IMPACT OF RISK APPETITE ON THE VALUE OF A FIRM

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Abstract

In order to strike the appropriate balance between creating and protecting value, management considers an overall risk profile in order develop expectations that are established by the risk appetite of the company. Risk appetite as acceptable parameters for risk taking opportunities that is consistent throughout the company, and reflects a mutual understanding between management's willingness to allow risk exposure in pursuit of core strategic objectives.
Conversely, managers see risk appetite as an impractical, one-time assessment that limits them when making decisions. Making use of secondary data collected through library research, journals and analysis of reports, the paper reviewed the impact of risk appetite on the value of a firm and concluded that an organization must consider its risk appetite at the same time decides which goals or operational tactics to pursue. To determine risk appetite, management, should take three steps of developing risk appetite, communicate risk appetite, monitor and update risk appetite.

Keywords: Risk, Risk management, Firm value, Appetite

Introduction

Risk taking is an essential part of business today, as a company must make informed and rational decisions about the risks they want to take in pursuit of goals and objectives of the organization.. It is a known fact that organizations must be able to define their risk appetite, risk tolerance and risk targets to effectively align strategy execution and risk management processes to achieve a competitive advantage, that is, a company must understand how much risk it is willing to take and how it plans to balance risks and opportunities before designing and executing a set strategy

When risk appetite has been clearly defined by the management, it becomes their responsibility to communicate the risk appetite throughout the organization to ensure these actions of the company at all levels are in line with the risk the company is willing to accept.

A major barrier to the implementation of effective management is the lack of a definition of risk appetite. Risk appetite lies at the heart of good management, yet the term is frequently misunderstood, meaning different things to different people. Risk appetite can best be thought of as the relationship between the organization's value (or expressed as an annual return) and the maximum acceptable level of risk- which we again expect to be upward-sloping but convex (so that increase in risk have to be "compensated" by increasing larger amounts of value). Thus risk appetite illustrates the maximum level of risk the organization is prepared to bear to achieve a given return or alternatively, the minimum level of return it is prepared to earn for a given amount of risk.

Corporate governance is an ongoing process by the management to create and protect enterprise value. As management interacts and makes decisions, they are also reflecting on the overall risk appetite of the company which is an aggregate summary of assertions that provides a basis for clarifying both risks the company is actively taking and risks that are purposely avoided. The objective of this study is to look and review the impact of risk appetite on the value of a firm.

Literature Review

The notion of risk appetite is well covered in the literature in regard to its technical calculation and assessment when applied to financial investment. The association between remuneration and risk appetite in organizations, however, receives far less attention. This literature review will concentrate on the work of prominent academics contributing to the field. In recent times a body of technical and compliance literature has also developed in response to the impact of the global financial crisis. This review will not seek to critique the technical literature, but rather, the scholarly works that are to inform the design of the research project.

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Industry studies have also highlighted a high degree of confusion. A recent survey by AIRMIC (2009) found a lack of consistency in organizational definitions of risk appetite, even following the production of

supposedly “universal” definitions in standards like BS31100. The British Standards publication in 2008 known as Risk management Code of Practice offers the following definition of risk appetite” the amount and type of risk that an organization is prepared to seek, accept or tolerate”. On the whole Risk appetite can be considered as one of the building blocks of effective risk management initiative.

Edward Bowman is contributor to the question of risk in organizational decision making is cited in many of the works that will be examined later. Bowman (1980) identified a paradox between the assumed relationship between risk and return and the reality. He contended that the common belief that higher risk resulted in higher returns was flawed and that in reality firms with lower risk profiles were more likely to deliver higher average profits. Bowman continued his research in subsequent years and developed his theory to demonstrate that trouble companies actually take more risk (Bowman 1982). He reinforced these findings in the years that followed through further research including content analysis (Bowman 1984) that provide further evidence supporting his position that low profits trigger higher risks.

Whilst Bowman’s work has been widely acknowledged it is not without it critique. Fiegenbaum and Thomas (1985), for example, in examining Bowman’s risk- return paradox point out that it does not hold across time periods. Therefore the time period of examination must be carefully chosen with due regard to wider environmental factors which may critically offset the result.

Bowman is also supported by Bromiley (1991) who demonstrated that performance can be shown to have a strong negative influence on risk taking in organizations and that risk taking has a negative influence on performance. Bromiley makes the interesting observation that poor performing executives not only take more risks but they take bad gambles. A bad gamble being a substantial risk with a disproportionately low return. There is little in the literature that attempts to explain why one executive performs better than another with the exception of some references to personality type. Stewart and Roth (2001) , for example, argue that individual predispositions influence risk taking in conjunction with situational factors. In addition they Steward and Roth (2001) claim their research to show entrepreneurs are likely to demonstrate a propensity for risk than their managerial counterparts when pursing profit and growth.

