KnowledgEquity – Financial Risk Management – FAQs

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Module 1 – FAQs

Figure 1.10 of the Study guide shows a histogram of Monte Carlo simulation results. There is also a tornado chart analysis under the same module. Are we required to know how to run/create these analyses?

No, you are not required to know how to run a monte carlo simulation or a create a tornado chart analysis. You should however be able to interpret the results summarised in a chart or a histogram.

The Study guide states that during the global financial crisis (GFC) the credit markets that were previously highly liquid dried up virtually overnight. Please explain what this means.

A credit margin is an additional interest rate charged by financial institutions over and above the benchmark rate (BBSW) or risk-free rate and largely depends on the credit risk of the borrower. Prior to the GFC it was easy for organisations to access funds through credit lines etc from financial institutions. The financial institutions also charged a low credit margin.

The GFC changed all that and the risk profile generally increased meaning banks started charging higher credit margins with credit lines being withdrawn. This in effect is what we refer to as credit rationing. It was much harder for organisations subsequent to the GFC to access borrowings and credit lines.

Page 35 of the Study guide says, 'investors in gold mining companies presumably want an exposure to the gold price....'. I do not understand what this means. Can you please explain.

Investors in gold mining companies are generally aware that the gold price is denominated in USD and their willingness to invest in these companies is an indication that they are comfortable with the exposure this presents to them. If the functional currency of the Company is however in AUD, investors would be exposed to the USD gold price as well as other transactions that are denominated in USD.

Module 2 – FAQs

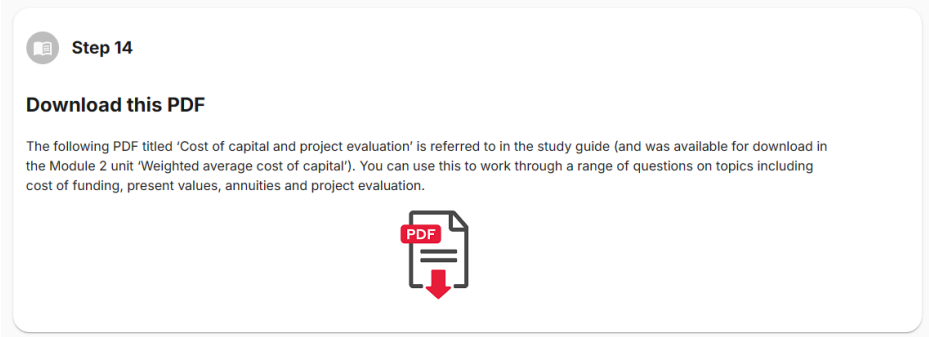
Why do we have to calculate the yield to maturity for bonds?

Trial and error is only used for bonds that mature over more than one year as there is no other direct method of calculating the yield to maturity. The other alternative is to use a financial calculator or a program to calculate it.

Page 139 of the Study guide states that a booklet Cost of Capital and Project Evaluation is provided on My Online Learning for you to use in conjunction with this module and Module 3. I cannot however seem to locate it. Where can I find it?

This booklet is now provided as part of your Guided learning resources.

It is located in the unit titled FRM M3- Part C: Capital budgeting techniques under Step 14.



Is CAPM equal to the required return on equity? I thought it refers to the cost of equity. Does this refer to the same thing?

CAPM calculates the cost of equity. The cost of equity is the minimum return that shareholders expect as a return from their investment.

Is the cash conversion cycle the same as the operating cycle?

No, the operating cycle is the period starting from when the company purchases its inventory to the time when it receives cash from its customers for its products.

The cash conversion cycle on the other hand purely looks at cash flows i.e. the period between cash outflows as a result of paying for inventory and when the organisation receives cash from its customers.

Consequently, the operating cycle is equal to the accounts payable period (from the time the company buys inventory to when it pays for it) plus the cash conversion cycle.

You can also refer to the FRM webinar where this is covered under Part B of Module 2 (working capital management) of the Study guide.

Module 3 – FAQs

I am getting a little confused about the terms; nominal and real cashflows, and how these are related to inflation? I read an external article which explained it differently. Please advise.

