Spotlight CDP Quiz

Alternative Risk Transfer
Worked Solutions

Question 1

There is a convergence of corporate finance and risk management, in that the raising of capital and risk management are becoming more and more inextricably linked – particularly in the understanding of how risk management can impact on the capital structure of the business. Alternative Risk Transfer is a term being used with increasing frequency. Which of the following is the best description of what the term means?

(a) the convergence of corporate finance and risk management
(b) the use of insurance contracts to finance or transfer risk in a non-traditional way
(c) the increasing use of traditional insurance products to replicate derivatives, thereby avoiding unwanted accounting complexities
(d) The innovative use of existing financial derivatives
(e) don't know

Answer
The right answer is (b) the use of insurance contracts to finance or transfer risk in a non-traditional way.

One part of the convergence of corporate finance and risk management is ART, Alternative Risk Transfer. This is the incorporation of insurance contracts into broader risk management to finance or transfer risk.

A good source of information relevant to all this CPD quiz is "The ART of Risk Management: Alternative Risk Transfer, Capital Structure and the Convergence of Insurance and Capital Markets" by Christopher L. Culp. (Wiley 2002)

See also:
http://www.treasurers.org/thetreasurer/resources/2004/05/May04TTGouraud57-58.pdf

Question 2

Many firms self-insure specific risks; for example a car hire company might self-insure its vehicle fleet by arranging an insurance-like transfer pricing system with premiums paid to a captive insurance company to replicate the external insurance premia to be paid.

Which of the following describes this form of self-insurance?

(a) post-loss funding of ceded risks
(b) post-loss funding of retained risks
(c) pre-loss funding of ceded risks
(d) pre-loss funding of retained risks
(e) don't know

Answer
The right answer is (d) pre-loss funding of retained risks
In these situations, many firms take the view that they have a reasonably well-spread portfolio such that their cost of insurance would broadly equal their claims experience. In addition, they are in a position to avoid the costs of moral hazard and adverse selection that would normally accompany a commercial insurance contract.

Question 3

Taking out fire insurance on your home, where the home owner is indemnified against any loss in value in the event of fire, is often compared to which of the following options?

(a) buying a put option on the value of the house
(b) buying a call option on the value of the house
(c) selling a put option on the value of the house
(d) selling a call option on the value of the house
(e) don't know

Answer
The right answer is (a) buying a put option on the value of the house
Buying a put option gives the holder the right to sell something at a given price to the writer of the option. If your house is in good order, and has not been fire-damaged, you would presumably not want to sell it. After the trigger event, a fire, you have the right to sell the house to the writer for its pre-fire value. The difference between the option and the fire insurance is that the value change on its own does not allow the "option" to be exercised, in addition the trigger event must happen, i.e. the fire. At times of declining house prices this leads to moral hazard – owners may become arsonists!

Question 4

"Finite risk products" contain elements of both risk finance and risk transfer. Which of the following is the risk that they are mainly intended to address?

(a) an overall risk is quantified but the timing is uncertain
(b) an overall risk is unquantified but the timing is known
(c) an overall risk is unquantified and the timing is uncertain
(d) an overall risk is quantified and the timing is certain
(e) don't know

Answer
The right answer is (a) an overall risk is quantified but the timing is uncertain.
Although "finite risk products" exhibit both risk transfer and risk finance, the emphasis is normally on the latter; the name "finite" indicating that the risk covered is not open-ended. As the product is more concerned with a risk which has already been quantified, the risk being covered by the product is more to do with the timing of payments than the size of those payments.

Potentially high premiums are normally offset by use of an experience account into which premiums are paid, along with the investment income from those premiums, and from which any costs / losses are deducted. Any surplus in the account at the end of the agreed multi-year period is shared according to the initial contract. As the main unknown risk for which these products are used concerns timing of known payments / costs then they must be multi-year contracts.

Question 5

ART products can be positioned along a scale with pure underwriting risk at one end and pure timing/premium reinvestment risk at the other. Which of the following best describes the capital structure impact and the risk impact of these extremes on the scale?

(a) underwriting risk corresponds to risk finance and synthetic equity
timing risk corresponds to risk transfer and synthetic debt
(b) underwriting risk corresponds to risk transfer and synthetic equity
timing risk corresponds to risk finance and synthetic debt
(c) underwriting risk corresponds to risk finance and synthetic debt
timing risk corresponds to risk transfer and synthetic equity
(d) none of the above
(e) don't know

Answer
The right answer is (b) underwriting risk corresponds to risk transfer and synthetic equity
timing risk corresponds to risk finance and synthetic debt
Underwriting risk is essentially about transferring risk from one party to another; as such it is more like equity than debt. Where the main risk involved concerns timing and reinvestment risk, then the amount / cost of the risk is already known and "just" has to be funded. The cover sought is therefore more about financing a known ultimate cost (with unknown timing) and the characteristics correspond more to synthetic debt than equity.

Question 6

Integrated risk management, as an alternative to "silo" risk management, is used to access efficiencies otherwise inaccessible.
Which of the following best describes the potential efficiencies of integrated risk management?

(a) scale economies; more hedging is placed with a single counterparty
(b) ease of administration; all external risk management is with one counterparty
(c) better tailoring and ease of administration; risk management can be more closely tailored to your company, all with one counterparty
(d) reduction of over-insurance and risk capital; if the correlation between risks is less than perfect then covering each "silo" will result in over-covering and over allocation of capital.
(e) don't know

Answer
The right answer is (d) reduction of over-insurance and risk capital; if the correlation between risks is less than perfect then covering each "silo" will result in over-covering and over allocation of capital.

If each risk is covered separately then, by implication, too much cover has been taken. There is a finite probability of each risk being maximum in any one year; if the correlation between the exposures is less than one then the overall risk is less than the sum of the constituent parts. On a risk adjusted basis, too much capital has been allocated to cover the identified risks.