Ready for battle

EVEN FOR THOSE WHO BELIEVE THE WAR ON RECESSION IS PAST ITS WORST, RISK MANAGEMENT REMAINS A CRITICAL DANGER FOR TREASURERS TO TACKLE. **WILL SPINNEY** MAPS OUT A STRATEGY.

Risk arises from being in business and while investors wish firms to take some types of risk, so they can earn a return above that available on a risk-free investment such as a government bond, there are some they don't wish to see the firm suffer from. Categorising risks allows them to be more easily identified and grouped to ensure their consistent treatment within the firm. Some risks cannot easily be categorised and the analysis can be subjective, but we split them into business, financial and operational types, leading to a deeper analysis of financial risks. Two major crossovers between financial and business risks, which can be hard to categorise, are discussed.

RISK CLASSIFICATION The purpose of classification (or risk taxonomy) is to help in identifying risk sources and to allow consistent treatment for similar groups of risks.

Unidentified risks are inevitably unmanaged, and therefore potentially a threat to the firm. If similar risks are treated in different ways then unexpected effects can be anticipated. Classifying risks allows the firm to manage them in the same way and with the same team.

Different treatment of risks are shown in this example.

Confused plc has two divisions, both of which are allowed to make their own risk policies. UK Bread Maker Ltd (UKBM) buys wheat for its production process and always buys wheat at the spot price for immediate delivery. US Bread Maker Inc (USBM) buys wheat for its production process and buys as far forward as possible, thus fixing the price long into the future. Overall the firm's profitability has become hard to predict or manage because the effect of a changing wheat price is subject to two different and opposing policies. Given the inter-related nature of risk, any classification is inevitably an imprecise process.

One way to classify the risks faced by a corporate organisation is to group them as broadly as falling into main areas. Note that this risk classification is from the perspective of a corporate treasurer and so focuses on financial risks rather than business or operational risks. While the management of both business and operational risks are of course integral to the success of the firm, we will concentrate primarily on the financial risks.

Risks can be broadly classified into those that firms are expected to create value from, ie business risks, and all others which they are not expected to create value from, ie financial and operational risks.

Business risks typically result from or are associated with the core competencies of the firm. Investors invest in the firm because they expect it to create long term shareholder value through a managed acceptance of these risks.

There are other risks that an investor does not wish to be exposed to. Investors expect management either to avoid them outright, or to take action to reduce the impact on the firm if they do occur, either internally or by transferring the risk to others. They include:

- **financial market risk**: where movements in prices on markets such as interest rate or foreign exchange or commodity rates[1] can affect the cash flows of the firm.
- **other financial risks**: including how heavily a firm depends on borrowed funds to finance its operations, and its ability to cope with events or credit risk where failure of a customer or bank could affect its cash flows.
- **operational risks**: those relating to the production facilities or anything connected with the firm's routine operations.

BUSINESS RISKS Investors expect the firm to take these and are why they invest in the firm. They expect management to create value from them so they are associated with the core competencies of the firm. Examples include the introduction of new products or the scrapping of old ones, entry into new

or withdrawal from old markets, risk in large contracts, expenditure on research and development, volume of sales, exposure to competition in pricing and products, acquisitions and divestments and so on. The board should decide which risks will be explicitly accepted by making strategic business decisions. The role of the treasurer is to support this process.

Business risks are associated with the financial outcomes from the firm's operations: for example, has profitability been higher or lower than expected? The risks relate to the success of the company: whether it is operating as expected and can therefore service debt and make repayments; whether it can make planned investments and so on.

The treasurer must understand the variability of the firm's performance and assess risk in that context.

- **Crossover risks**: This category is hard to classify as either wholly business or wholly non-business (typically financial) risks.

For instance, the method of financing chosen by a firm, hopefully with agreement from shareholders, can be either aggressive or conservative. Aggressive financing implies a heavy reliance on debt financing, and an increased risk of insolvency. Conservative financing implies less reliance on debt financing, and a lower risk of insolvency. Equity (and debt) in aggressively financed firms is more risky, so investors seek a higher return on their investment.

Private equity investors explicitly seek higher equity returns by adopting aggressive financing techniques, ie the firm is expected to create shareholder value by accepting this financial risk. It may spill over into issues such as maintenance of capital expenditure and management of working capital and may be construed as forming part of both business and financial risk.