Real cash flows are equal to nominal cash flows less inflation. Consequently, these cash flows that have been adjusted to remove inflation. Note that most of the prices quoted in the market (e.g. interest rate on a bond) are usually provided as nominal rates.

Module 4 – FAQs

Does the counterparty in a derivative arrangement refer to the lender of the borrowing that the organisation has obtained?

No, it refers to the party that the organisation has entered into the derivative arrangement with. As an example, assume an organisation has a borrowing of $2Million at a floating rate based on the bank bill swap rate (BBSW) and decides to enter into a fixed for floating swap arrangement. The lender is the financial institution that provided the $2 Million loan to the organisation while the counterparty is the party that has agreed to enter into the swap arrangement with the organisation. These are therefore two unrelated contracts.

Module 5 – FAQs

The study guide states that an interest rate collar involves purchasing a cap and selling a floor. Does 'selling a floor' mean to sell an interest rate floor so that the counterparty has the right but not the obligation to buy the underlying instrument at the strike rate? What is the purpose of such a collar?

Yes. The organisation would purchase a Cap to hedge against rising interest rates. The organisation would however be required to pay a premium to the counterparty for the right to exercise the option if interest rates increase beyond the strike rate.

An organisation can however minimise the cost of the hedge arrangement by also selling a Floor option. This would result in the organisation receiving a premium from a counterparty who is keen to hedge against a decline in interest rates. It is therefore possible to have a nil premium/cost on the hedge arrangement.

I am a bit confused with the difference between Long Cap and Short Cap. Please explain these two concepts.

'Long' refers to the buyer, that is, from the buyer's (of the option) perspective while 'short' is the seller's perspective. As an example, the buyer of an interest rate Cap option is usually interested in limiting the exposure from interest rate risk. If interest rate goes above the Cap, the buyer will exercise the option and limit the interest rate to the Cap rate.

As an example, if interest rate in the market is 6% but the buyer has a Cap option set at 5%, the buyer will exercise the option and limit the rate to 5%. The option is therefore only rewarding (has a pay-off) if BBSW is greater than the Cap rate. The formula applied is as follows: Pay-off long Cap = Max [BBSW – Cap rate, 0]

The opposite is however true for the seller i.e., the pay-off is only realised when BBSW is less than the Cap rate since it is obvious that the buyer will not exercise the option. The formula for the Pay-off short Cap is as follows:

Pay-off short Cap = – Max [BBSW – Cap rate, 0]

The Study guide states that BP has a functional currency that is different from its presentation currency, this is however not the case based on its annual reports.

At the time of the merger/acquisition BP's reporting currency was GBP however since 1999 the group has reported in USD. CPA has noted this for update in the next Study Guide.

Appendix 5.1 in the Study Guide has the solutions to the questions but there are no questions?

Please ignore the Appendix 5.1 Solutions, CPA has noted this for update in the next Study Guide.

Module 6 – FAQs

I would like to have some clarity in regard to the treatment of the cost of premium/options. In Example 6.7, the cost of the option has been subtracted in calculating the effective exchange rate whereas in Question 6.6 (b) the option premium has been added.

This is because of the difference between the objectives and needs of an exporter and an importer. When importers pay a premium, it further deteriorates the currency (remember a stronger currency is better for an importer) and hence you deduct the premium as it further deteriorates the effective rate. The exporter on the other hand benefits from a weak AUD and so the premium will be added as it is an additional cost to the exporter.

The study guide states that one of the advantages about hedging with forward exchange contracts is because FECs can be pre-delivered or extended. What does this mean?

This generally tends to happen when the organisation uses FEC to hedge forecasted transactions. The actual timings may become clearer as time progresses and the organisation may wish to either extend or bring the FEC date forward. If this occurs an adjustment may be required to the agreed FEC rate.

Is there an error in Example 6.4 – Foreign Exchange Sensitivity Analysis?

