2.2.4 Modcon Exercise Part 1 Answer

Unit:	Unit 1 – Treasury Strategy
Module:	Module 2 – Risk and return
Date:	1 September 2016
Summary:	A project evaluation case study requiring the identification of operating and investment cash flows, NPV, PI and IRR followed by comment on the attractiveness of the proposal and identification of major risks for a given scenario.

This exercise is designed as a test of the knowledge of discounted cash flows and the relevance of various cash flows. However, it is a much richer exercise than simply that test and so we have taken the opportunity to hint at a rather fuller answer around all of the risks involved in the project. This is based on a real example and typifies how the treasurer must stay alert to all the issues. We investigate some of these further issues in Modcon Part 2.

Answers 1 and 2

Ungeared Project Analysis and Profitability Index Calculation: refer to accompanying exercise spreadsheet answer.

Answer 3

Summary of financial attractiveness of project

- At a WACC of 15%, the project has positive NPV of some $1.3million. Assuming that this is on an “all-in” basis, i.e. the cash flow forecast is complete and accurate, and that the WACC is a reasonable reflection of the required return, the project should be proceeded with.
- The IRR of the project is some 20% - required project returns would have to rise by some 33% over current levels to render it non-value adding, which should be a reasonable margin of safety.
- The profitability index of 20% is again reasonable. Note that this takes into account effectively giving the entire development back to the Qatari authorities at the end of the 10 year project life.
- There is also a supply contract with Modcon (Homes) UK for the supply and erection of the prefabricated homes. This will bring turnover and (we assume) profitability in addition to the local contract itself, although there will be working capital considerations and other risk issues.
- HOWEVER, despite the headline financial attraction of the project, there remain important uncertainties over it. These and the possible splits of the headline return are discussed below.

Answer 4

a) Major risks relating to the project's cash flow

1. Full rental income is assumed for 2015 although construction costs are still being incurred - this looks optimistic. Partial rental income is also assumed for 2014.

2. Rental income is constant - is this contractual? If not, what about inflation? With an interest rate of 8% zero inflation seems unlikely. Same with electricity receipts. It is, however, conservative although rental inflation could be negative if, say, much supply of homes comes on the market.

3. Has 100% occupancy been assumed throughout?

4. Construction costs are mainly incurred within the first year. Since the amount is large, is this reasonable or might there be delays? The other risk also is cost over-run if not fixed price contracts.

5. What is the profitability of the contract to supply and erect the houses and which will accrue to the parent in the UK.

6. Ground rent is constant - is this contractual? If not, what about inflation?

7. The operating unit should be queried over its interest calculations correlated with the detailed timing of its loan and other cash flows.
   i) Working from the interest charge of $320k in project year 1, the model seems to imply that the loan is drawn either evenly through the year, or 100% at mid-year – this needs to be correlated with the terms of the loan agreement.
   ii) In project year 2, loan interest of $576k implies an average drawdown of $7,200k – so the first repayment of $1,600k seems scheduled for mid project year 2. If so, it is unclear how this is to be funded – anticipated rentals in the first half of year 1 may be insufficient to fund both the balance of the construction payments (surely due in full in the first half?), together with other costs and the loan repayment.

b) Other risk factors

1. The project has been viewed on the basis of the ungeared cash flows accruing to the project. This analysis is useful but ultimately it is cash flows to the parent which are important. Is the discount rate applied appropriate for the risks in this project? It is notoriously difficult to calculate a cost of capital because of the different outlooks of the different investors. It can be useful to consider their point of view, whether they have further access to capital in case of problems etc. It is very common for such investors to plead poverty in the knowledge that the foreign investor may have deep pockets.
2. A full equity analysis should also be carried out on the cash flows accruing to the parent. This will analyse the flows of the USD 500,000 (half the equity), plus the cash flows accruing on the supply contract. Even though this project involves a subsidiary, there are still risks of trading with a foreign customer.
3. Ten years is a long time-scale for international companies and their expatriate staff - a lot can change in that time. How far forward can contracts ensure full occupancy? And they only have letters of intent. There is considerable market risk here with

potential supply / demand imbalance. What support for occupancy can be obtained locally? Can the lessor be persuaded to take an interest (see below)? What is the fallback if occupancy is too low? Sell back? To whom? Alternative uses? At what cost to redevelop?

