

Analyzing Strategic Risks using SWOT

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The ongoing discussion on how to manage risks has been revitalized lately for at least two reasons. Primarily, many investors have lost huge sums of money due to poor corporate performance and outright wrongdoings. Secondly, the accelerating change in the business environment is another crucial reason why risk management is becoming increasingly important. However, effective risk management can enable decision-makers to increase their knowledge about their options in times of uncertainty and thus reduce their risk of business failure.

In this paper, the focus is on strategic risks, which may be greater than the risks most companies track, report and manage (see Section 2.1). Furthermore, such risks are complex and information is lacking, and there is also a lack of risk decision-support in strategy (see e.g. Courtney 2001). In fact, the outlining of a strategy can equally well be compared to formulating a risk profile, because 'the risk-taking strategy is an essential part of the total strategy' (Noy 1998) and 'risk acceptance characteristics are essential to the success of many strategies' (Noy 2001).

1 Risk, Uncertainty and Strategy

Risk and uncertainty are often used interchangeably. For example, Friedlob and Schleifer (1999) claim that for auditors 'risk is uncertainty', but the fact is that there are many basic differences

The word 'risk' derives from the early Italian word *risicare*, which originally means 'to dare'. In this sense risk is a choice rather than a fate (Bernstein 1996). Risk as a general noun is defined as 'exposure to the chance of injury or loss; a hazard or dangerous chance' (Webster 1989). Along the same token, in statistical decision theory risk is defined as 'the expected value of a loss function' (Hines and Montgomery 1990). Thus, various definitions of risk imply that we expose ourselves to risk by choice.

Risk is measured, however, in terms of 'consequences and likelihood' (Standards Australia 1999; Robbins and Smith 2001) where likelihood is understood as a 'qualitative description of probability or frequency', but frequency theory is dependent on probability theory (Honderich 1995). Thus, risk is ultimately a probabilistic phenomenon as it is defined in most literature.

Crucially, 'risk is not just bad things happening, but also good things not happening' (Jones and Sutherland 1999) - a clarification that is particularly crucial in strategy. Many companies do not fail from primarily taking 'wrong actions', but from not capitalizing on their opportunities, i.e., the loss of an opportunity. As Drucker (1986) observes, 'The effective business focuses on opportunities rather than problems'. Risk management is ultimately about being proactive.

Uncertainty, however, is a different. Uncertainty as a general noun is defined as 'the state of being uncertain; doubt; hesitancy' (Webster 1989). Thus, there is neither loss nor gain *necessarily* associated with uncertainty; it is simply *the not known with certainty* – not the unknown.

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Interestingly, in most business situations the relationships or patterns are not orderly; they are complex. Thus, uncertainty and complexity are intertwined and as an unpleasant side effect, imprecision emerges. Lotfi A. Zadeh formulated this fact in a theorem called the *Law of Incompatibility* (McNeill and Freiberger 1993):

As complexity rises, precise statements lose meaning and meaningful statements lose precision.

Since all organizations experience some degree of complexity, this theorem is crucial to understand and act in accordance. With *complexity* we refer to the state in which the cause-and-effect relationships are loose, for example, operating a sailboat. A mechanical clock, however, in which the relationship between the parts is precisely defined, is *complicated* – not complex. Thus, striking a sound balance between meaningfulness and precision is crucial, and possessing a relatively clear understanding of uncertainty is needed since uncertainty and complexity is so closely related.

To discuss strategic risk, we must first define the word ‘strategy’ because ‘strategic’ means according to Webster (1989) ‘pertaining to, characterized by, or of the nature of strategy’. In business literature, there is abundant usage of the term ‘strategy’ and it has become ‘... among the most sloppily used terms in business...’ (Magretta 2002). We prefer to adapt the definition of strategy found in *On War*, which according to Louise Willmot has been described as ‘the only truly great book on its subject’ (war) – see von Clausewitz (1997). Carl von Clausewitz defines strategy as ‘the employment of the battle as the means towards the attainment of the object of the war’. From that definition, but in a business context, we define strategy as ‘the employment of competition as the means to attain business objectives’. In other words, a strategy describes how an organization is to attain its business objectives by competing against others. Thus, a strategy cannot be defined without also defining the competition.

