



**LEADING TREASURY  
PROFESSIONALS**

**The Association of Corporate Treasurers**

# **Examiners Paper, Solutions and Examiners Report**

## **MCT ADVANCED DIPLOMA GENERAL EXAMINATION**

### **APRIL 2013**

## QUESTION 1

A recent survey of North American finance professionals investigated current practice in project appraisal methodology. The results are summarised below:

Period of explicit cash flow forecasts:

5 years 38%, 10 years 35%, full project 27%

Risk-free rate instrument: 46% used the 10-year Treasury bond

Range: 90-day Treasury bills to 30-year Treasury bonds

Cost of debt:

current cost of total debt 37%

forecast rate on newly-issued debt 34%

average cost of total debt over some historical time period 29%

Tax rate for shelter of debt:

effective P&L tax rate 64%, marginal tax rate 29%, 7% a target rate

Debt to equity ratio:

current book debt and equity 30%

target debt/equity ratio 28%

current market debt and equity 23%

current book debt, market equity 19%

Project discount rates in DCF calculations:

WACC used for all appraisals 53%, higher hurdle rate or variable hurdle rates 47%.

### Required:

**With specific reference to each of the 6 findings above and concerning yourself with “best-practice” for project appraisal in a non-financial organisation, answer the following questions:**

- a) How would you choose the explicit forecast period?  
(1½ marks)
- b) What risk-free instrument would you choose and why?  
(1½ marks)
- c) Which method would you use for the cost of debt and why?  
(1½ marks)
- d) What are the pros and cons of using the effective tax rate versus the marginal tax rate? Define “effective” and “marginal” tax rates.  
(2½ marks)
- e) Which is technically the “best” method for calculating gearing and which is the “worst”? Give your reasons and identify any problems in using each method.  
(3 marks)
- f) What are the arguments for using the same WACC for all appraisals (53% of practitioners)? Why would some companies use a single higher hurdle rate or variable hurdle rates?  
(4 marks)

**(Total 14 marks)**

## QUESTION 2

You are a member of the Finance and Treasury team working for North East Builders, a construction company which specialises in work for local authorities and other public sector organisations. In 2012 North East Builders reported turnover of £158 million (excluding £24 million from joint ventures) and operating profit of £12.8 million, before exceptional charges of £1.0 million. Joint ventures contributed £8.0 million of this operating profit. The net interest charge on group and j.v. debt, was £5.6 million (of which j.v. interest was £5.4m). Group, cash balances stood at £25.4 million, group debt at £76.2 million and joint venture debt at £120 million. The CEO reported that “because of the adverse economic environment affecting the construction industry, also the UK Government’s public sector spending cuts and changes to the benefits regime, competition for new business is increasing in its intensity”.

Your company is a member of the Toon Consortium which is bidding for a 25-year project to design, build and operate a 390-unit social housing, extra-care facility, located on three sites, for Newcastle City Council (NCC). The NCC has a responsibility for, and an urgent requirement for, suitable accommodation to house its elderly people with varying levels of care needs. The facilities will include a range of communal amenities for both residents and non-residents, such as restaurants, coffee shops, lounges, hairdressing salons, therapy rooms and gyms. Payments for rent and services are largely supported from local authority or central government sources. The total cost of the project is estimated at £120 million.

Your partners in the consortium are Care Homes Ltd, a not-for-profit housing association, and Nagoya Financial Partnership Ltd, specialist investors in healthcare and education, who will provide investment, financial expertise and introductions for the long-term debt finance. The bid costs for North East Builders, which are non-recoverable if the Toon Consortium bid is unsuccessful, are estimated at £350,000. The members of the Consortium have not worked together previously.

A Special Purpose Vehicle (Geordiecare Ltd) will be established to contract with Newcastle City Council to provide the extra-care accommodation on a long lease, for which it will receive payments from NCC. The SPV, in turn, will grant a sub-lease to Care Homes, who will serve as landlord to residents of the homes, for which they will pay a guaranteed lease charge to the SPV. Construction and maintenance of the facility will be sub-contracted to North East Builders. Management of tenancy and resident services will be sub-contracted to Care Homes. On-site care and support services will be provided outside of the PFI by specialist care providers appointed by NCC.

Financing will consist of equity share capital, subordinated debt and senior debt. Equity of £1 million and subordinated debt of £11 million will be contributed by the partners in proportion to their respective shareholdings in Geordiecare Ltd; North East Builders 25%, Care Homes 25%, Nagoya 50%. Interest on the subordinated debt is projected at 11%, with the blended return on equity and subordinated debt projected at 13%. The equity would be subscribed at the outset but the sub-debt would be subscribed at the end of the construction period, scheduled for month 18, and would repay the “subordinated debt bridging loan” provided by the senior lenders. The project IRR is calculated at 9.75%.

NCC has an option to purchase the facility from the SPV after 25 years. If NCC does not exercise its option to buy the facility then Care Homes will be contracted to buy the facility and pay at least the “residual value”, an amount to be agreed as part of the consortium’s bid. The effect of this “residual value” payment is to reduce the level of loan repayments during the lifetime of the PFI and also reduce the charges payable by NCC to the SPV. There will also be an “overage sharing arrangement” whereby, if the market value exceeds the agreed residual value, Care Homes will pay 50% of the difference to NCC. If the market value is less than the residual value there are no extra payments either way.

In the event of any default by the SPV, NCC reserves the right to take ownership and control of the PFI assets on payment, to the SPV, of a sum equal to the present value of the “residual value”, discounted at the project IRR. This discounted “residual value” will be considerably less than the re-payable outstanding debt in the early years of the project.

**Required:**

- a) **What are the main risks to the SPV? In each case say how the SPV could be protected from the risk and who should bear the risk?**  
(10 marks)
- b) **What is the implied rate of return on the equity and the implied interest rate on the senior debt? Comment on the relative costs and functions of the three types of finance.**  
(6 marks)
- c) **What are the pros and cons, for North East Builders and for Care Homes respectively, of including a higher versus a lower “residual value” in the competitive tender?**  
(4 marks)
- d) **In broad terms summarise the likely financial returns and main risks for North East Builders, in preparation for a forthcoming Board Meeting.**  
(4 marks)

**(Total 24 marks)**

### QUESTION 3

On January 30th 2013 the German healthcare and pharmaceutical company Stein AG announced a bid of \$34 per share, worth \$1.13 billion, for the US vitamin company Schooner Inc. The bid was subsequently agreed.

On February 15th Stein's UK rival, Albion PLC, made a counter bid of \$42 per share, worth \$1.40 billion (£880 million). Albion intend to fund the acquisition, which is key to its strategic global move into vitamins, from existing debt facilities. This rival bid was agreed on 22nd February and Stein decided not to increase its original offer.

It estimates that it can make cost savings of £25m.

Between 26th January and 22nd February the FTSE 100 Index fell slightly from 5806.7 to 5791.0.

|                              | <b>Schooner Inc.</b> |      |      | <b>Albion PLC</b> |      |      |
|------------------------------|----------------------|------|------|-------------------|------|------|
|                              | June 2012            |      |      | September 2012    |      |      |
|                              | <b>\$ millions</b>   |      |      | <b>£ millions</b> |      |      |
| Sales                        | 258.9                |      |      | 9,485             |      |      |
| Profit before interest       | 25.46                |      |      | 2,395             |      |      |
| Interest received            | 0.056                |      |      | 23                |      |      |
| Interest paid                | (2.795)              |      |      | (32)              |      |      |
| Tax paid                     | (9.074)              |      |      | (622)             |      |      |
| Earnings                     | 13.727               |      |      | 1,745             |      |      |
| Gross debt                   | 135.762              |      |      | 2,508             |      |      |
| E.P.S. years                 | 2012                 | 2013 | 2014 | 2012              | 2013 | 2014 |
| Earnings per share (\$ or £) | 0.47                 | 0.94 | 1.20 | 2.40              | 2.47 | 2.48 |
| Average no shares (mill)     | 33.186               |      |      | 727.629           |      |      |
| No. of shares at year-end    | 33.341               |      |      | 728.622           |      |      |
| Share prices                 | <b>\$</b>            |      |      | <b>£</b>          |      |      |
| 2 October 2012               | 17.48                |      |      | 35.07             |      |      |
| 1 November 2012              | 19.28                |      |      | 35.60             |      |      |
| 4 December 2012              | 24.19                |      |      | 35.65             |      |      |
| 1 January 2013               | 24.49                |      |      | 37.50             |      |      |
| 26 January 2013              | 23.19                |      |      | 37.50             |      |      |
| 31 January 2013              | 33.84                |      |      | 37.50             |      |      |
| 15 February 2013             | 33.92                |      |      | 37.51             |      |      |
| 16 February 2013             | 43.76                |      |      | 37.04             |      |      |
| 22 February 2013             | 41.90                |      |      | 38.59             |      |      |

#### Required:

- a) What are the likely reasons for the increase in Schooner's share price between October 2012 and 26th January 2013, and the increase in Albion's share price since 16th February 2013?

