4.1.4 Financial Risk Self-Test Questions

Unit: Unit 1 – Treasury Strategy

Module: Module 4 – Financial risk

Date: 1 September 2016

Summary: Questions testing knowledge of financial risk

Keywords: risk framework, risk measure, uncertainty, risk budgeting, governance, taxonomy, crossover risk, internal and external risks, continuity of risks, transferability of risks, committed and uncommitted risks, rewarded versus unrewarded risks, time horizon

Question 1
Reconcile the following two statements:

a) Shareholders want risk so that the company they own becomes more profitable and valuable.

b) A reduction in risk will enhance the value of a firm.

Question 2
a) Using the risk management framework, write two sentences against each stage on how an airline might approach the management of fuel price volatility.

Stage	Comment
Risk identification	
Risk assessment	
Risk evaluation	
Risk response	
Risk reporting	

b) What *type* of risk is fuel risk and how would you *classify* it?

Question 3
Is it always possible to measure risk? Does this make any difference as to how risk is managed?

Question 4
What is the history of the approach to risk management in the financial sector for market risk and what influence has this had on corporates?

Question 5
What is the risk budgeting process?

© Association of Corporate Treasurers

Question 6
Describe the typical governance structure in a UK quoted public company.

Question 7
Describe the risk framework in graphical form.

Question 8
What is a risk taxonomy? *Briefly*, what does it provide?

Question 9
What is a crossover risk?

Question 10
The ACT adopts a Business v Financial Risk v Operational Risk Taxonomy. Describe some other analyses of risk which might add value to this taxonomy.

© Association of Corporate Treasurers

Answers

Answer 1

The two statements are not contradictory even though they may appear so. Companies take risks so that they may find profitable lines of business; these are the risks that they are "expected to take" by their investors. These risks will enhance the value of the firm only if the ventures are successful. If a venture or risk is not successful, then the value of the firm diminishes. However, shareholders are looking for the firm to invest in risks that are understood and part of its core business, rather than risks such as those of fire, floods or excessive credit risk. These latter are risks whose impact the company is expected to avoid, or to take actions to reduce, by, transfer or reduction.

Firms who show they can produce successful ventures from the risks they are expected to take, while successfully avoiding, transferring or reducing other types of risk where investors do not expect losses, will have more potential investors and a lower cost of capital which enhances firm value. A firm which is more successful at managing risk in a venture (and hence making it a success) will be valued more highly than another which does not manage the risk so well.

For a given level of risk, a lower cost of capital will also enhance the value of the firm.

Answer 2

a)

Stage	Comment
Risk identification	Fuel is clearly a major component of cost to an airline; say 30-40% of sales and its volatility is obviously a threat to objectives such as profitability. Such increased costs may be passed on to customers but not easily.
Risk assessment	The assessment of risk can be estimated by multiplying the volume of fuel purchased by price volatility, reduced by the extent of any surcharges or price rises that may be achieved. The risk assessment phase establishes an initial priority for further analysis. At the risk assessment phase, the risk needs to be classified into "expected to take", or "expected to reduce impact", as this will impact priority for further action.
Risk evaluation	More refined analysis can then be performed, in priority order per risk, as suggested by the risk assessment phase. In this case, the volatility of the fuel price, both historically and forward-looking as implied by the market can be used to assess likely probabilities and impacts. Value at risk techniques can be applied to quantify the probability and impact of the risk.
Risk response	Once the risk has been objectively evaluated, responses can be proposed. Responses can be combined to manage a single risk. In this case, one alternative could be to protect the price list fully for the next twelve months. A second could be to limit value at risk in the fuel price to a percentage of sales or percentage of projected earnings.

Stage	Comment
Risk reporting	Price, hedge horizon and value at risk can be reported almost continuously. A committee can be established to monitor these reports.

b) Fuel risk is a complex risk to classify. Airlines cannot be expected to operate at a loss and so ultimately any change in costs, both up and down, has to be passed on to customers. This may or may not affect demand for flights – compare car miles, which do not seem to change much according to the fuel price. In the short run, however, are issues of competitiveness. The first airline to raise prices may lose customers. Fuel price risk is clearly a sector specific risk and is both a business risk and a financial risk. It is continuous and strategic. It is transferable to customers in the long run and to the financial markets (or to suppliers) in the short run. It may also be that shareholders should actually carry the major risk, so the "expected to…" decision (and communication to investors) is key.