This competition against others in pursuit of objectives exposes the organization to both expected and unexpected risks – strategic risks. Consequently, we define strategic risks as ‘risks that arise in pursuit of business objectives’. In other words, many strategic issues basically exist in a state of uncertainty from which strategic risks (and other business risks) can emerge as objectives are pursued. Having defined strategic risks, we propose to measure strategic risks as;

Strategic risk = probability x impact on business objectives

2 The Strategic Risk Analysis Approach

As we define it, strategic risks arise in pursuit of business objectives – either by exploiting opportunities and/or reducing threats. How these risks can be managed is determined by the organizational characteristics – the strengths and weaknesses. We therefore believe that combining characteristics and risks is a crucial aspect of risk management as well as strategy. For our purpose, this cross-linkage of characteristics and risks is referred to as ‘the SWOT principles’. Interestingly, the literature on risk seems to ignore this point, while literature on strategy discusses characteristics frequently. What we try to do here is to bring those two perspectives risk – and characteristics – together in a best possible way in order to attain business objectives.

A Strength, Weakness, Opportunity and Threat (SWOT) analysis is a ‘handy mnemonic that help planners think about corporate strategy’, and it ‘... can be applied to many different aspects of a company’s

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business...’ (Hindle 2000). It starts by identifying the strengths and weaknesses of the business unit and the opportunities and threats it faces. Depending on the current situation weights are assigned to signify importance.

The analysis follows two main axis: 1) Internal (S and W) versus external (O and T) and 2) positive (S and O) versus negative (W and T). A SWOT matrix is defined to provide strategic decision support and four generic strategies can be devised, see Figure 1.

Internal factors	Internal Strengths (S)	Internal Weaknesses (W)
External factors		
External Opportunities (O)	<u>S - O Strategy: Maxi-Maxi</u> Utilize one’s strengths to capitalize on external opportunities	<u>W - O Strategy: Mini-Maxi</u> Develop ones weaknesses to be able to capitalize on external opportunities
External Threats (T)	<u>S - T Strategy: Maxi-Mini</u> Use one’s strengths to cope with external threats	<u>W - T Strategy: Mini-Mini</u> Develop ones weaknesses to either defend from or avoid external threats

Figure 1 – SWOT Matrix and the Four Generic Strategies. Based on Wehrich (1999).

Obviously, a SWOT analysis is a relatively simple, inaccurate, open-ended technique. However, the Law of Incompatibility suggests that SWOT analyses are one of those tools that are useful in complex situations. With this context, our approach consists of four steps that are explained briefly in the following:

1. Define objectives.
2. Brainstorm risks and characteristics according to the SWOT axis.
3. Calculate possibilities and consequences of the risks.
4. Combine risks with characteristics.

It is important to notice that these four steps must be put in a greater management context (including SRM) and that wording must be adjusted to local jargon.

2.1 Step 1 – Define Objectives

To clear define the business objectives is a crucial initial step because if we do not know where we want to go it is difficult to identify what risks may arise. In fact, an unclear business objective is a strategic risk in itself, and should be remedied at this stage. By reviewing the strategy and plans, and through interviews and a management session on targets and objectives, the business objectives are assessed for clarity. We try to remove as much ambiguity, discord, disagreements and other vagueness as possible. That allows us to define the objectives well.

2.2 Step 2 – Brainstorm Risk and Characteristics According to the SWOT axis

The analysis involves a brainstorming session, but the brainstorming process has a few challenges, which should be resolved for practical reasons. Firstly, it is important to define risk to the participants properly. Also, the participants should at this stage not concern themselves with *measuring* risks. The participants must also think in terms of both opportunities and threats.

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Secondly, questioning wording is useful in helping decision-makers express and elaborate on what they *really* mean. As we have all experienced – it is terribly easy to talk past each other. Also, uncertainties and risks should not be confused.

Thirdly, it is important to be aware that people have biases. Therefore, facilitators should actively guide the process. Myths and hidden assumptions are basically too common and hence crucial to identify to leave to self-assessment. For the same reason, the facilitator should also review significant business information prior to the brainstorming so that s/he can ask penetrating questions.