(4 marks)

- b) Calculate the market capitalisation values of the two companies and their combined values between 26th January and 22nd February 2013. Has the proposed merger permanently added value?

(4 marks)

- c) Given Albion's intention to fund the acquisition with debt calculate Albion's eps for next year. Comment on the importance of the likely improvement in eps.

(5 marks)

(Total 13 marks)

#### QUESTION 4

You are Treasurer of Fonds Jacques Brulure (FJB), a charitable fund which endows worthy causes with fixed annual grants for 3 to 10 year periods. It therefore seeks to hedge its future income from investments in line with future commitments.

##### Summary financials (EURm)

|                       |       |   | <u>2010</u> |      |   | <u>2011</u> |
|-----------------------|-------|---|-------------|------|---|-------------|
| Fund at start year    |       |   | 11,861      |      |   | 12,656      |
| Charitable activities |       |   | (654)       |      |   | (617)       |
| Income, gains         | (209  | + | 1302)       | (237 | + | 132)        |
| Expenses              | 1,511 |   |             | 369  |   |             |
|                       |       |   | (62)        |      |   | (55)        |
|                       |       |   | 12,656      |      |   | 12,353      |

\* Fund seeks to earn 5% real long-term return.

For the portion of the fund invested in assets which deliver Libor-linked returns the charity transacts "pay floating, receive fixed" IRSs. The swap counterparties now require either a Credit Support Annex (CSA) or a credit risk premium in lieu.

Indicative premiums paid by a BBB+ rated entity for a EUR 10m IRS without a CSA are shown below:

|             |        |
|-------------|--------|
| 5 Year IRS  | 10 bps |
| 7 Year IRS  | 13 bps |
| 10 Year IRS | 18 bps |

Some banks are also justifying a liquidity premium by arguing that with a positive yield curve the swap payments represent an embedded loan. In the early years of the swap the fixed payment from the swap bank is higher than the floating payment it receives and this imbalance is only redressed in later years.

Currently you have EUR 50m nominal of IRS, average maturity 5yrs.

Your CFO has asked you to advise on two possibilities for reducing the cost of IRS hedging:

- (x) Use exchange traded futures
- (y) Acquire a rating to reduce your perceived counterparty credit risk to the bank.

continued overleaf

**Required:**

- a)      i) What is the extra cost of hedging without CSAs? (1 mark)
- ii) Could it be worthwhile? Justify your answer. (3 marks)
- b)      Comment on the feasibility of the CFO's suggestions (x) and (y). (5 marks)
- c)      Is the Bank's argument for a liquidity premium valid? Justify your answer. (3 marks)
- (Total 12 marks)

**QUESTION 5**

You are Treasurer of a medium-sized e-retail company, originally a family-run mail-order business and in 2009 subject to a management buy-out. The post buy-out shift to e-retail sought to capitalise on a similar shift in retail market sentiment driven in part by the financial crisis and the company is now growing rapidly. Currently turnover is £400m, growth 18% pa, net debt £70m all bank funded.

Your Chief Executive, widely respected in the e-retail business and largely responsible for the recent growth, returns from a Breakfast Presentation at the firm's brokers eager to explore the possibilities presented by the fledgling Retail Bonds Market (LSEs ORB : Order book for Retail Bonds – this is the only UK-based market dedicated to retail-focussed issues, although some brokerages do offer retail investors access to the corporate bond market).

The Chief Executive sees two opportunities: (i) diversifying funding sources which are currently entirely bank-based; and (ii) issuing a retail bond to give publicity to the firm's name and to allow customers to share in the firm's success.

The data provided at the broker's presentation includes a profile of typical retail bond investors and a record of ORB issues since 2010.

In 2011 Tesco Bank issued two retail bonds on ORB, raising £185m. One was priced at 5.2% fixed and the other was RPI linked. Another Tesco Bank issue in 2012 at 5%, maturing in 2020, was oversubscribed.

Recent non-ORB issues included Hotel Chocolat offering 6.75% fixed for 3 years to raise £5m (issued £3.7m) and Mr & Mrs Smith, boutique hotels, offering 7.5% fixed for a similar maturity and amount.

## **The Typical Retail Investor**

### **Behaviour**

- 75% use tax efficient Individual Savings Accounts (ISAs)
- 43% use Self Invested Personal Pension (SIPP) accounts
- Prefer corporates and have a fondness for higher yield
- 71% aim to purchase bonds around the BBB area
- 5-7 year maturity “sweet spot” with 81% of respondents choosing this maturity
- Multiple buyers – 56% of respondents hold 5 or more bonds

### **Characteristics**

- Prefer known-name or brand
- Absolute return, not relative value
- Round-numbers important - coupon, maturity, price
- Alternative valuation criteria to institutional market

## **Born on ORB Issues since February 2010**

| Sector                 | No of issuers | Volume | No of issues/taps | Size Range | Rating range |
|------------------------|---------------|--------|-------------------|------------|--------------|
| Banks                  | 3             | £795m  | 12                | £10-200m   | NR – Aa3     |
| Alternative Financials | 5             | £810m  | 8                 | £25-300m   | BBB- to A-   |
| Supranationals         | 1             | £350m  | 1                 | £350m*     | AAA          |
| Utilities/Infra        | 3             | £517m  | 6                 | £40-260m   | Baa2-AA-     |
| Property               | 4             | £278m  | 4                 | £58-80m    | NR           |
| Industrials            | 0             | 0      | 0                 | 0          | 0            |
| Retailers              | 0             | 0      | 0                 | 0          | 0            |

\* Retail eligible offer

### **Required:**

- a) What are your views about (i) ie the pros and cons of your company issuing on ORB as an alternative to bank finance?  
(6 marks)
- b) What is your advice about (ii) ie using the issue to publicise the business and create customer loyalty?  
(3 marks)
- (Total 9 marks)



## QUESTION 6

You sit on the Investment Committee of a medium-sized privately owned company's pension fund as the shareholder representative.

The defined benefit scheme is closed to new members and also closed to future accruals. Covenants are in place to limit the size of deficit in relation to pre-tax profit and to require the company to refer to Trustees for approval of future changes to the nature of the business.

Current deficit is 120% of pre-tax profit with a 10-yr plan in place to eliminate the deficit.

The Investment Committee is considering investing in a new retail bond issue on LSE's ORB by Propinvest Holding plc, a UK-based property investment company, as part of a general endeavour to enhance yield:

### **PropInvest Retail Bond**

|                  |                                |
|------------------|--------------------------------|
| <b>Issuer</b>    | <b>PropInvest Holdings plc</b> |
| Issue Date       | 30 April 2013                  |
| Maturity         | 31 December 2020               |
| Amount           | £65m                           |
| Coupon           | 5.500%                         |
| Coupon Frequency | 6 months                       |
| Coupon Type      | Fixed                          |
| Denomination     | 100.00                         |
| Currency         | GBP                            |
| Calculate        | ACT/365 ISMA                   |
| Secured          | No                             |
| Rated            | No                             |

### **Business Strategy**

Propinvest invests mainly in office buildings in major European business cities: 45% of the portfolio is in London, 26% in France, 21% in Germany and 8% in Sweden. The Group believes that over the long-term this spread of locations provides the advantages of diversification into major European markets.

At 30 June 2012 the portfolio comprised 76 buildings, providing floor space of 412,200 sq. metres, let to over 400 tenants.