For example, two utility firms share similar profitability records but are financed differently, one entirely by equity and one with large levels of debt. Their performance in year 1 can be summarised as follows:

	Utility A	*Utility B*
Profits	1,000	1,000
Interest	Nil	(600)
Tax at 35%	(350)	(140)
Profits for shareholders	650	260

In the second year, the profits fall by 25% and their performance can now be summarised as follows:

Profits	750	750
Interest	Nil	(600)
Tax at 35%	(262.5)	(52.5)
Profits for shareholders	487.5	97.5
Fall in profits for shareholders	25%	62.5%

The firm financed by debt is seen to be a lot more risky than the firm financed entirely by equity. Thus, the riskiness of the equity is affected by the financial risk. This can be viewed as both business and financial risk.

The business of some firms is inextricably linked to some financial market or raw material price exposure and it is hard to categorise such risks into any one type. Typical examples are firms which manufacture a product in one country but market it in another, or where a raw material is so important to the business that its price affects demand for the product.

THE TREASURER MUST UNDERSTAND THE VARIABILITY OF THE FIRM'S PERFORMANCE AND ASSESS RISK IN THAT CONTEXT

Rolling Racers plc illustrates business and foreign exchange risks. It has a major cost base in GBP, as its manufacturing plants are in the UK, but its market is predominantly in USD. It thus has to sell USD to meet its GBP costs and the foreign exchange exposure is such a fundamental part of the business that foreign exchange risk is a business risk, even though it is in the form of a financial risk. Management will take action to minimise this risk by strategic decisions such as placing new manufacturing plants in locations with USD costs. The response to the risk is strategic and not purely financial, although financial instruments will be used.

Business and commodity price risk can be seen in the example of Flycheap SA, a low cost airline. Demand for air travel depends partly on the cost of tickets, so that increases in ticket price caused by fuel price rises will cause a reduction in sales if the fuel costs are passed on to customers. Thus the fuel price will influence strategic business decisions for Flycheap as there is no long term financial response.

FINANCIAL RISK The key area where treasurer's expertise is called for is here, and it is where most treasury activity takes place. However, it is vital that companies address financial risk in the context of the business, and not for its own sake.

Financial risk can be divided into market, liquidity and credit. Although such categorisation is convenient, usage and definitions vary and boundaries between categories are blurred. For example liquidity risk magnifies others, such as market and credit risk, and cannot be divorced from them.

- **Financial market risk**: This is where business performance is affected by movements in financial market prices or rates such as those in the foreign exchange market. It may result in a profit or loss, and is what derivatives were designed to manage.

Foreign exchange risk is that expected cash flows from overseas investments, or trade in foreign currencies, will be adversely affected by fluctuations in exchange rates. As a result the value of a foreign currency receivable or payable when converted into the currency of the country where the business is located may be more or less than expected. This risk can arise on uncommitted, committed and future transactions, and on the translation of assets, liabilities and profits for accounting purposes.

Interest rate changes can also affect the cost of borrowing and the value of investments such as bonds.

Commodity risk refers to the uncertainties of future market values and income, caused by fluctuating commodity prices – grain, metals, fuel (coal, jet fuel, gas), electricity and so on.

THE FIRM FINANCED BY DEBT IS SEEN TO BE A LOT MORE RISKY THAN THE FIRM FINANCED ENTIRELY BY EQUITY

Price risk is that the value of an investment you own will fall. It is a combination of interest rate risk, credit risk and market liquidity. These interact:

- Interest rate risk – interest rate fluctuations affect the value of instruments which pay fixed interest.
- Credit risk (see below) – the asset is worth less because the issuer's credit has weakened.
- Market liquidity risk – the market is only willing to buy the asset at a lower price (if at all).

Price risk shows how risks can be bundled up into a single term in some applications, and how important it is that the treasurer understands how risks originate. Although a single term can be useful when considering an asset or liability class, it can also confuse.

- **Liquidity risk** Since liquidity is access to cash, liquidity risk revolves around fluctuations in the ability to access cash when it is needed. It is very difficult to find a universally accepted definition of liquidity risk, although it is commonly accepted that it comes in two forms – funding and market. Funding liquidity risk is defined as a firm's inability to obtain funds to meet cashflow obligations (because of issues about itself), whereas market liquidity risk refers to the danger that market transactions will become impossible due to market disruptions or inadequate market depth. The two forms cross over however – for instance if commercial paper or bond markets dry up that is market risk, which will immediately become funding risk if the borrower has insufficient committed bank facilities to act as a stop gap.

Liquidity risk can occur if the liquidity obtained from either the asset or the liability side of the balance sheet is less than expected, income is not converted to cash or liquidity needs are more than anticipated. This suggests that it may result from any or all of the other categories of risk. It is important for treasurers to recognise the overlap that exists between and among these different types of risk, as they can all have a considerable impact on a liquidity risk profile of a firm. Hence, risk managers are generally most concerned with the company wide implications of liquidity risk.