Bowman employs the work of Kehneman and Tversky (1979) that draws on the expected utility theory to develop an alternative model of describing decision making under risk which they have named prospect theory. Prospect theory contends that utility theory is inadequate to explain the evaluation of a gamble because utility theory is based on the principle

that a prospect is assessed as a function of the acquired prospect minus its cost (Kahneman & Tversky 1979) which fails to acknowledge that individuals will commonly evaluate the prospect and the cost individually which is a different decision making process. This is an important distinction for the purpose of the research project as it introduces the notion that an executive may be more prepared to accept risk when funding a fair opposed to acquiring a prospect at fair price.

Hermalin (1993) argues that manager with career concerns may opt for a riskier project as, it is claimed, in choosing the riskiest project around he minimizes the possibility of reputational risk (assuming that the market can view the project risk). Hermalin claims that project risk and reputational risk are different and need not be positively correlated. He goes further to suggest that the only reason to link the managers remuneration to return is to influence the manager to invest in the right kind of projects and claims that this unnecessary because managers are inherently risk averse. Rose (1973) claims that agents do indeed need to be motivated with payoff structures and that, in general, these structures are not incompatible with the expectations of the principal.

Whilst this position is at odds with the literature Hermalin returns to common options by identifying that when a manager has private information he may reveal it in such as to serve his purpose ie. To make a project appears less risky when seeking higher management approval, or conversely, to appear more risky if this suits his purpose. Hermalin identifies such misrepresentation as a problem of agency which cannot be managed through contact design on the basis that a contact cannot be insulated from the market and, therefore, it will always underpin the manager’s career concerns.

Tying back to the Kahneman and Tversky (1979) and Bowman (1980) Shapira (2002) argues that executives are more likely to take risk when they are unlikely to meet targets. Furthermore executives are more likely to take riskier action when their own position is threatened than when they are secure. Risk can be seen as a function of the performance gap as Shapira found that the greater the gap the greater the executive’s appetite for risk. Shapira found evidence of this position in an examination of government bond traders where “Their profit and loss figures have a profound effect on their behavior.” (Shapira 2002, p. 16). Shapira’s research also speaks to consequence in decision making provides examples individual trader’s being terminated for auctioning high risk decisions. This is an important consideration when viewed in the context of risk seeking behavior following poor performance as the only way to bridge the performance gap was to take the high risk option and if the consequence for failing to achieve target is the same, termination in this case, then there is no downside risk for the individual, only for the organization.

Performance is a central executive risk appetite in the literature, however, little is said about the influence of market share in risk decisions which is identified by Woo (1987). The potential for a correlation between market share and risk taking was examined by Woo employing a path analysis methodology. The research could only deliver a qualified conclusion that reduced risk may correlate to market share.

Determining the risk appetite of an organization will help in determining the limit to which it can accept or take a risk which eventually, affect the value of the firm either positively or negatively.Also, the ability of the firm to define its risk appetite to determine the risk management to adopt in reducing the attendant risks that are likely to affect the firm's value.

The Role and Benefits of Risk Appetite

The key role that risk appetite has to play here is in helping organization's to make better decisions. Almost all of the decisions that an organization has to make involve an element of risk, meaning that when making the decision the organization cannot predict, with absolute certainty, the outcome that will arise.

An organization with a low appetite for risk might pass up certain seemingly beneficial opportunities on the grounds that the level of return they will actually receive is too variable. In contracts an organization with a higher appetite for risk might accept the very same opportunities.

Risk appetite has a key role to play in supporting the design of an organization's strategy and the resultant achievement of its care objectives . COSO (2004) states:

A key for any organization is to balance the expectations of its various stakeholders by allocating its limited resources in such a way that it is able to maximize its overall value to these various groups. This is a difficult task at the best of times, however it is much easier to achieve where the organization has a clear picture of its stakeholders' appetite for risk.

The role for risk appetite in this context is that, if set correctly, it can be used to summarize and where possible combine the risk preferences of an organization's various stakeholder groups. The idea being that an organization should consider the views of its various stakeholders and thereby set its appetite for specific risks in a manner that achieve the best possible balance of these views.

Pursuit of profit without a defined appetite for risk can lead to disaster. Many apparent risk management failures have been caused by pursuit of profits with the risks being poorly understood. Often management makes the mistake of focusing on the appetite of one group of stakeholders without giving sufficient weight to the appetites of others

"Value is maximized when management sets strategy and objectives to strike an optimal balance between growth and return goals and related

risks, and efficiently and effectively deploys resources in pursuit of the entity's objectives".