### **Financing Strategy**

Propinvest believes in having a wide range of financing sources to assist in its objectives. Its strategy is for each property asset to be in its own wholly-owned subsidiary with its own separate financing arrangements, typically using bank debt and Group equity. This helps to ring-fence each property and its related debt from affecting the rest of the Group, helping to minimise risk to the Group as a whole. Propinvest has active borrowing relationships with 19 banks as part of this strategy, as well as one long-term debenture and one unsecured corporate bond which it issued in Sweden in 2011. Net loan to value at 30 June 2012 was 56%.

## Five Year Financial Summary

31 December 2011

|  | 2011<br>£m     | 2010<br>£m | 2009<br>£m | 2008<br>£m | 2007<br>£m |
|--|----------------|------------|------------|------------|------------|
| Group revenue  | <b>80.1</b>    | 79.1       | 76.3       | 81.6       | 89.5       |
| Costs  | <b>(30.6)</b>  | (30.3)     | (30.3)     | (37.4)     | (49.9)     |
|  | <b>49.5</b>    | 48.8       | 46.0       | 44.2       | 39.6       |
| Net movements on revaluation of investment properties          | <b>18.0</b>    | 30.1       | (6.7)      | (103.3)    | (68.1)     |
| Gain on sale of corporate bonds and other investments          | <b>0.5</b>     | 9.3        | 1.9        | -          | -          |
| Profit on sale of investment properties                        | -              | -          | 0.3        | 7.0        | -          |
| Profit/(loss) on sale of subsidiaries/joint venture/associates | <b>2.2</b>     | -          | -          | (16.2)     | (1.9)      |
| Impairment of intangible fixed assets and goodwill             | -              | -          | -          | (22.0)     | -          |
| <b>Operating profit/(loss)</b>                                 | <b>70.2</b>    | 88.2       | 41.5       | (90.3)     | (30.4)     |
| Finance income   | <b>12.2</b>    | 6.1        | 6.6        | 8.7        | 6.6        |
| Finance costs  | <b>(47.7)</b>  | (31.1)     | (32.1)     | (51.7)     | (49.3)     |
| Share of profit/(loss) of associates after tax                 | <b>3.0</b>     | 7.7        | 2.5        | (7.5)      | 0.5        |
| Other non-recurring costs                                      | -              | -          | -          | (1.3)      | -          |
| <b>Profit/(loss) before tax</b>                                | <b>37.7</b>    | 70.9       | 18.5       | (142.1)    | (72.6)     |
| Taxation   | <b>1.1</b>     | (10.8)     | (1.1)      | 64.1       | 39.7       |
| <b>Profit/(loss) for the year</b>                              | <b>38.8</b>    | 60.1       | 17.4       | (78.0)     | (32.9)     |
| <b>Share buy-backs paid and proposed</b>                       | <b>12.3</b>    | 11.1       | 6.0        | 59.0       | 9.3        |
| <b>Net Assets Employed</b>                                     |                |            |            |            |            |
| Non-current assets   | <b>1,037.0</b> | 1,018.6    | 944.2      | 869.1      | 1,251.5    |
| Current assets   | <b>67.3</b>    | 59.8       | 80.7       | 205.9      | 132.4      |
|  | <b>1,104.3</b> | 1,078.4    | 1,024.9    | 1,075.0    | 1,383.9    |
| Current liabilities  | <b>(182.9)</b> | (123.1)    | (164.3)    | (133.9)    | (167.7)    |
| Non-current liabilities  | <b>(553.9)</b> | (598.1)    | (551.6)    | (602.5)    | (813.1)    |
| <b>Net assets</b>  | <b>367.5</b>   | 357.2      | 309.0      | 338.6      | 403.1      |
| <b>Ratios</b>  |                |            |            |            |            |
| Net assets per share (pence)                                   | <b>817.5</b>   | 766.7      | 643.3      | 548.4      | 595.1      |
| EPRA net assets per share (pence)                              | <b>983.1</b>   | 952.9      | 825.8      | 698.4      | 770.4      |
| Earnings/(loss) per share (pence)                              | <b>82.0</b>    | 127.1      | 36.4       | (120.6)    | (45.7)     |
| EPRA earnings/(loss) per share (pence)                         | <b>64.9</b>    | 42.5       | 28.0       | 28.4       | (9.1)      |
| Net gearing (%)  | <b>155.0</b>   | 152.3      | 170.0      | 121.1      | 169.1      |
| Adjusted net gearing (%)                                       | <b>128.5</b>   | 122.1      | 132.5      | 95.1       | 130.6      |
| Recurring interest cover (times)                               | <b>2.63</b>    | 3.15       | 2.08       | 1.08       | 1.31       |

Notes Net gearing (%) = Net Debt % Net Assets

Adjusted net gearing % = Net Debt % Adjusted Net Assets

Adjusted net assets = Net Assets excluding the fair value of financial derivatives, deferred tax on revaluations, and goodwill arising as a result of deferred tax.

### Required:

- What are the principal risks associated with this investment which you would wish to discuss with the Committee?  
(5 marks)
- What additional information would you request from the Committee before deciding whether or not to support the investment?  
(3 marks)

(Total 8 marks)

## QUESTION 7

“Using derivatives to hedge net investment risk on an overseas subsidiary is a waste of effort if the subsidiary’s local currency is in long term decline against the parent company’s currency.”

**Required:**

- a) **What is net investment currency risk?** (2 marks)
- b) **How does it arise and how could you hedge it?** (3 marks)
- c) **Do you agree with the quotation above? Justify your answer.** (3 marks)

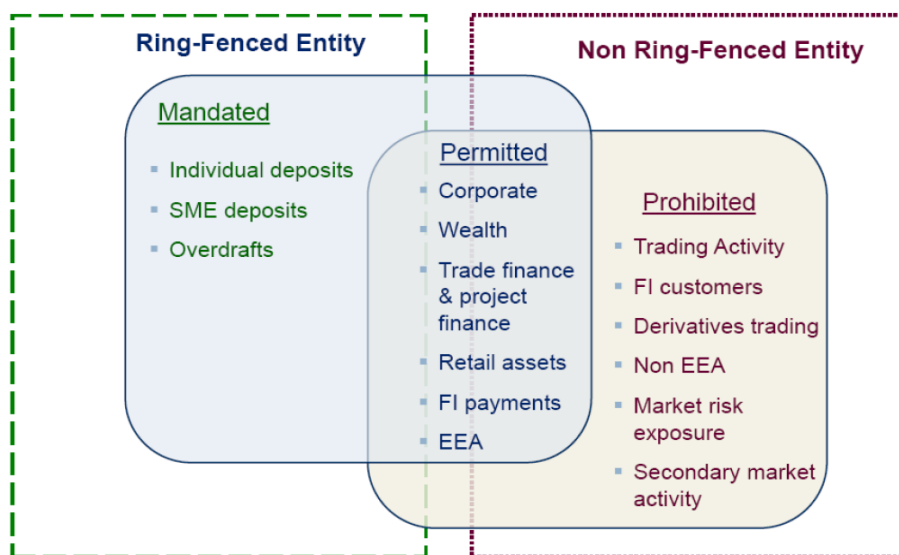
**(Total 8 marks)**

## QUESTION 8

In order to reduce the likelihood of a future banking crisis on the scale of the 2007-08 event, governments and banking regulators have been concerned to insulate retail and commercial banking activities from the perceived excesses of investment banking.