- **Credit risk** Many organisations extend trade credit, use derivatives and borrow, and credit risk occurs when a counterparty fails to honour its side of the contract. The deterioration of credit quality is also a source of credit risk through the reduced ability to issue debt or borrow.

Counterparty risk applies whenever the firm is exposed to non-performance by a counterparty. It therefore includes the credit risk of a customer failing to pay for goods or services. However the term is more often applied to market counterparties; for instance a foreign currency counterparty failing to deliver the currency purchased after you have paid away your currency sold, or becoming insolvent before maturity.

Sovereign risk is important because it indicates the maximum creditworthiness of a counterparty – no organisation can be more creditworthy than its home country's central bank. Sovereign risk also includes concepts such as expropriation, war and civil unrest.

Pre-settlement risk involves one party becoming insolvent before delivering its side of the contract. For treasurers it is vital that hedging counterparties remain solvent for the duration of the contract – otherwise the hedge evaporates. A similar risk occurs in commercial contracts. Customers may become insolvent before paying for goods, and supplier insolvency may threaten production schedules.

There is little upside opportunity with regard to credit risk.

OPERATIONAL RISKS These, such as failure of production facilities, staff failures, criminal activities, litigation, external events, processing and system failures as well as failures in compliance, fall into the category where investors expect firms to minimise their impact. There is usually no upside with operational risk, things can only go wrong. Operational risks often arise from procedure and internal control related issues, and are often unrewarded risks, ie those which investors expect to be controlled and which if taken offer no reward. The corporate treasurer can act as an internal consultant for the business, either looking at commercial procedures and promoting best practice, or advising on insurance or sharing of operational risks. In addition, the corporate treasurer has a responsibility to minimise operational risks for his own department and processes.

OTHER WAYS OF VIEWING RISK It can be useful to assess risks along different dimensions so they can be better classified, in turn aiding management decisions.

- **Internal and external risks** An ill-conceived acquisition is an example of an internal risk, while a change in legislation is external. However, the division of risk into internal processes and external environmental factors is somewhat arbitrary, and strong interdependence is almost inevitable between them.
- **Continuity of risks** Risks can also be continuous or event led. Continuous risk is caused by a source that can constantly change, for example foreign exchange rates. Event risk is caused by something specific like a fire.
- **Transferability of risks** Transferable risks can be transferred to someone else, for example hedged with risk management products, or passed to an insurer. In this way you can export transferable risks out of your firm (for a price). A foreign exchange exposure is a transferable risk. A firm can eliminate it by entering into a foreign exchange transaction with a bank, thus fixing the rate and making its risk the bank's.

Non-transferable risks must be borne by your firm. They might be avoided, accepted and retained, or reduced as appropriate. In the case of non-transferable business risks it is important your firm has distinctive competence in the relevant areas. For example, a pharmaceutical company's non-transferable risks would include failure to gain approval for use of a new drug, wasting research and development costs.

- **Committed and uncommitted risks** There is a further split. Committed risks are irrevocable. They include firmly negotiated sales and purchase contracts, rental or lease payments, pensions to prior employees and sometimes commitment to new products, such as a new car model. They also include committed financial flows like loan principal and interest payments, dividend, and tax payments.

Uncommitted risks can be defined as those potential transactions which can be anticipated as part of your firm's business. Your firm might not be committed to such transactions but it is very likely that they will occur. Such risks may include the next renegotiation with regard to raw material purchases (for example aircraft fuel), even if some way in the future – the next product launch, such as new car model in five to seven years time. It also includes anticipated future currency inflows from sales, or currency outflows for raw material purchases and anticipated financial flows such as interest payments, dividends and tax payments. One off transactions such as an acquisition could also be considered and future capital expenditure should be included as all firms need to invest for the future.

The identification of such uncommitted risks requires a detailed analysis of your business and an understanding of its future growth and development plans. They can be seen as strategic or economic in that they affect the future profitability and perhaps viability of a firm.

Suppose for example that your firm is based in Australia. It imports substantial quantities of goods from Germany, paying EUR for them. It sells them in Australia for Australian Dollars (AUD). Firm orders are made for these goods three months in advance. The profitability of the firm compared to its competitors and peers will depend partly on the extent to which they also import from Germany and sell in AUD, and partly on your firm's ability to pass on adverse price fluctuations to customers. Overall sector profitability will be similarly affected.