2.3 Step 3 - Calculate Possibilities and Consequences of the Risks

The risks are the O's and T's from Step 2, but we do not yet understand their magnitude, which leads to our risk ranking mechanism. How we do that is discussed more in the case, but it should be noted that it is necessary to divide the risks into case specific categories containing preferably *less* than 9 risks where the categories are defined by type. The reason is that experiments show that people cannot simultaneously compare more than 7 ± 2 objects (Miller 1956).

2.4 Step 4 - Combine Risks with Characteristics

In line with ‘the SWOT’ principles, we consider how to best combine S's and O's, S's and T's, W's and O's and W's and T's. The purpose is to identify how the organization can manage, or adapt to, the identified risks. That part plays a key role in our approach – not directly for the SRA part, but for the entire risk management process.

A spreadsheet with all characteristics along one axis, and all risks on the other, provides a good overview and allows identification of logical pairs. An element (S, W, O or T) from the brainstorming that cannot be combined with any other element are omitted from the further analysis. Likewise, a threat (negative risk) that cannot be matched against any organizational characteristic (including intermediate states of strengths and weaknesses) is also irrelevant for most SRA strategies; it must be either accepted or transferred.

These are the steps. To illustrate how SRA works in practice we use a case, which is next.

3 Case – How an Investor Used SRA

The decision-maker – our customer – is an investor that wants to find out if it is worth investing more into a new-to-the-world transportation concept (the objective). The viability of the concept was related to 5 risk categories; 1) finance, 2) technology, 3) organizational (internal), 4) marketing and 5) communication. The latter is important in this case because an objective is to attract investors. The strengths and weaknesses were mainly related to the quality and experience of the management team. Despite handling a technological innovation, together we saw the significant risks to be mainly business related and not technological, as will be evident from the analysis next.

We followed the steps and identified more than 200 risks. Then, we spent about a week with top management, in which we also interviewed the director of a relevant governmental research institute and other parties, for a review of the technology and various communication and marketing related risks. Based on this information we perform the SWOT (Step 2), after which 39 risks remain significant. The vast reduction in the number of risks occurs, as the documentation did not contain all that was relevant. In due course, this fact was established as a specific communication risk.

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The next step was to rank the risks. By performing a pair-wise comparison of all risks, we got possibility matrices similar to the weighting matrix for the risk categories shown in Figure 2

Since the executives are highly experienced in their industry and have insight information concerning their competitors we choose to not only rank the risks, but to also weight the ranking. We see for example that communication risks are believed to be twice as important as marketing risks. In fact, communication risks are believed to be most crucial at this stage. A similar exercise is then done within each risk category.

The impacts were modeled on a ‘high’, ‘medium’, ‘low’ scale. ‘High’ was then given a score of 3 and ‘low’ as score of 1 while ‘medium’ was given a score of 2. By multiplying the probabilities and the impacts we got the risk profile shown in Figure 3. All the risks were negative due to the fact that everything is a matter of survival at this point, i.e., negative losses. Managing the opportunities were deliberately pushed forward in time to ‘after landing the first contract’.

Risk Category	Communication	Financial	Internal	Marketing	Technical	Sum	Normalization
Communication	1	1	7	2	4	15	100,0 %
Financial	0	1	4	2	3	10	66,7 %
Internal	0	0	1	0	0	1	6,7 %
Marketing	0	1	4	1	2	8	53,3 %
Technical	0	0	3	0	1	4	26,7 %

Figure 2 - Weighting Matrix for the Risk Categories.