In the UK the recommendations of the Independent Banking Commission (ICB: Vickers Report) require UK banks to ring-fence those activities of banking groups which the Government considers essential for economic stability, in order to hedge against the risk of investment banking activity triggering a bank failure:

*Vickers (ICB) Ring-fence*

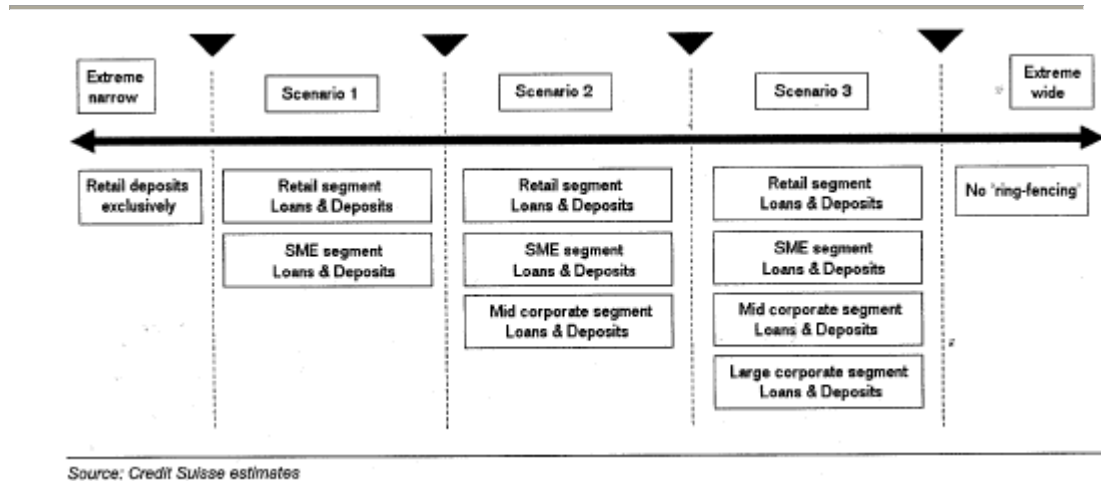


Source: ICB/ALMA 2012

The ring-fence boundary is flexible, as shown in the diagram above. However, once the boundaries are drawn each part of the bank must treat the other at arm's length as if it were a third party.

The figure below sets out three potential scenarios for UK banks ring-fenced according to the ICB recommendations.

#### UK Banks: potential scenarios for the ring fenced entity



Analysts expect to see each of the three main scenarios above adopted by at least one of the major UK banking groups.

As an alternative to Vickers, the EU sponsored Liikanen Review suggests ring-fencing the trading rather than the retail/commercial activities of banks. In addition it proposes extra capital buffers for trading activities and improved governance including limits on the use of insured deposits for “excessively risky” business.

In the US banking groups have been forbidden to engage in proprietary trading, ie trading securities solely for the banks gain.

#### **Required:**

**What are the implications for corporate treasurers of non-financial services companies if these changes are implemented?**

**(12 marks)**

## ADVANCED DIPLOMA

### GENERAL EXAMINATION - NOTE FORM ANSWERS

APRIL 2013

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#### QUESTION 1:

(25.2 mins, 14 marks)

**(Marking scheme: more subjective but 1/3 mark for each good point)**

- i) For valuation purposes – until cash flows become stable  
For providing debt repayment – until debt is repaid.  
Probably full project therefore.  
(2.7 mins, 1.5 marks)
- ii) To match typical project life so probably 10-years at least. Also more stable over time – consistent basis for appraisal. Might be difficult in some countries where no real bond market exists. Perhaps use index linked bonds for a real return approach.  
(2.7 mins, 1.5 marks)
- iii) Forecast rate on newly-issued debt (ie marginal cost is more relevant to future years than historical cost. But if current rates unusually low/high an average might give a stable and relevant figure.  
(2.7 mins, 1.5 marks)
- iv) Effective tax rate (P&L tax dividend by PBT) is easy to establish but it is the wrong rate technically eg the P&L tax charge is a provision which often includes deferred tax. But it is also the tax rate on the equity profits not on debt interest. The marginal tax rate on the company's actual borrowings is more correct (the weighted average tax rate that applies to debt interest) – should be higher than effective rate because of tax management of debt. Complex in multi nationals.  
(4.5 mins, 2.5 marks)
- v) Book equity is always wrong – required returns for shareholders are based on the market price they paid for shares not the book value.

Book value of debt is allowable since even fixed rate debt, where value will fluctuate with interest rates, has to be repaid at par. But use market value of debt if it is “permanently distressed” below its par value.  
Best is company's target debt/equity, ratio based on market values.  
Current debt/equity ratio may well be a typical.

Note that “gearing” here relates to the relative proportions of debt and equity for calculation of WACC. Other “gearing” measures such as net debt/EBITDA are used in other contexts.

(5.4 mins, 3 marks)

- vi) To allow for “lazy capital”, negative and low IRR projects etc. But also to allow for higher than average risk projects. Others stick with the same WACC for consistency across the whole company, irrespective of project differences eg risk. A single nominal WACC cannot be applied internationally because of different levels of inflation. Some companies have very different lines of business where one WACC is inappropriate. More than one WACC might be difficult to communicate to management, where concept is difficult anyway.

(7.2 mins, 4 marks)

**QUESTION 2:**

**(43.2 mins, 24 marks)**

**2a) (18.0 mins, 10 marks)**

**(Marking scheme: 1/3 mark for each good point)**

Construction risk (cost <sup>1</sup> or time over-run) <sup>2</sup> – fixed price contract <sup>3</sup> with liquidated damages. <sup>4</sup> Penalties for delays <sup>5</sup>/incentives to finish on time. Also performance <sup>6</sup> bond from bankers – North East Builders. <sup>7</sup> Design and build contract by NEB. <sup>8</sup>

Failure of equity partners <sup>9</sup> to come up with their contributions to subordinated debt on completion of construction – bank guarantees <sup>10</sup> for respective partners with counter indemnities from the partners’ banks <sup>11</sup> – risk on partners and banks. <sup>12</sup>

Demand for the accommodation <sup>13</sup> – payment on “availability” <sup>14</sup> rather than actual residents “from the local authority” <sup>14</sup> – by City Council <sup>15</sup> if they agree. Otherwise risk is on Care Homes <sup>16</sup> to manage voids – they pay rent to SPV irrespective of profitability of the business. Mitigate by economic and business assessment. <sup>17</sup> Bad debts and operating costs <sup>18</sup> – Care Homes at <sup>19</sup> risk but viability a threat to <sup>20</sup> payment of rent to SPV to cover interest. Welfare reform is the big risk here plus public sector cuts. <sup>21</sup>

Pricing issues over the project life as inflation renders historic costings useless – use minimum return or profitability criteria, ensure income and costs are matched – essentially for NCC to bear the risk but Care Homes to be efficient. Price increases are often linked to RPI or CPI by regulation.

Failure of Care Homes to operate the facility effectively/provide <sup>22</sup> good service. Tight operating <sup>23</sup> contract with defined KPIs on service level, quality etc. – on Care Homes. <sup>24</sup>

Failure or defects in the built <sup>25</sup> facility or poor maintenance of the facility – tight maintenance contract <sup>26</sup> on NEB with defined KPIs.

Counter-party risk - failure of either NEB <sup>27</sup> or CH – step-in rights <sup>28</sup> for banks and/or City Council to replace deficient partners.

Failure of specialist care provider – NCC, step-in rights.

Interest rate risk <sup>29</sup> – financial hedges <sup>30</sup> – SPV and banks <sup>31</sup>  
 Liquidity/cash flow <sup>32</sup> risks – SPV – overdraft or similar <sup>33</sup>  
 Change in low/government <sup>34</sup> policy – NCC <sup>35</sup>  
 Issues on residual risk.

2b)

(10.8 mins, 6 marks)

**(Marking scheme: ½ mark for each key bit of calculation but maximum 3 marks for non-financial part of answer)**

**Version i)**

Tax status unknown so assume no tax (attempted by most candidates)  
 Sub debt at 11% on 11m = 1.21m  
 Blended return of 13% on 12m = 1.56m  
 Therefore approximate return on equity = 0.35 on 1m = 35%  
 IRR on that project funding = 9.75% x 120m = 11.7m  
 Therefore return on senior debt = (11.7 – 1.56) / 108 = 9.39%

**Version ii)**

Allowing for tax at, say, 24% (attempted by one or two candidates)  
 Sub debt at (11% x 0.76) = 8.36%, gives after tax cost of £0.9196  
 Assume blended return of 13% on 12m is after tax, ie 1.56m  
 So return on equity is 1.56m – 0.9196m = 0.6404m  
 Therefore after-tax return on equity = 0.6404/1 = 64%  
 Assume project IRR of 9.75% is also after tax  
 IRR on that project funding – 9.75% x 120m = 11.7m  
 Therefore after-tax cost of debt = 11.7m – 1.56m = 10.14m  
 Interest rate therefore 10.14/108 = 9.39 (as above) after tax  
 Pre-tax rate = 12.35%

Note this is higher than the subordinated rate which seems unlikely although the instrument is hardly arm's length as it contributed in the same proportions as the equity.