(see 'example 6.4, page 233')

Yes, there is an error under Example 6.4. See the highlighted figure in the below screenshot

It is calculated as USD 3,000,000/0.95 = **$**3,157,895 (USD costs converted to AUD).

EXAMPLE 6.4

Foreign Exchange Sensitivity Analysis

An Australian-based company has revenue of AUD 10 million and costs of AUD 5 million and USD 3 million. Its target profit margin is 10 per cent. The following analysis shows that at the current exchange rate of AUD/USD 0.9000, the profit margin is AUD 1.67 million or 17 per cent. A decline in the AUD/USD exchange rate to AUD/USD 0.7500 results in the profit margin declining to the company's target of 10 per cent. Below AUD/USD 0.6000, the company is making a loss, unless it can increase revenue or cut costs.

FX sensitivity analysis

AUD sales	AUD costs	USD costs	AUD/USD	USD costs converted to AUD	AUD profit margin	AUD profit margin %
10 000 000	–5 000 000	–3 000 000	0.45	–6 666 667	–1 666 667	–17
10 000 000	–5 000 000	–3 000 000	0.50	–6 000 000	–1 000 000	–10
10 000 000	–5 000 000	–3 000 000	0.55	–5 454 545	–454 545	–5
10 000 000	–5 000 000	–3 000 000	0.60	–5 000 000	0	0
10 000 000	–5 000 000	–3 000 000	0.65	–4 615 385	384 615	4
10 000 000	–5 000 000	–3 000 000	0.70	–4 285 714	714 286	7
10 000 000	**–5 000 000**	**–3 000 000**	**0.75**	**–4 000 000**	**1 000 000**	**10**
10 000 000	–5 000 000	–3 000 000	0.80	–3 750 000	1 250 000	13
10 000 000	–5 000 000	–3 000 000	0.85	–3 529 412	1 470 588	15
10 000 000	**–5 000 000**	**–3 000 000**	**0.90**	**–3 333 333**	**1 666 667**	**17**
10 000 000	–5 000 000	–3 000 000	0.95	–3 529 412	1 842 105	19
10 000 000	–5 000 000	–3 000 000	1.00	–3 000 000	2 000 000	20
10 000 000	–5 000 000	–3 000 000	1.05	–2 857 143	2 142 857	21
10 000 000	–5 000 000	–3 000 000	1.10	–2 727 273	2 272 727	23

Source: CPA Australia 2023.

Module 7 – FAQs

I am having trouble understanding what an embedded derivative is. Please explain.

Embedded derivatives tend to be hidden within what we refer to as a host contract. As an example, it may be a clause within a contract with a customer which states that prices will be adjusted in line with inflation (i.e. what we generally refer to as CPI clause). This clause represents an embedded derivative.

I am having trouble understanding what net written options are. Please explain.

This is also referred to as a net sold option or position. This generally happens when one has a collar. A collar exists where one purchases a Cap (option) and sells a floor (option). A net sold position is where the floor option has a higher value than the cap option.

I am struggling to calculate the present value of the respective legs of a swap (receipt or payment). As an example, under Appendix 7.1 on Table A7.3 of the Study guide, the present value of $12,500 is $12,346. How is this calculated?

Using the example on Table A7.3, the first thing to note is that the discount rate is 5% or 0.05. Note however that this is an annual discount rate but the cashflows relate to quarterly periods. It is therefore necessary to first calculate the quarterly discount rate.

This is calculated as 0.05 X 3/12 = 0.05 X 0.25 = 0.0125 or 1.25%

You can now use this formula to calculate the present value of the notional receipt amount as follows:

PV = 1/ (1 + k) ^n)

Present value = $12,500/ (1 +0.0125) ^1

Present value = $12,500/1.0125 = $12,346

Module 8 – FAQs

One of the quiz questions on fraud states that Janice has noted that other staff are paid more than she is. Wouldn't this information indicate that rationalisation exists?

This is not necessarily the case. For rationalisation to occur, the person must be affected emotionally to a point of being able to justify a wrong action. While Janice is aware that others are paid more highly than she is, there is no indication that she is bitter or complaining about it.