4. Completion on cost and within the two years depends first on the local contractor. Can the former be effectively covered by a performance bond and a tight contract? (Recall the contractor is connected to the lessor, who is the ruler of Qatar).

5. Second, completion depends on Modcon (Homes) and Modcon (Qatar). These are the infrastructure and supply risks. The external supply of homes can be covered by a performance bond. The detail of the management between Modcon (International) and Modcon (Qatar) is also important regarding delays and contingencies. These are the construction supply and risks.

6. Technological risks, and operating risks, (apart from market risk) seem less important.

7. There is potential political and regulatory risk because of the close involvement of the ruler of Qatar.

8. In the event of delays and cost over-runs, the banks would be most at risk, therefore a standby finance agreement seems appropriate. Under this the shareholders would inject extra cash, say up to an extra 2 million dollars, as necessary.

9. Banks would probably explore the possibility, and the effects on cash flows, of increasing the original equity stake to 2 or 3 million dollars, and reducing the loan accordingly. This changes the risk / return characteristics considerably for both owners and lenders. This is an addition to the standby agreement.

10. The final package would depend on a sensitivity analysis which allowed for the likely variations in the cash flow assumptions - this is needed to help quantify the risk.

11. The most important factor for success of the project is a good working relationship between 1) the lessor / contractor, 2) the Qatari shareholders and 3) Modcon International management, both in Qatar and in the UK. Management, “control” and ownership are not well aligned in this joint venture, a situation which is not ideal. With goodwill, problems can be overcome. Without it this joint venture project looks far too risky. It has been known for joint venture partners to ‘steal’ the company, with their better local knowledge etc. In particular if the project reverts to the state, will the local investors have a greater interest in keeping them happy or the other investor?

12. There is also a currency risk regarding supply of homes from the UK (sterling cost?) into a USD project.

13. There are considerable legal risks as evidenced by the ambiguous legal opinion plus the typical conflict of land issues in the Middle East. ~~Typically~~Typically, in the Middle East, security (in the Western European sense) is operationally difficult or indeed impossible to put into effect. The security provisions are therefore representative of

the region – the charge over the project is effectively window-dressing, and the lender will actually be relying on the credit of the venture partners, supported by the guarantee. This latter is being given by an intermediate Modcon group company rather than the ultimate parent, so there is no recourse directly to the parent, although that could well mean de facto recourse to the parent. However the terms of the guarantee will have to be scrutinised carefully, and limited as far as possible. In particular, obligations under the guarantee should extend no further than Modcon's obligations to the project generally, in terms of money, share of responsibilities (i.e. related to the 50% shareholding), and duration. This does not currently seem to be the case and the bank may think it is able to rely on a whole guarantee from wholly owned Modcon (International), perhaps placing no reliance on any similar guarantee from the equity partners.

14. Remitting cash back to the UK by way of dividends or ultimately return of capital can be problematic.

c) Summary of risks and returns for participants

1. Lenders - the risks relate to the early period of the contract i.e. of delays or cost over-runs in construction, and also failure to let the homes according to schedule. The project is highly geared and there would be no worthwhile security on tangible assets because of the leasing agreement. The return for the plan described is minimal given the considerable risk, and so either the returns to lenders must be increased or the risks decreased in the final funding package.

2. Modcon (Homes) does not have an equity stake and the risk to them is low, although Modcon (International) (and hence Modcon Group PLC) does. Modcon Homes will make their profit on the contract for supply and erection of the homes and they will be paid from the proceeds of the loan. Again their risks relate to the early period and much depends on the delivery and payment terms and conditions in their contract. Do they have to start shipping before any possible site preparation problems would have emerged and when do they get paid?

3. Modcon (International) is expected to issue a guarantee for the lending.

4. The Qatari shareholders and Modcon (International) have shared the million dollars of share capital between them. Their risk is long-term - their return comes in the last five years of the project but the potential returns are excellent. All the risks affect them but they have a relatively small amount at risk.

5. The Qatari contractor gets the early profit on the construction work.

6. The Qatari lessor / contractor cannot lose. The developed property reverts to him after 10 years. If anything goes wrong and the project is ~~delayed~~delayed, he gets the land back plus any construction on it.