**NB. 3 marks (9 good points for calculations, but a bonus mark if after tax version done reasonably well)**

|          | "No tax" |     |               |  |
|----------|----------|-----|---------------|--|
|          | Return   |     | %             |  |
| Equity   | 35%      | 1m  | 0.833%        | - pure risk capital, <sup>10</sup> first in, last out <sup>11</sup>              |
| Sub-debt | 11%      | 11m | <u>9.167%</u> | - quasi-equity, <sup>12</sup> second in, second last out (usually) <sup>13</sup> |
|          |          |     | 10.0%         |  |

Less than majority <sup>14</sup> stakes to keep it off balance sheet

Minimum acceptable amount to satisfy

the banks and achieve acceptable interest cover.<sup>15</sup>

Senior debt 9.39% 108m 90% - Maximum debt, on conventional terms,<sup>16</sup> to achieve maximum tax efficiency. Maximum asset security and covenants, general documentation,<sup>17</sup> etc. The senior lenders have control effectively.<sup>18</sup>

Equity is subordinated to sub-debt which, in turn, is subordinated to senior debt – in terms of timing of subscription,<sup>19</sup> timing of repayments, timing of dividends/interest. In this case there is a bridging loan to cover the sub-debt amount during the construction period – unusual. Effect is to help the cash flow and reduce the early stage risk for the three partners.

Senior lenders particularly will control amount and timing of<sup>20</sup> dividends to the equity partners.

**2c)**

**(7.2 mins, 4 marks)**

**(Marking scheme: 1/3 mark for each good point)**

Note that a major benefit of gaining this contract for NEB and Care Homes is the construction contract for NEB (up front) and the care contract (long term annuity type) that they will gain and which is their bread and butter work. Arguably the equity/sub debt is the price they pay to get the contracts.

A higher residual value reduces the annual cost of the facility to NCC, thereby increasing the<sup>1</sup> chances of the bid succeeding, which is beneficial to NEB because of the value of the construction<sup>2</sup> and maintenance contract(s). It also reduces the level of annual loan repayments thereby reducing the pressures on the SPV's cash flows, thereby reducing the risk to NEB's equity and sub-debt.<sup>3</sup> In summary a higher RV is all good for NEB.<sup>4</sup>

The advantages of winning the tender also apply to Care Homes<sup>5</sup> re the value of the management contract, also the reduced risk to their partner<sup>6</sup> investments. But a higher guaranteed "residual value" is payable<sup>7</sup> by Care Homes, with the risk that the market value might be less<sup>8</sup> than the RV so Care Homes over-pay for the assets. A lower RV means that, if the market value is higher, Care Homes pay<sup>9</sup> half of this additional amount to NCC (the "overage") and they get a capital gain<sup>10</sup> on the other half.

In summary a higher RV reduces the potential upside<sup>11</sup> and increases the downside<sup>12</sup> risk for Care Homes. (It increases the guaranteed upside for NCC who carry no downside risk).



eg

| residual value | market value | payment by<br>Care Homes | (loss)/gain<br>to Care Homes |
|----------------|--------------|--------------------------|------------------------------|
| 100            | 100          | 100                      | 0                            |
| 100            | 80           | 100                      | (20)                         |
| 80             | 100          | 90                       | 10                           |
| 80             | 80           | 80                       | 0                            |
| 80             | 60           | 80                       | (20)                         |

**2d)**

**(7.2 mins, 4 marks)**

**(Marking scheme: 1/3 mark for each good point)**

We need the work <sup>1</sup> – construction contract will be a good percentage of the £120m total cost at, say, 10% profit margin = £12m. <sup>2</sup> Significant in relation to our turnover of £158m and operating profit of £12.8m. <sup>3</sup>

Continuing maintenance contract worth maybe 1% of £120m <sup>4</sup> = £1.2m.  
Return of 13% compound on 25% of £12m = £390k <sup>5</sup> (back end loaded, of course).

Risks – this is business as usual for us. <sup>6</sup> But £350k <sup>7</sup> costs of failed tender are significant. Also £4m is a significant <sup>8</sup> investment for NEB in relation to existing debt of £7.2m but we have more than adequate cash balances of £25.4m. <sup>9</sup> We will be expected to give various non-financial guarantees and assurances, <sup>10</sup> including bid and performance bonds <sup>11</sup> required from our banks which add to the total facilities.

The equity/sub-debt investment has a long tail – <sup>12</sup> when are we allowed to sell it if at all?

We are very much at risk on our counter-party partners especially Care <sup>13</sup> Homes (check out credit status and track record).

**QUESTION 3:**

**(23.4 mins, 13 marks)**

**3a)**

**(7.2 mins, 4 marks)**

**(Marking scheme: 1/3 mark for each good point)**

Schooner

Prices up 33% <sup>1</sup> from October to January 26<sup>th</sup>, on a rising trend (good results <sup>2</sup> ? acquisitions made ? <sup>3</sup> bid speculation ?) <sup>4</sup> Main increase is in October and November towards the half year mark <sup>5</sup> (June period end so interim results were probably announced in September) so good results anticipated? 40% is often quoted as a minimum required acquisition premium so 33% a bit low. <sup>6</sup> Successful bid was much higher. The bid price was 47% up on the immediate pre-bid price and 95% on the price 4 months earlier – a handsome premium – so maybe the bid was not anticipated. <sup>7</sup>

## Albion

Albion's price fell 1.3% <sup>8</sup> on announcement of their bid – concerns that they may be paying too <sup>9</sup> much and might get involved in a bidding war with Stein <sup>10</sup> (bid price is 81% up on price of 26th January before either bid). However Schooner is only a small acquisition for Albion in money terms. <sup>11</sup>

But six days later it was up 4.2% (2.9% on the pre-bid price) so presumably the market is now happy <sup>12</sup> with the medium term strategic benefits of the merger and the absence of a second bid by Stein. <sup>13</sup>

NB The bid was debt financed so no new shares to dilute the equity.

**3b)**

**(7.2 mins, 4 marks)**

**(Marking scheme: 1/3 mark for each good point)**

| Market Capitalisation Values (£m) |                        |                    |       |               |                |                            |
|-----------------------------------|------------------------|--------------------|-------|---------------|----------------|----------------------------|
| <u>Schooner</u> <sup>1</sup>      |                        |                    |       | <u>Albion</u> |                | <u>Combined % Change</u>   |
|                                   |                        | Shares 33.341      |       |               | Shares 728.622 |                            |
| 26 Jan                            | @ \$23.19 <sup>2</sup> | \$773 <sup>3</sup> | 486   | @ 37.50       | £27,323        | £27,809                    |
| 15 Feb                            | @ \$33.92              | \$1131             | £711  | @ 37.51       | £27,331        | £28,042 +0.84              |
| 16 Feb                            | @ \$43.76              | \$1459             | £917  | @ 37.04       | £26,988        | £27,905 - 0.49             |
| 22 Feb                            | @ \$41.90              | \$1397             | £878  | @ 38.59       | £28,118        | £28,996 +3.91              |
| Period change                     |                        |                    | + 392 |               |                | + 795                      |
|                                   |                        |                    |       |               |                | + 1,187 <sup>5</sup> +4.27 |

NB Exchange rate = 880 / 1400 = 0.62857 <sup>6</sup> (1.5909)

The 16th February combined value is very <sup>7</sup> similar to that for the 15th February, before Albion's bid (down £137m).

The increase in the bid value of Schooner (+ £206m) is more than offset by the fall in Albion's value (- £343m). In theory a zero change would indicate that the market did not anticipate any positive synergies <sup>8</sup> or destruction of value from the merged businesses.

By 22nd February the overall increase in total market value is £1.187m <sup>9</sup> (+ 4.3%) while Schooner is up £392 (80.7%) and Albion up £795 (2.9%). (For comparison the FTSE fell by 0.27%, hardly moving at all). <sup>10</sup> The market seems to like the bid even at this high price and P/E, <sup>11</sup> but Albion's share price will fall if the likely benefits of the merger prove illusory. <sup>12</sup>

**3c)**

**(9.0 mins, 5 marks)**

**(Marking scheme: 1/3 mark for each good point)**

Current forecast eps for Albion 2013 = £2.47 <sup>1</sup>

Estimated number of shares = 730.611 million <sup>2</sup> (increasing at same rate as last year, but no need to be precise.

