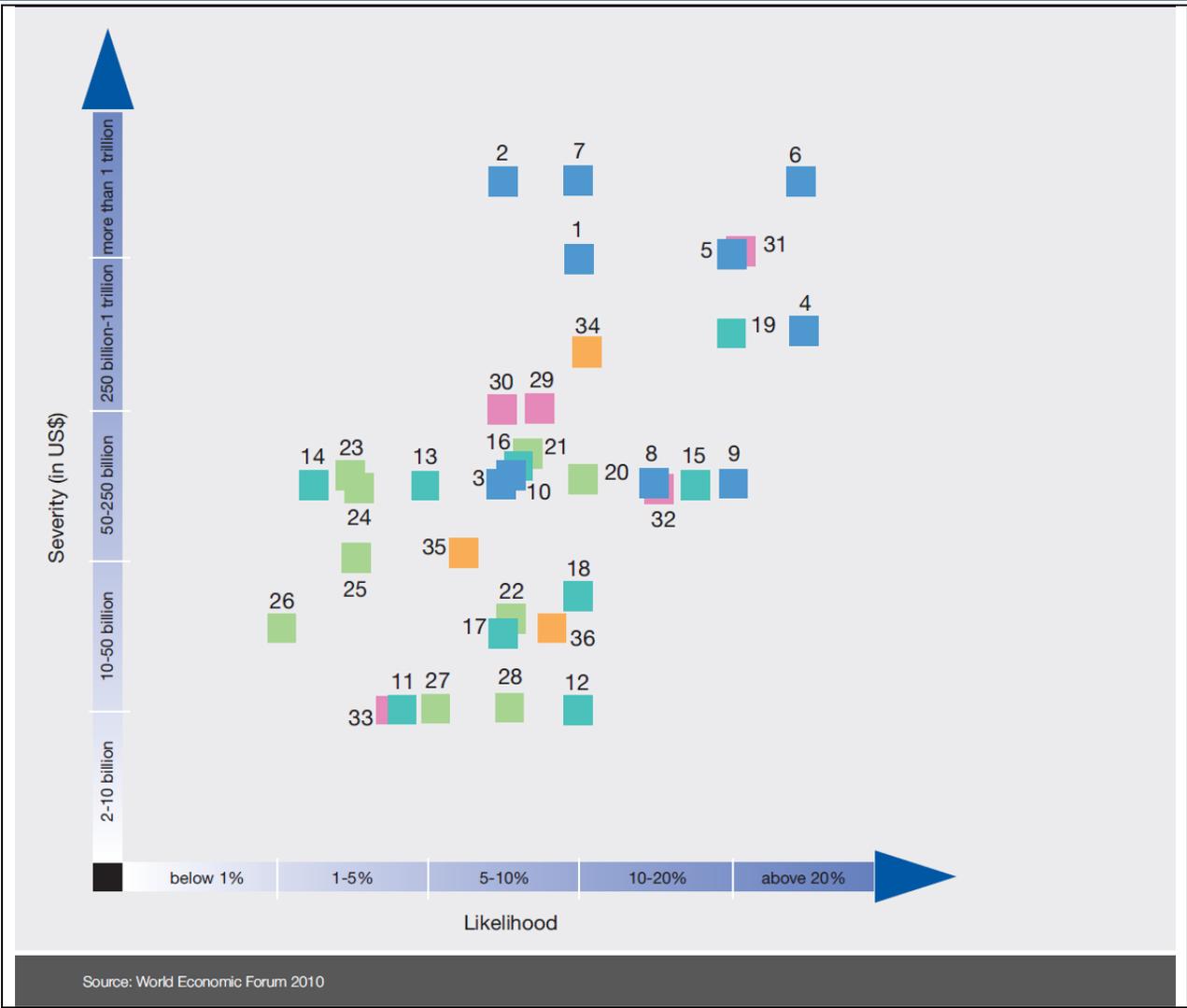
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Source: World Economic Forum 2010