By setting boundaries for risk taking the concept of risk appetite has an important role to play in maintaining appropriate corporate governance. The idea being that by clearly expressing, setting and

Monitoring its appetite for risk an organization can help to constrain board/ management decision-making by ensuring that they:

- Do not make decisions that expose to organization to an excessive amount of risk by investing in risk activities or reducing expenditure on risk control
- Do not make conservative decisions that expose the organization to too little risk and hence generating an insufficient return on its activities

This role is particularly emphasized by regulators and rating agencies. Some stated publicly their support for it.

"……our ERM methodology emphasizes the role that a well-defined risk appetite plays in risk governance. A statement of risk appetite can go a long way toward strategic aspects of risk taking." (Standard and Poor's 2007)

"Risk appetite defines the level and nature of risks to which the board considers it is acceptable to expose the firm. It therefore defines the boundaries of activity that the board intends for the firm. It is an essential component of risk frameworks." (FSA 2006)

The table below summarizes the various roles and benefits that can be assigned to an effective risk appetite framework

Table 1

	Benefits
Support strategic Setting	Enhanced performance by facilitating the achievement of an organizations objectives (e.g. improvement profits, growth, cost control, etc.)
	Improvement strategic planning by highlighting which risks to take and which to avoid
	Achieve a balance risk profile, thereby increasing the organization's capacity on take on risk where this is value adding (an organization that reduces its exposures to take the risk that are outside its appetite will free up capacity for the risks that it wants to take
Support risk management	Better allocation of risk management resources by targeting areas of over or under exposure
	Improvement clarity regarding the benefits of risk management expenditure leading to better board and management 'buy in '

	Foster a risk aware culture
Set boundaries for risk taking	Enhanced corporate governance leading to happier investors, regulators and rating agencies
	Decision makers are motivated to make better and more consistent decisions
Support stakeholder value maximization	Improvement management of stakeholder expectations
	Enhanced organizational performance (e.g. improved return, profit, growth, cost control, etc.)
	Value (e.g. share price) of the organization increases
Corporate governance and transparency	Improved information for external stakeholders

Source: Adapted from AIRMIC (2009)

An effective enterprise risk appetite framework should be capable of providing benefits to the organization's internal and external stakeholders, as summarized in the table above.

Methods for Expressing Appetite

As explained above the multi-dimensional nature of risk appetite means that it can be expressed in a variety of different ways. Below are some of the more common ways in which an organization's appetite for risk can be expressed.

1.Setting a boundary on a probability and impact grid.

One of the most widespread approaches is to place an organization's risks on a probability and impact matrix and then draw a line to demarcate the boundary between those risks that are deemed to be 'acceptable' and those that are not.

One benefits of this approach is that it can be applied an organization and at all levels. Moreover it uses standard risk assessment terminology that individuals should already be familiar with, which makes it easy to communicate and therefore embed within an organization. However the problem with this approach is that it can promote a negative view of risk- with action only taken where risk exposures exceed the agreed line.

2.Economic capital measures (balance sheet based expressions)

Balance sheet based measures of risk appetite, such as economic capital, can be a very effective way to express an organization's overall appetite for risk. This approach is especially popular with financial institutions where organizations set levels of 'buffer' capital that can be used to help absorb unexpected losses and or allocate their available capital to specific business units, activities and even risks.

This allows an organization to express in a few 'simple' numbers he balance it wants to achieve between its ability to absorb losses by holding surplus capital and desire to invest this capital in order to generate a positive return. The idea being that an organization with a low appetite for risk will

wish to hold more capital, thus passing up certain positive net present value investments and vice-versa.

This method of expression can also be used to modify the risk premium/hurdle rates that are applied to investment decisions, the higher the hurdle, the lower the appetite for risk. High risk premium/hurdle rates show that the organization in question requires a high level of return (that will be effectively added to its capital buffer) when taking risky investments.

3. Changes in credit rating

Another popular expression of risk appetite is to changes in credit rating. Where, for example, an organization with an 'AA' rating might state that it does not wish to take any risks that may cause a downgrade to an 'A' rating. Intuitively such an expression of risk appetite is very simple. No organization that has a credit rating is likely to want to suffer a downgrade. Hence it reason that reference should made to this when such an organization is expressing its risk appetite.