Current forecast earnings therefore £1804.6 <sup>3</sup> million (Note 3.4% up on 2012)

Current forecast eps for Schooner = \$0.94  
Estimated number of shares = 33.652 million <sup>4</sup> (again, approximation is fine)  
Current forecast earnings therefore = \$31.633m <sup>5</sup> = £19.9m <sup>6</sup>

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Required debt funding = £880m  
Average interest rate paid by Albion = 32/2508 = 1.28% - very low! Effective tax rate of Albion = 26.3%. Assume marginal rate is 30. <sup>7 8</sup>  
Assume interest rate 4%, after tax = 2.8%  
Impact on earnings = £880m x 2.8% = £24.64m <sup>9</sup>

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Estimated cost savings of £25m – assume maybe <sup>10</sup> half is achievable before September 2013 – after tax @ 39.8% = £7.53m <sup>11</sup> (assuming US tax rate applies) <sup>12</sup>

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Forecast earnings = 1804.6 + 19.9 – 24.6 + 7.53 = £1807.4m <sup>13</sup>  
eps = 1807.4 / 730.611 = £2.474 <sup>14</sup>

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Only just avoids <sup>15</sup> dilution because of the high price and high exit P/E multiple, based on forecast earnings for Schooner, (P/E = 1400 / 31.633 = 44.3). Earnings yield (reciprocal) = 2.26%, lower than the assumed after-tax cost <sup>16</sup> of debt. The possible improvement in eps is marginal. The strategic benefits in the medium term are more important.

**NB** The actual range of market estimates of eps at this point was 2.13 to 2.70, average 2.4895.

**QUESTION 4: (21.6 mins, 12 marks)**

**4a) (i) Cost of not using CSA (1.8 mins, 1 mark)**

**(Marking scheme: right answer = 1 mark, wrong = Ø).**

Assuming EUR 50m IRS for 5 years, the cost of not having a CSA and paying the premium would be:

$$\begin{aligned} &10 \text{ bps} \times \text{EUR } 50\text{m} \\ &= \text{EUR } 50,000 \text{ pa} \end{aligned}$$

**4a) (ii) Is it worth choosing to pay a premium? (5.4 mins, 3 marks)**

**(Marking scheme: looking for evidence of assessing the materiality of a CSA collateral call (cost, liquidity compared with the premium cost calculated at (i)).**

Whether it is worthwhile or not depends on the (i) cost of funding collateral calls, (ii) ability to fund if calls are very spikey.

Here is a basic materiality check with round numbers. If rates fall, FJB's swap is in the money, so there will be no collateral call from the bank, but if rates rise there will. Therefore, assume a rise in the relevant swap rate of 1% from, say, 3% to 4% and a collateral funding cost of 4.50%:

| <b>Residual Life of Swap<br/>Years</b> | <b>Collateral*<br/>EUR '000</b> | <b>Funding Cost pa<br/>EUR '000</b> |
|--|---------------------------------|-------------------------------------|
| 5                                      | 2,226                           | 100                                 |
| 4                                      | 1,815                           | 82                                  |
| 3                                      | 1,388                           | 62                                  |
| 2                                      | 943                             | 42                                  |
| 1                                      | 481                             | 22                                  |

Note: \* PV of 1% discounted at swap rate for residual life.

For companies in general and for these relatively low interest rates, the CSA premium would appear to be preferable from a cost standpoint ('though the low cost of the premium relative to the collateral call cost possibly signifies the low probability of a rate rise now).

However, FJB is a charity and likely to be long cash. So the collateral cost is the opportunity cost of the cash, ie probably the deposit rate with a bank. But FJB should earn the deposit rate on the collateral with the bank, with possibly a small reduction for carry cost, so opportunity cost may be much less than the 4.50% assumed in the table. So in FJB's case it is unlikely that they would want to pay the extra fee to the bank, especially as collateral spikeyness is unlikely to be an issue for them.

#### **4b) Feasibility of futures, rating**

**(9.0 mins, 5 marks)**

**(Marking scheme: for (i) looking for understanding of the features of futures versus OTC swap and for (ii) the fact that a bank should not need a rating to assess the credit risk of an entity like JFB).**

- (i) Futures would have a lower credit spread.

Futures have margining so the issue is not avoided. Other issues would be maturities available, difficulty of getting an efficient hedge and the administration involved.

- (ii) Similar large charitable foundations, eg Gates, Harvard, merit AAA rating.

If FJB has an AAA rating it would have a good basis for resisting collateral calls. However banks do not (or SHOULD NOT!) require a rating to assess credit risk. FJB is big enough to have the expertise to negotiate a CSA limit high enough to absorb the less spikey calls or alternatively use several swap providers and negotiate a CSA limit with each.

#### 4c) Liquidity premium argument

(5.4 mins, 3 marks)

**(Marking scheme: looking for realisation that technically this argument is unsound. Extra points if the new regulatory regime is spotted as the possible explanation).**

This argument ignores the counterparty on the other side of the swap bank which is paying the bank fixed and receiving floating and the cash flows are built into the swap price. This sounds like either a misunderstanding or mis-selling!

What the bank may be alluding to is the liquidity cost of funding an adverse MTM position with a bank's derivative counterparty which fails to honour a collateral call. Banks have to stress test for this eventuality and provide for it in anticipation of the hypothetical stress test materialising.

#### QUESTION 5:

(16.2 mins, 9 marks)

**(Marking scheme: number of credible points, quality of comments. For 5.a., to pass 5 pros, 5 cons; for 5.b., to pass 3 points).**

#### 5a) Retail Bond Alternative to Bank Debt

(10.8 mins, 6 marks)

A rapidly growing e-retail business is likely to be perceived by a bank lender as at the more risky end of the credit spectrum; and most banks are emerging from the financial crisis with much reduced lending capacity.

So it is prudent for the Chief Executive to seek out other sources of funding. The pros and cons include:

##### Pros

- Second unrelated source of funds
- Available growing market
- Investor appetite for yield (implied acceptance of some risk)
- Develops corporate funding expertise
- Looser documentation
- No cross sell pressure from banks
- Don't need a rating
- Interest fixed without derivative collateral exposure

##### Cons

- Less flexible
- Immediate draw down so use to refinance or else need to warehouse
- Bullet repayment so higher refinance risk
- Public scrutiny
- Need to manage investor relations
- Issue fee/costs
- Not underwritten so if undersold, bad for image
- Not floating rate interest
- Dual impact of customer desertion if bond servicing/repayment ability is questioned publicly in the press . . . leading to bank lender concerns about falling trade levels.

On balance possibly useful in small amounts but give high regard to reputational and refinancing risk.

#### 5b) Retail Bond to Develop Customer Loyalty

(5.4 mins, 3 marks)

Retail bond investors are characterised as absolute return rather than relative value. They are influenced by "name" and may not be skilled at fundamental analysis.

So the bond may well generate interest and sell.

However, if the company has a problem with performance which attracts adverse press comments then it could ultimately do a lot more harm than good.

It is interesting that there are no high street retailers on the ORB issue list.

Some of the bank issues consist of existing bonds grandfathered into the retail bond sector. Tesco Bank has recently issued into the market. However the large supermarket chains like Tesco do have good name recognition, are perceived as trustworthy and have financial substance. Less well established retail issuers could be running a reputational risk.

**QUESTION 6: (14.4 mins, 8 marks)**

**(Marking scheme: number of credible points, quality of comments. For 6.a. 5 points, for 6.b. 3 points).**

**Observations**

PropInvestment exemplifies one of the shortcomings of the ORB market: issuers/issues are typically unrated and in most cases there is no independent credit risk opinion available. This is a particularly acute issue here because this is a specialist property investment company with individual properties ringfenced in terms of funding and security. The issuer is the holding company and the detail of the legal/financial relationships within the Group are not clear from the information provided.

You are the representative of the pension company shareholders. The company is formally committed to eliminating the pension fund deficit over ten years and in the meantime material change to the nature of the business is constrained. The company's shareholders will not wish to see their exposure to the pension deficit increase because of aggressive investment but they also have an interest in eliminating the deficit as soon as possible to remove potential constraint on the future development of the business.

The pension fund is closed and relatively mature, probably focusing now on stable low returns.