**Economic Risks**

- 1 Food price volatility
- 2 Oil price spikes
- 3 Major Fall in the US \$
- 4 Slowing Chinese economy (<6%)
- 5 Fiscal crises
- 6 Asset price collapse
- 7 Retrenchment from globalization (developed)
- 8 Retrenchment from globalization (emerging)
- 9 Burden of regulation
- 10 Underinvestment in infrastructure

**Geopolitical Risks**

- 11 International terrorism
- 12 Nuclear proliferation
- 13 Iran
- 14 North Korea
- 15 Afghanistan instability
- 16 Transnational crime and corruption
- 17 Israel-Palestine
- 18 Iraq
- 19 Global governance gaps

**Environmental Risks**

- 20 Extreme weather
- 21 Droughts and desertification
- 22 Water scarcity
- 23 NatCat: Cyclone
- 24 NatCat: Earthquake
- 25 NatCat: Inland flooding
- 26 NatCat: Coastal flooding
- 27 Air pollution
- 28 Biodiversity loss

**Societal Risks**

- 29 Pandemic
- 30 Infectious diseases
- 31 Chronic diseases
- 32 Liability regimes
- 33 Migration

**Technological Risks**

- 34 Critical information infrastructure (CII) breakdown
- 35 Nanoparticle toxicity
- 36 Data fraud/loss

Figure 4 – Global Risk Map 2010 (Source: World Economic Forum, Global Risk 2010)

# Pandemics

A lack of preparedness to respond a pandemic of a highly infectious disease at the international, state or corporate level exacerbates loss of life and results in the breakdown of essential systems (ICT, power, supply chains).

Likelihood (%)

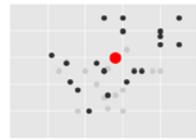


Severity (Billion US\$)



Severity and likelihood were addressed over a 10 year time frame

Risk Landscape

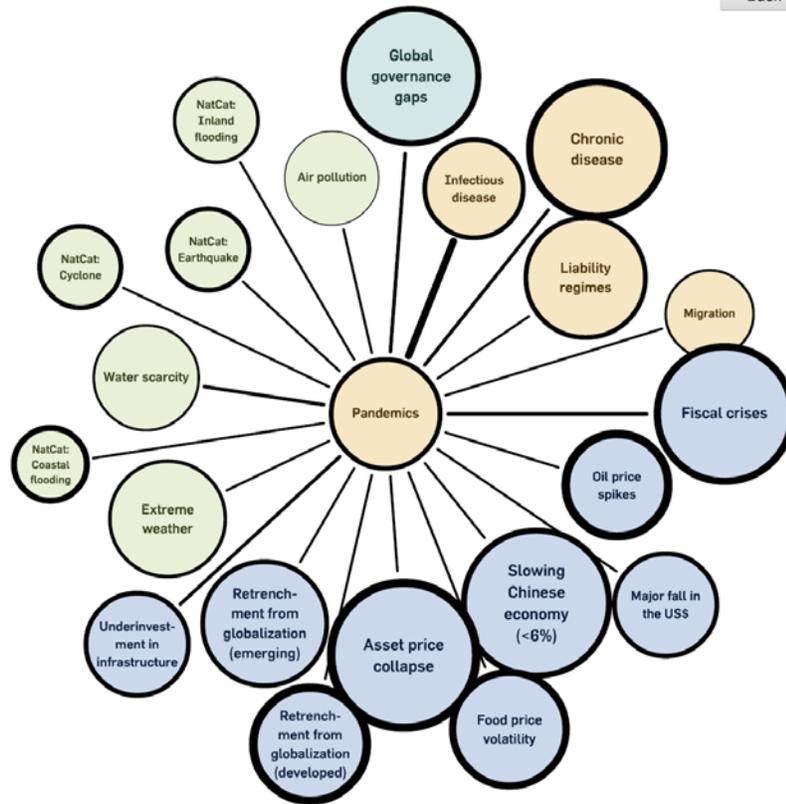


Likelihood →

Connection strength



Domain



Source: World Economic Forum 2010

Figure 5 – The interconnection between pandemics risk and other risk categories (Source: World Economic Forum, Global Risk 2010)