In some ways credit rating based expressions of risk appetite can even be taken as a rough proxy for economic capital based expressions, as discussed above. Both methods of expression reflect the organization's preferences regarding its 'probability of default' (i.e. insolvency/bankruptcy). Where an economic capital based expression might not prove cost effective to produce, a credit rating based expression could be used instead. In such a situation, the organization is effectively outsourcing the calculation of its probability of default to a rating agency rather than relying on its own finance staff.

However there are problems with this approach. One key issue is that it relies on the credit being an accurate reflection of an organization's exposure to risk, an area that has received significant attention during the current credit crunch. Moreover, a credit rating is a very blunt instrument that will not be very sensitive to the individual risky decisions that an organization has to make.

4.Profit and loss

Profit and loss based expressions risk appetite are often popular with shareholders and the boards of quoted companies. As with balance sheet approaches, profit and loss based expressions also have a beneficial role to play in strategy setting by helping decision makers understand the relative merits and hence weight the various outcomes that could be associated with their decisions.

However such expressions are frequently mis-understood by organizations, many of whom have an unfortunate habit of using them to only express their exposures to down side risks. This is exemplified in organizations that set maximum loss figures or issue crude statements like 'we do not wish to report a loss in any one accounting year'.

The trouble with such statements is that they can promote a negative view of risk, leading to undue conservatism by focusing attention on the maximum amount of potential loss. A good example of this is within financial services where some organizations appear to be unwittingly constraining their lending activities by setting maximum loss amounts that effectively prevent them from engaging in potentially profitable lending, because by doing so they might breach these limits in either the current or some future downturn.

5.Value based measure

Value based expression of risk appetite have received much less attention in the practical literature than areas such as economic capital or profit/loss. This arguably reflects the capital/profit based preferences of many of the current industry leaders in risk appetite thinking, that is the large financial institutions). Nevertheless the lack of attention paid to value based expressions is rather surprising given the linkages between the concept of risk appetite and ERM, which has at its heart the relationship that exists between an organization's risk profile and value.

A simple way to express an organization's appetite in terms (assuming of course that it is quoted) is to set limits around the volatility of its share price or perhaps to set a target share price. The logic being that where a quoted company suffers a sudden loss it may also see a decline in its share price. Similarly quoted companies that don't take chances may also suffer a fall in their share price, if the market assumes that this will lead to lower profits in the long run. Hence by setting volatility limits or a target share price a company can direct its attention to investments, projects and activities that are likely to achieve these targets/limits.

However such an approach clearly relies on there being a strong relationship between a company's market value and the decisions that it makes regarding its risk profile. In practice share price movements are often influenced by a range of factors that are outside of a company's control.

6.Setting limits, targets or thresholds for key 'indicators'

This method of expression for risk appetite is arguably the simplest and probably also the most widespread. Even organizations that do not explicitly state that do not explicitly state their appetite for risk are likely to have a range of indicators that set limits, targets r thresholds

Such indicators are often demarcated into one of three categories:

- Key risk indicators- that are indicators which help an organization to determine whether specific controls to a specific risk event.
- Key control indicators- that are indicators that help an organization to determine whether specific controls are operating effectively

- Key performance indicators- that are indicators that an organization monitors to keep track of its financial performance or operational efficiency.

Indicators like this can be monitored without setting limits, targets or thresholds. However, it is common to set targets so that management can monitor those indicators that most require their attention.

7.Qualitative Statements

Almost all of the organizations that formally express their appetite for risk include one or more qualitative statements. Such statements might include:

- We have low appetite for risk
- We have no appetite for fraud/financial crime risk
- We have a zero tolerance for regulatory breaches
- We will at all times attempt to avoid negative press coverage
- We will not take risks that effect quality of customer service provided
- We will committed to protecting the environment.

Such statements can be very useful and they can help to fill the gaps of an organization’s appetite for risk by expressing certain attitudes or philosophies (e.g. an organization’s wish to avoid regulatory sanction and or reputation damage) that cannot be articulated numerically. Moreover they can be applied to areas of risk that are difficult to quantify effectively, such as reputation risks. Finally, they are often easy to understand and communicate across the organization and can even be integrated within an organization’s policies, ethical statement or statement of values.

Risk Return and Firm Value

While individuals have risk preferences (and obviously act at times in a risk averse or loss averse way), it is difficult to see how firms could have risk preference in the same way that individuals do. The firm itself is merely a legal entity and Articles of Association cannot have risk preference. We cannot understand the firm as if it were an individual unless it is a one-person business. In practice, corporate decisions are made by groups of people who may have little of their personal wealth at risk. Furthermore, firms are in business to put capital at risk in order to generate return.