**6a) PropInvest Issue Risk (9.0 mins, 5 marks)**

The risks you would need to raise with the Investment Committee are:

- The lack of an independent credit opinion for the issuer
- Lack of transparency about how the unsecured bondholders of the Holding Company would fare, were the issuer to fail, given the ringfenced nature of the subsidiaries
- Structural subordination of these unsecured bonds
- Double leveraging via the subsidiaries

- This bond is property-related and subject to revaluation risk at a time when both the UK and Europe are still facing a very uncertain future.

Having said all that, property investment can be a low risk business if there is a quality rent roll and the company has survived the financial crisis.

#### **6b) Additional Information**

**(5.4 mins, 3 marks)**

- Propinvestment business model
- Purpose of issue: is it to directly fund growth at subsidiary level, maintain LTV ratio at Group level as the Group expands, fund share buybacks?
- Clarity about the Holding Company structure, subsidiary arrangements with funders for each property and where these bonds rank in the event of failure
- Comment from the Investor Committee, given information on the above, about how this investment fits with the pension fund's asset investment policy.

#### **QUESTION 7:**

**(14.4 mins, 8 marks)**

#### **7a) Net investment risk**

**(3.6 mins, 2 marks)**

**(Marking scheme: For pass, mention of equity exposure plus intra-group debt; if latter not mentioned in part (a) but implied in part (b), credit given).**

Net investment currency risk is another name for currency translation risk of the balance sheet rather than the profit and loss account.

- It comprises:
- equity investment in overseas operations funded with parent company currency
  - overseas retained earnings
  - intra-group debt from the parent company
  - ( - less cash held in overseas entity denominated in parent company currency)

The value of these items will change if the overseas currency exchange rate changes.

#### **7b) Source, hedge**

**(5.4 mins, 3 marks)**

**(Marking scheme: 1 mark for comments about equity and intra-group debt, 1 mark for comments about structural hedge, 1 mark for comments about financial market hedge.)**

The risk is that on consolidation a fall in value of the overseas currency against the parent company currency results in a write-down of the parent company's assets and therefore its shareholders' equity.

- Hedges:
- fund overseas entity's assets locally, with debt if feasible
  - maximise dividend and/or fees to reduce retained earnings
  - use a cross currency interest rate swap, if available
  - increase product pricing overseas to compensate, if

competition allows

Caveat: - you may not wish to hedge it if you know that shareholders invest in the company's equity because they want this risk.

**7c) Quotation? (5.4 mins, 3 marks)**

**(Marking scheme: To pass, expecting a “yes”, a “no” or a qualified version of either, plus two credible points with some discussion.)**

Non-structural hedging just kicks the can down the road. And it may be that shareholders want this exposure for portfolio purposes.

However, it could be that for appearances sake (eg ratio covenants) postponement of the inevitable is worth the cost at this point in time.

So, a qualified agreement . . . . .

What actually happens? It is usually difficult to get the financial products needed in countries with a long term decline, so probably expensive and probably not worth it . . . . so again an agreement.

**QUESTION 8: (14.4 mins, 8 marks)**

**(Marking scheme: circa 10 credible points plus quality of explanation. There were 12 marks for this question and it was the last one, so some students were probably short of time. For whatever reason some produced only half a page of text and unless the quality and focus of comments is exceptional this is unlikely to earn 6 marks for a pass.)**

**Implications for Corporate Treasurers of Ring-Fencing Banks**

Two ways of tackling this Question:

- list of random bullets
- treat by classifying features of the corporate-bank interface

Taking the second way:

- Overall banking relationship:
  - without even considering ring-fencing (RF), banks will need more capital and more liquidity, so lending/credit-risk-related products will be less available and more expensive. With RF, the non-RF bank in the group will be largely/entirely wholesale funded: so if large corporate business goes into the non-RF bank the availability of credit related products may be even more problematic.

Therefore corporates may need to deal with more banks including non-UK/non-EU banks.

Corporates may also need to look beyond banks to non-bank financial intermediaries.



- Global integration:
  - as with corporates, banks had been working towards the holy grail of integrated global operations. This was always resisted by bank regulators, in the interests of protecting their domestic depositors from contagion due to failures in parts of a banking group operating in other countries. Paradoxically, just as corporates are becoming ever more global, banks are being forced by shortage of financial resources and by banking regulators to operate on a self-contained country by country basis. Some banks already worked to that business model (eg Santander) but were very much the exception.
- Disintermediation of bank lending:
  - as happened after the introduction of Basel 1 in the 1990s, corporate funding by banks has been disintermediated once again by Basel 3 because of huge changes in capital and liquidity rules. Corporate borrowers have had to shift to capital markets or to non-bank financial intermediaries. Nowhere has this shift been so rapid or so dramatic as in the UK social housing sector, traditionally funded by thirty year syndicated loans swapped to fixed.
- Derivatives:
  - some of the shocks during the financial crisis arose from unexpectedly large movements in mark to market contract values covered by collateral agreements, eg long-term interest rate swaps. Regulators are keen to drive these products from OTC to exchange traded. The regulatory cost to banks of financing OTC positions in anticipation of extreme stresses is being set deliberately high to discourage their use. Derivatives will go into the non-RF bank which may be less able/willing to support this business in the future.
- Deposits:
  - counterparty risk is already an issue for many cash rich large corporates. Regulators have shown unexpected enthusiasm recently for letting depositors take some of the strain in bank rescues and if this continues to be the practice corporate deposits are likely to get hit before retail. So whether depos are in the RF or non-RF bank they may be at higher risk than previously and it is not clear yet which place is preferable.

So this area will continue to need careful evaluation by corporate depositors and government stock may provide some useful diversification.
- Cash Management:
  - ring-fencing together with country by country self-contained regulation may render some aspects of pooling and netting problematic.

## Examiner's Report

### Advanced Diploma - April 2013

#### OVERVIEW

|           | General Exam | Case Exam | Combined |
|-----------|--------------|-----------|----------|
| Marks     | 47.8%        | 57.8%     | 52.8%    |
| Questions | 8            | 8         | 16       |
| Students  | 18           | 16        | 34       |
| Pass #    | 7            | 12        | 19       |
| Pass %    | 39%          | 75%       | 54%      |

Range of marks      31.9% to 72.2%      44.3% to 73.1%

N.B. For original marking purposes the pass mark discussed here is 50%.

This was a good set of results overall, with the range of marks and the average mark a few points higher than for some time. The average mark and pass rate on the case exam were particularly good. The general distribution of the marks across the two papers was very good, but it revealed three very distinct constituencies – the top 29% achieved marks of 60 or above, the “middle slice” of 44% of candidates achieved marks between 45 and 57, but the remaining 27% achieved marks between 32% and 45%. One excellent candidate achieved an average mark of 70.6%.

We have detailed the results by question, which show that some questions had very low pass rates and very low average marks;

| <b>General exam</b> | <b>marks available</b> | <b>passes out of 18</b> | <b>average mark</b> |
|---------------------|------------------------|-------------------------|---------------------|
| Q1 (GI)             | 14                     | 13                      | 58%                 |
| Q2 (GI)             | 24                     | 6                       | 42%                 |
| Q3 (GI)             | 13                     | 9                       | 48%                 |
| Q4 (JB)             | 12                     | 7                       | 40%                 |
| Q5 (JB)             | 9                      | 12                      | 53%                 |
| Q6 (JB)             | 8                      | 9                       | 49%                 |
| Q7 (JB)             | 8                      | 10                      | 54%                 |
| Q8 (JB)             | 12                     | 8                       | 46%                 |
| <b>Case exam</b>    | <b>marks available</b> | <b>passes out of 16</b> | <b>average mark</b> |
| Q1 (GI)             | 12                     | 10                      | 54%                 |
| Q2 (GI)             | 10                     | 11                      | 56%                 |
| Q3 (JB)             | 13                     | 13                      | 56%                 |
| Q4 (GI)             | 12                     | 13                      | 66%                 |
| Q5 (GI)             | 12                     | 13                      | 66%                 |
| Q6 (GI)             | 12                     | 8                       | 50%                 |
| Q7 (JB)             | 17                     | 13                      | 59%                 |
| Q8 (JB)             | 12                     | 8                       | 53%                 |

### **Corporate Finance and Funding Summary (both papers)**

Overall the quality of answers on the eight corporate finance and funding questions across the two papers (109 marks out of 200) was much better than in recent years. The average mark was 53.7% with 12 passes plus 3 marginal passes out of the 19 candidates. Two candidates were at distinction level but 3 of the clear fails were bad fails with marks in the 30s.