Answer 3

There are three academic approaches to risk.

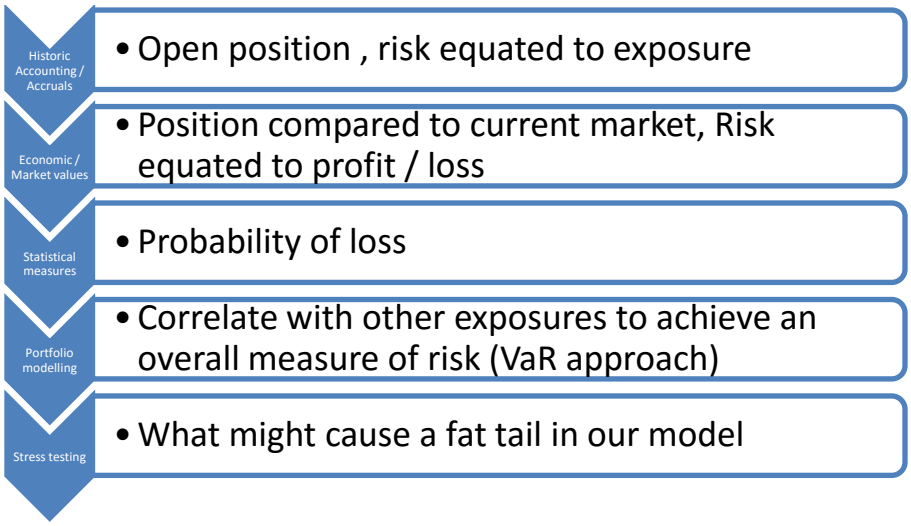
Knight, in a seminal work of 1921, felt that some risks were easy to measure, in fact almost to the extent that there was no risk, whereas other risks (called Knightian Uncertainty) defied measurement. The category of measurable risks would include, for example, those risks that are insurable, where on average, the loss rate across a population remains very stable.

Hubbard, writing more recently, says that both risk and uncertainty can be measured. Indeed, he believes that everything can be measured.

Taleb, author of the Black Swan theory, makes no distinction between risk and uncertainty and broadly reacts against measurement, because measurement will lead to optimisation, which is fundamentally weak, preferring the approach of robustness.

It is up to individual and firm culture as to how they approach their own risk issues. Treasurers and firms have to interact with the financial community and many ideas are ingrained into how that world works, whether right or wrong. There is no doubt that a measurement approach has many virtues, as it leads naturally to a budgeting type approach. It is always useful, however, to maintain a certain scepticism to measurement and keep a qualitative, 'gut feel' or commercial approach alive as well.

Answer 4

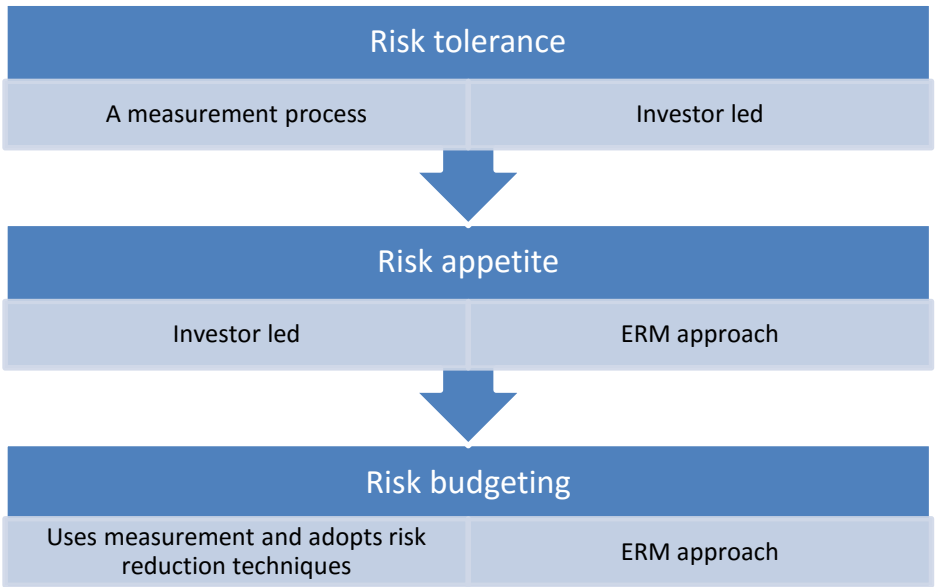


The diagram shows a rough history of market risk as applied in the financial sector. The credit crisis has caused the financial sector to think more deeply about risk and consider much more about what can go wrong, hence the 'fat tail' approach, as well as stress testing and reverse stress testing.