However this does not mean that risk does not cause a firm any problems. The best way to think about this is to investigate the impact of risk on the value of the firm-this is the maximum amount of money that the firm could be sold for. This value should be equivalent to the present value of the

firm's future expected or average cash flows discounted at an appropriate discount rate r:

$$\text{Value}=\mu v=\sum_{t=0}^{n} E\ (\text{cash flow}_{t}) / (1+r)^{t}$$

Where E denotes "expected value." (For a quoted company, this value should also be equal to the number of shares multiplied by the share price, although fluctuation in share prices makes this imprecise relationship).

There is a distinction between a firm's profit (gross of tax) and cash flows so that cash flow may be non-linear function λ of gross profits (t), that is

$$\text{Value}= \mu v=\sum_{t=0}^{n} E\ (\lambda(t))/ (1+r)^{t}$$

It follows therefore that risk will be a problem if it reduces firm value μv and that this can happen in three broad ways:

1. If risk increases the discount rate r. for quoted companies, the discount rate only reflects that risk that the shareholders cannot themselves remove by holding a diversified share portfolio (the so-called systematic risk). The tragedy is that firms find it very difficult to influence their systematic risk.
2. If risk reduces profits (t) whatever the shape of the cash flow functions. This may happen if the firm has to pay a risk premium to stakeholders who dislike risk, and/or if risk reduces profits because information is asymmetric (reading to so-called agency costs).
3. If the function λ (t) is concave, so that risk reduces E (λ (t)). not a fixed value is not a fixed value but can itself fluctuate because not all risk can be removed by risk management.

One way of understanding this risk is to cash flow λ(t) can have a variety of possible values in each year t depending on the outcome (of course, these are not known in advance). This means that value itself is risky, and we can denote risk by the term σv we may get a risk possibility frontier which we expect to be upward sloping and concave (so that reductions are only achieved by sacrificing increasing larger amounts of value). This frontier denotes the smaller level of risk σv associated with each μv. the smallest risk is that obtained after all cash flow increasing risk management activities have been exhausted (so that further attempts to reduce the left of the line is technically possible.

Developing Risk Appetite

We have identified the characteristics of an effective risk appetite statement and noted how those characteristics are useful in managing risk. We have also examined he relationship between risk appetite and risk management. Now we will discuss how an organization can bring out the many "implicit feelings" that management and the board may have about

that they believe is the organization's risk appetite and how discussion of those feelings leads to development of risk appetite.

Developing risk appetite is not an end in itself and should not require an inordinate amount of time. Remember the purposes of risk appetite are

- To provide effective communication throughout the organization in order to drive the implementation of enterprise risk management;
- To change discussions about risk so that they involve questioning of whether risks are properly identified and managed within the risk appetite; and
- To provide a basis for further discussion of risk appetite as strategies and objectives change.

Also, keep in mind that any expression of risk appetite must be preceded by a discussion of strategies and objectives. The risk appetite must be linked to those objectives.

Management often use one of three approaches to discuss and develop their risk appetite:

Facilitated discussions

Discussions related to objectives and strategies, or

Development of performance models.

Conclusion

An organization must consider its risk appetite at the same time decides which goals or operational tactics to pursue. To determine risk appetite, management, with board review and concurrence, should take three steps:

1. Develop risk appetite
2. Communicate risk appetite
3. Monitor and update risk appetite

These three steps are discussed briefly below, and in detail in the body of this paper.

Develop Risk Appetite

Developing risk appetite does not mean the organization shuns risk as part of its strategic initiatives. Quite the opposite. Just as organizations set different objectives, they will develop different risk appetites. There is no standard or universal risk appetite statement that applies to all organizations, nor is there a "right" risk appetite. Rather, management must make choices in setting risk appetite, understanding the trade-offs involved in having higher or lower risk appetites.

Communicate Risk Appetite

Several common approaches are used to communicate risk appetite. The first is to create an overall risk appetite statement that is broad enough yet descriptive enough for organizational units to manage their risks consistently within it. The second is to communicate risk appetite for each major class of organizational objectives. The third is to communicate risk appetite for different categories of risk.

Monitor and Update Risk Appetite

Once risk appetite is communicated, management, needs to revisit and reinforce it. Risk appetite cannot be set once and then left alone. Rather, it should be reviewed in relation to how the organization operates, especially if the entity's business model changes. Management should monitor activities for consistency with risk appetite through a combination of ongoing monitoring and separate evaluations. Internal auditing can support management in this monitoring. In addition, organizations, when monitoring risk appetite, should focus on creating a culture that is risk-aware and that has organizational goals consistent with the boards.

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