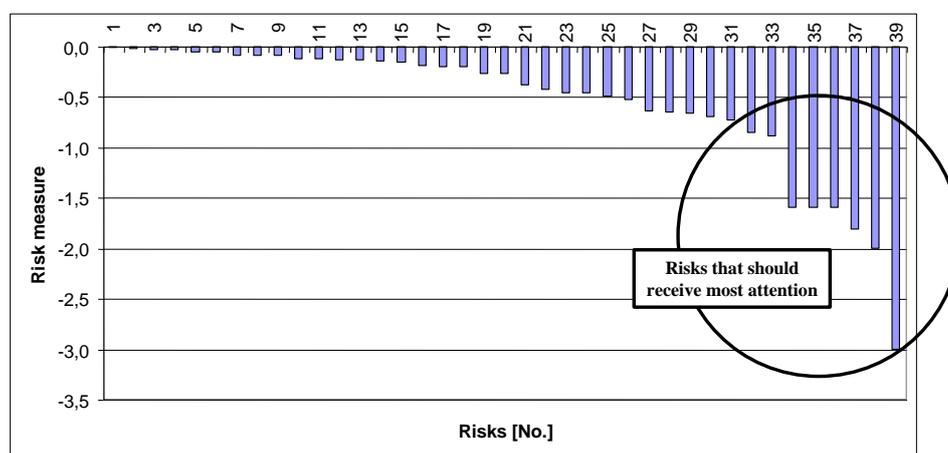


Figure 3 - Risk Profile.

Proceeding to Step 4, we combine the strategic risks with the characteristics of the organization (S and W). We employ a simple way of matching characteristics with risks using plus and minus. Again, precision was deemed not of the highest importance. 12 risks increase (+) in severity, 19 risks decrease (-) and 7 risks remain the same. The risks that stand out from Figure 5 are:

- Business essentials presented too unclearly to investors (-3.0 +).
- Foreign investors do not find an acceptable exit strategy alternative (-2.0 +).

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- Payment guarantees are not being awarded (-1.8 +).
- Lead-time in sales is longer than expected (-1.6 -).
- Investors do not find the benefits s/he is looking for (-1.6 +).
- Listeners misunderstand initial presentation of business plan (-1.6 +).

Thus, the risks polarize. On one hand, risks related to technology and performance decrease, while on the other hand, communication risks increase. This is perhaps surprising, given that most of the people in the company are sales and marketing people with a background from large multinationals.

4 Critical Evaluation

We believe that what makes our approach work is that it helps us identifying the risks without mingling them with characteristics and uncertainties. Although skilled facilitation is important, the method works primarily because it handles opinions in a structured manner.

By asking the top managers to think of risks as defined earlier, and not the measures of risks – which is a common mistake – we avoid long lists of everything that is ‘problematic’ or ‘unsure’. Subsequently, the process of relating risks to characteristics becomes quite simple and provides a straightforward way of identifying suitable risk management strategies, which are not discuss here.

The potentially most important success factors are that our customers feel that 1) the approach invites to a practical level of detail, that 2) the entire SRA process was intuitive and 3) free of artificial exercises. The relative comparison is basically easier to relate to and truer to the complexity at hand.

But the SRA, like all risk assessment approaches, is no panacea. Firstly, the SRA approach cannot guard the decision-makers against hidden assumptions, beliefs and myths. Secondly, risks that are ignored, unidentified, unpredictable or simply unknowable cannot be analyzed and subsequently managed. In fact, residual risks are always present, which emphasizes the need for having contingency plans and being responsive. Risk management is basically about managing identified risks while preparing for the unidentified ones in our opinion. Thirdly, skilled facilitation is important because the SRA is susceptible to the ‘garbage in, garbage out’ problem.

5 Closure

We believe the approach is intuitive and can handle the complexity of strategic risks, because it is based on a theoretical framework of definitions and measures of risk that is simple, yet capable of handling uncertainty and complexity. The framework also enables us to link strategic risk with organizational characteristics. Furthermore, we view the lack of mathematical rigor as an advantage because it is replaced by robust and simple pair-wise comparisons. After all, managerial thinking especially at the more senior levels requires intuition and the exercise of subjective judgement in all organizations (Isenberg 1984).

We seek an approach that can help us distil information and knowledge from various sources to increase our understanding of the strategic risks so that we in turn can make more informed decisions about how to pursue business objectives. As most approaches, the SRA does not provide solutions *per se* – it provides attention directing towards problems and possible solutions. In the words of Louis Pasteur:

Chance favors the prepared mind.

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6 References

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