### **Treasury and Risk Management Summary (both papers)**

There were eight questions on treasury and risk management across the two papers (91 marks out of 200). Unusually the marks were poorer on TRM than on CFF and worse than in previous years. The average mark for the 19 candidates was reasonable at 51.5% but only 9 of the 19 candidates passed, but with another 6 marginal passes. Again there were two distinction level candidates. There were 2 bad fails but not the same as those in CF&F. The most significant and unusual feature of the distribution was the 42% of candidates achieving scores in the 40s.

## **Examiner's Report - General Examination**

### **Question 1 Critical review of a survey of investment appraisal methodologies.**

This was a straight-forward but technical question asking for views on best practice in relation to six aspects of investment appraisal such as the detailed, practical calculation and use of WACCs and cash flow forecasts. It was very well answered, whereas such technical issues have not been satisfactorily dealt with in recent examination papers.

### **Question 2 A very demanding project finance question.**

Part 2a – review of risks for the project SPV. The average mark here was 44%, one of the problems being that some candidates did not focus exclusively on the risks for the project company, as asked for in the question – it was all too easy to go on and on about all kinds of risks for the various parties involved in the project, but this was not asked for.

Part 2b – derive the rates of return on the different tranches of finance, given a project IRR, the composite return on equity plus sub-debt, and the capital structure (53% average mark). This was generally well answered and some candidates even did the calculations after tax (much harder and strictly correct, although the some of the parties were non-tax-paying.) A brief description of the respective nature and function of the different tranches of finance was also required.

Part 2c – this was a tough technical question about the risk-return implications for the various parties of a very technical clause in the documentation i.e. a disposal price in the bidding procedure that shifted the balance of upside and downside risks for the different parties but in different ways. Candidates did find this very hard to get their heads round in examination conditions (average mark 25%). Four candidates passed, four passed up the question and the rest failed.

Part 2d – this was about the attractions and the risks of the contract for the construction company who is also an equity partner. The average score was 36% and main weaknesses were a failure to summarise the effect of the construction company's various involvements, failure to relate the size of their involvement in the project with the scale of their existing business, and failure to refer to the state of the economy and the construction business, all of which

information was given in the pre-amble to the question.

**Question 3** Based on a contested bid for a US company, this question was about understanding share-price movements, value creation and impact on eps.

Part 3a. This only carried 4 marks but most candidates wrote very little about why the share prices of the two companies moved as they did throughout the course of the bid and therefore the average mark was only 42%. The main factors were the earnings performance and growth mainly of the target company, the market's anticipation of future bids and the markets assessment of the attractiveness of the bid to the acquirer at the bid price.

Part 3b. Candidates achieved an average mark of 61% on this question, reflecting some good understanding about creation of value (or not) in acquisitions. Some candidates were good on the numbers while others were good on the value-creation logic, and about five candidates put the two parts together.

Part 3c was a straight-forward calculation of the forecast eps for the acquiror after the completion of the deal. The average mark was 44% with only nine passes. The main observation was that most candidates did not have a clear understanding of the structure of the calculation and/or poor numerical and estimation skills.

The logic is as follows; go from current eps forecast for the acquirer to current earnings forecast via number of shares, allowing for normal increment in number of shares. Do same for target, translating from USD, of course and add to earnings. Deduct estimated after-tax interest (assumptions of UK tax rate and interest rate are required based on data in the question). Add estimated cost savings after US tax. Answer – just avoids dilution despite very high P/E because only a small acquisition.

### **Summary of Questions 1, 2 and 3, General Exam (51 marks) – Corporate Finance and Funding.**

Overall 9/18 passes, average mark 48.0%, range 25% to 74%. The demanding project finance question and the merger-based question were not straightforward and required some careful reading plus clear thinking, which clearly defeated some candidates and led to dropped marks for others. Unfortunately real life treasury jobs often throws up similarly unfamiliar problems and situations which require careful reading, clear thinking and the application of fundamental finance and treasury principles. This is just as important as being able to deal with more familiar, predictable problems which nevertheless still require sound and efficient technical analysis – like many of the questions in the case exam!

### **Question 4 About Interest Rate Swaps: Paying a Premium on the Rate versus CSA, Using Futures, Bank's Request for Liquidity Premium.**

What should have been a relatively straightforward Question yielded only 7 passes out of eighteen students, the lowest on this part of the Paper. A large charitable foundation hedging the income on LIBOR-linked assets can either sign a Credit Support Agreement which defines collateral call terms or pay a fixed premium on the swap rate, thus avoiding the possible provision of collateral. Part (a) asked if the premium alternative seemed worthwhile, given some data provided. The issue is whether it is better to pay the premium to avoid a collateral call in terms of cost and the possible spikeyness of a call in liquidity terms. There is not a right or wrong answer as it depends on the future yield curve. However, the materiality of any likely call is an obvious factor and surprisingly few candidates attempted to check this out. The pass rate was 11/18. Part (b) was about whether using futures might be more desirable or whether getting a rating would pre-empt the need for a CSA – both possibilities suggested by the CFO – pass rate 6/18. Part (c) quoted a banker's alleged argument that a positive yield curve represents an embedded loan by the swap bank in the early years which justifies a liquidity premium – pass rate 9/18.

**Question 5 Debate about (a) whether a retail bond issue on LSE's ORB market would be a wise diversification of funding sources for a bank-funded e-retailer and (b) whether it would create customer goodwill.**

On this Question the pass rate was 12/18, in contrast to Q4 the highest on this part of the paper. In essence, the first part is about the difference between bank and capital market debt, eg full draw down at start, bullet repayment, fixed rate, but also with some factors specific to ORB, eg lowish amounts, not underwritten. Part (b) is about the reputational risk to the company as a retailer if the bonds do not perform well. A topical Question, answered reasonably well.

**Question 6 An ORB issue by a property investment company and its suitability as an investment for a "closed to new members", relatively mature defined benefit pension scheme.**

This was a relatively difficult Question so in the context of overall performance on the paper the pass rate of 9 overall on the Question and 9, 11 on parts (a), (b) was quite respectable. Part (a) is not so much about the ORB market as about the credit risk of the issuer and in particular where the unsecured ORB bond sits in the pecking order of funders to the issuer in the event of failure.

The second part is an articulation of what more you would need to know about the issuer's business model, the issuer subsidiaries' borrowing relationships with their banks and the asset investment criteria of the pension fund.

Students who failed part (b) also all failed part (a).

**Question 7 Net Investment Currency Risk: Definition, How It Arises, How It Is Hedged and Whether It Should be Hedged.**

A short 8-mark, three part Question on a fundamental currency risk issue, but one which has been answered poorly in the past – hence its inclusion again here. Definitions when requested in Part (a) tended to omit intra-group debt but some students implied its relevance in Part (b) when discussing hedging (thus getting credit in marking terms). Pass on Part (a) 6/18 but on Part (b) hedging 14/18 – best on this part of the Paper. The last para asked about the wisdom of hedging if the currency was deemed to be in long term decline and this part was generally well answered – 10/18 passes.

### **Question 8 Impact of the Proposal Ring-fencing of UK Commercial or Corporate Treasuries.**

Another topical Question which has had a lot of press but which required some “from first principles” thinking. The Basel 3 rules, currently in the implementation stage, generally render bank credit more expensive and less available. Because banks have some discretion about where the ring-fence sits, and the discretion tends to be exercised around the boundary between middle market and large market corporates, it is a little difficult to generalise. On balance ring-fencing is probably less desirable from a large corporate point of view although in practice each banking relationship needs to be judged on its own merits. So this was a Question which some students found quite difficult and which others may have “timed out” on given the very short responses. Passes 8/18.

### **Summary of Questions 4, 5, 6, 7 and 8, General Exam (49 marks) – Treasury & Risk Management.**

Overall 7/18 passes, average mark 48%, range 30% to 71%. These marks are similar to those for the Corporate Finance section of the Paper, except that untypically the pass rate is lower on this section. The five Questions set were quite varied and three required some “first principles” thinking. However two (Q4, 7) were about fairly basic issues and might have provided some more badly needed marks for students on the pass/fail borderline.