The corporate sector has been slow to adopt the detailed measurement approach involved with (for example) VaR and has probably resisted it because of the widely held view of its failure in the financial sector. However, modelling is still catching on and the corporate sector is slowly becoming more scientific in its approach.

Answer 5

The risk budgeting process can be summarised in the following diagram:



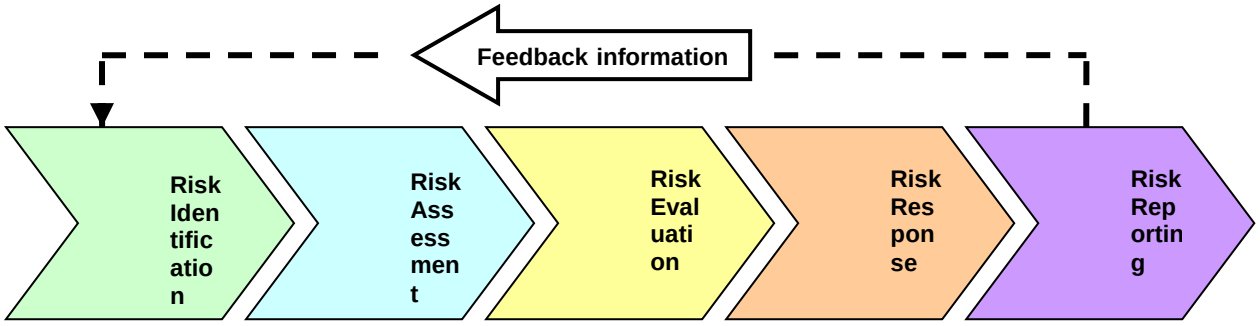
Answer 6

The Board of the firm is the representative of shareholders; it has the ultimate responsibility for risk management. However, the Board cannot conduct risk management on its own. It must decide what it must reserve for itself and what it must delegate. Remember that risk management is about enabling risk taking as much as about limiting risk. A common model for boards to take is that risk management tasks are delegated to a sub-committee of the Board, usually called the Risk Management Committee (RMC) – or an equivalent name. The RMC is made up of selected Board members together with senior managers; the role of an RMC is to establish an overall risk management direction, a clear vision for risk management which is supported by policies and operating principles.

The RMC must strike a balance in its approach to risk between risk taking and risk aversion. Where it is risk hungry it might allow empowerment, with significant delegation and reporting by exception, whereas in risk aversion, it will require significant sign offs and regular reporting. This highlights the issue where a firm may have different risk appetites for different risks. It may, for example, be aggressive on pushing new products but risk averse on foreign exchange risk.

The language of risk is changing. To add to the familiar Key Performance Indicators (KPIs), are the emergence of Key Risk Indicators (KRIs) and Key Control Indicators (KCIs).

Answer 7



Answer 8

A risk taxonomy is a comprehensive, common and stable set of risk categories that is used within an organisation.

- By providing a comprehensive set of risk categories, it encourages those involved in risk identification to consider all types of risks that could affect the organisation's objectives.
- By providing a common set of risk categories, it facilitates the aggregation of risks from across the organisation.
- By providing a common set of risk categories, it allows consistent treatment of similar groups of risk, including empowerment of risk taking in some areas and limiting risk in other areas
- By providing a stable set of risk categories, it facilitates comparative analysis of an organisation's risks over time.

Answer 9

A crossover risk is one that might sit inside two different categorisations in a taxonomy. A classic example of a crossover risk is fuel price risk inside (especially) airlines and other

transport firms. The airline (and its investors) do not expect to profit from movements in the fuel price. The fuel risk is a financial risk, as the fuel price is traded and it shows similar characteristics to foreign exchange risk, but it is also a business risk, in that the approach to pricing and the long term demand for travel may well be affected by the fuel price. So the fuel price will have an influence over profitability, despite the intentions of management. Other examples include foregone exchange risk and interest rate risk inside firms such as property companies.

Answer 10

- internal and external risks
- continuity of risks
- transferability of risks
- committed and uncommitted risks
- rewarded versus unrewarded risks
- time horizon
- group versus subsidiary