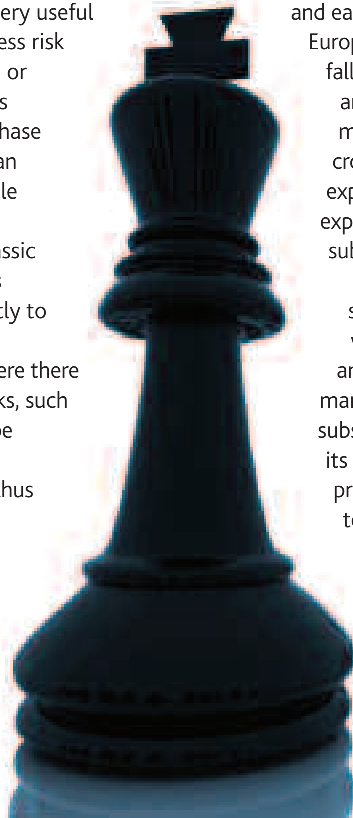
The risk is continuous as it does not depend on a particular event, so it is always present and needs continual management. (If it were dependent, measures should be taken immediately to minimise the possibility of the event taking place, to warn of increased probability of it happening, and to mitigate the effects of it having taken place.)

The risk is transferable; the rolling forward orders are committed risks (and form an exposure), and the remaining relevant planning period is an uncommitted or strategic exposure. As time passes and orders are issued, uncommitted risk becomes committed.

- **Rewarded versus unrewarded risks** This can be very useful as it can indicate whether a risk is a legitimate business risk (and therefore consistent with the business strategy) or not. A classic example of a rewarded risk is a business investment decision, such as an acquisition, the purchase of a new machine or launch of a new product. Such an investment will be made because there is a reasonable expectation of a return, and hence ultimately an expectation of an increase in shareholder wealth. Classic examples of unrewarded risk are operational, such as systems failure, fire or theft, all of which may be costly to manage, and for which there is no return for taking.

Clearly risk which is unrewarded is best avoided where there is no cost to doing so. However, many unrewarded risks, such as fire and theft, are inevitable in business, and must be managed as cost-effectively as possible. The cost of managing unrewarded risks must be covered by (and thus erodes) the returns earned from rewarded risks.

- **Time horizon** The optimum time horizon for risk management varies between markets and firms. If future cost changes can be passed on to the customer then input price risk may be predominantly of a committed nature, and may only require management over a limited time. This may be the case if contracts are negotiated on a one-off basis, or if the customer relationship supports the ability to pass on price changes.



For example, a manufacturer of industrial heat exchangers may make a product which includes a rare metal that is volatile in price. It is market practice to make quotes for the products on the basis of a variable price for that particular component. When a customer makes an order the metal is in turn ordered and its price on that order incorporated into the sales price of the heat exchanger. The manufacturer has a very short term horizon for input price risk.

By contrast, firms in a highly competitive environment may find that input price increases fundamentally erode their business margins. They need to take a much longer perspective on the management of risks such as interest and exchange rate exposure, and manage strategic exposures in addition to transactional ones. This is particularly important if the firm has a long product manufacture, delivery, sales and payment cycle.

For example, a manufacturer of confectionery prices its chocolate bars on a long term basis, managing prices at significant levels such as 39 pence or 49 cents to set down its place in the market against its competition. It cannot easily change these except over long periods, perhaps by changing the bar sizes. It therefore carries raw material risk until it can pass on those costs in the long term.

- **Group versus subsidiary**: Within a group there is also the issue of overall group performance versus the individual performance of a subsidiary. From a group perspective it is sensible to consider only "grouped" exposures, in other words it may be that several subsidiaries buy goods in currency A and other subsidiaries sell goods in currency A. So long as exposures share the same economic effect then it would appear sensible to only consider the net exposure as a risk to the group. But individual subsidiaries monitor their individual exposure to protect their performance and each will be subject to competition, possibly threatening this model. Here subsidiary management performance measures may be in conflict with group shareholder value enhancement.

The pitfalls in managing subsidiaries can be illustrated by Moulded Holdings plc. It has subsidiaries in the US and Europe and each has a niche market in the alternative continent, ie Europe exports to the US and the US exports to Europe. A fall in the Euro makes the US exporter less competitive and at the same time makes the European exporter more competitive. Moulded Holdings plc decides to cross subsidise the units and maintains prices for the US exporter. However, competition for the European exporter forces it to reduce prices in turn, making the cross subsidy unworkable.

But the conflict can also arise between group and subsidiary. Worldwide Flogger Inc is a US quoted group with subsidiaries all over the world. It reports in USD and is measured by analysts on that basis, and its management accounts are calculated in USD. Its UK subsidiary trades almost exclusively in GBP and submitted its plans in GBP which were then translated into a USD profit target. The UK subsidiary beat its budget in GBP terms but a falling GBP meant that it failed to meet its budget in USD terms, causing bonuses and future investment to be put at risk.

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[1] Although for some companies, such as oil or mining companies, commodity risk will be intrinsic to the business, and is unlikely to be classed as a business risk