

**The Association of Corporate Treasurers**

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

## **MCT ADVANCED DIPLOMA GENERAL EXAMINATION**

**April 2012**

## QUESTION 1

During 2011 leasing of vans and lorries increased by 24%, a much higher rate of increase than seen in general asset-based lending. This reflects an effort by users of such commercial vehicles to maintain investment levels at a time when companies in general are cutting back on capital expenditure. The growth is being driven by “captive” finance companies set up by vehicle manufacturers.

### Required:

- a) **Why do you think investment in vans and lorries is so resilient and why is leasing increasingly being used to fund such investments? What are the pros and cons for the lessees?**
- (6 marks)**
- b) **Why do you think vehicle manufacturers get involved in leasing, as lessors? What are the pros and cons for them, considering both commercial and financial implications?**

**(4 marks)**

**(Total 10 marks)**

## QUESTION 2

You are Treasurer of a “not-for-profit” housing association, whose business is the development and rental of social housing. You are currently working on the detailed arrangements for merger with another housing association of a similar size, under which both existing associations would become subsidiaries of “Newco”, this being the preferred route to the merger based on pension and legal advice. Both associations are already bigger than average and regarded as financially strong within the sector. The resulting entity will be a major sector player with a regionally more concentrated asset portfolio of 43,000 housing units and much greater financial muscle e.g. in relation to the use of capital markets. The Housing Regulator, who also has to approve the merger, is generally in favour of such mergers since they tend to result in stronger financial viability, economies of scale, better “value for money” and enhanced tenant services.

The merged group in year 1 will have turnover in the region of £160 million, pre-interest surplus (profit) of £30 million and interest payable of £18 million. Tax payable will be negligible. Housing properties are in the books at about £1,200 million on an historical cost basis but probably worth twice that on market values. Half of the original cost was funded by government grants, in the books at £600 million, which are subordinated to all commercial debt.

The two associations currently have borrowing facilities with twelve different banks involving about 30 covenants, with drawn facilities of about £500 million and undrawn of £60 million which have been negotiated to cover the future development programme, including both contracted and possible housing projects.

An internal review of the loan documentation indicated that their consent to the merger will be required from only one of your major lenders with no “not unreasonably withheld” clause. With them you have a 25-year, £40 million facility, of which £20 million is still undrawn, at an interest rate which is very favourable compared with what is currently available in the banking market (possibly by 200 basis points). The facility was put in place five years ago to cover the private finance portion of your association’s 10-year development plans. Government approval and grants have now been received for the second half of the development programme, based on the availability of your existing bank facilities. Contracts, which include tough terms and conditions, have been signed with the Government. Cross-default clauses are not an issue in either association.

The bank has indicated that their preference is for a reduction in the term of the drawn facility to 20 years and either a cancellation of the undrawn facility or a reduction of the term to 5 years. Across the sector, re-pricing, additional fees or revised financial covenants have been sought by banks in similar situations. The bank’s reasoning is that i) their exposure, though un-changed in total, will all be against one entity instead of two, as at present, ii) that the merger creates exposures to new entities within the group and iii) that the merger generally weakens their credit position at a time when the business environment is much more adverse than previously. In addition to the general economic malaise the sector has been adversely affected by numerous changes in the Government’s housing and welfare policies over the last two years.

You are charged with preparing a paper for the Merger Financial Steering Group (MFSG) who will be responsible for negotiations with the banks and advising the Newco designate board.

**Required:**

- a) **Summarise the main risks, constraints and opportunities posed by this current banking relationship situation and summarise how critical is the current situation. What counter-proposals do you recommend in response to the bank’s preferred course of action?**

**(7marks)**

- b) **What work do you need to do to provide the MFSG with the information to support your recommended course of action?**

**(3 marks)**

**(Total 10 marks)**

### **QUESTION 3**

Before the banking, economic and Euro-zone crises of 2008 quoted companies generally avoided holding too much cash on their balance sheet and had arrived at a view on what amount of leverage was appropriate to their sector and with which they were comfortable. Since 2008 the priority has been to pay down debt and accumulate cash with the result that the corporate sector is reported as being extremely cash rich.

**Required:**

- a) **Explain the finance theory which suggests that companies should not hold too much cash, too little debt or too much debt.**  
(4 marks)
- b) **Has this widely-used theoretical model now been proved to be faulty, given that companies seem to have fundamentally changed their view on what level of gearing is acceptable to them?**  
(4 marks)
- c) **If a company finds itself with “too much” cash for its foreseeable requirements what are the alternatives open to it? Discuss the pros and cons of each alternative, having regard to the interests of company management, shareholders and lenders.**  
(4 marks)

**(Total 12 marks)**

## QUESTION 4

You have the summary cash flows for a proposed co-generation power station in Mauritius, a joint venture in which you will have a 30% equity stake and which will be project financed with 87% debt. As Assistant Treasurer you have been asked to carry out a preliminary analysis of some financial and treasury aspects of the project.

### CENTRALE THERMIQUE DE BELLE ISLE

#### CASH FLOWS

Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
million Maurits	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Equity		11.9	31.3																						43.2
Local loans				29.8	39.7																				69.6
Foreign loans					41.7	5.2																			46.9
Profit before interest & depreciation					22.1	21.9	21.6	21.2	20.9	20.3	19.7	19.0	18.3	17.6	16.9	16.1	15.3	14.5	13.6	12.7	11.7	10.7	9.6	8.5	332.1
Capital expenditure		(11.9)	(61.1)	(81.4)	(5.2)																				(159.6)
Change in working capital																									0.0
Taxation																(1.1)	(1.1)	(1.0)	(0.9)	(0.7)	(0.6)	(0.5)	(0.3)	(0.1)	(6.3)
Cashflow before loan service		0.0	0.0	0.0	22.1	21.9	21.6	21.2	20.9	20.3	19.7	19.0	18.3	17.6	16.9	15.0	14.2	13.5	12.7	11.9	11.1	10.2	9.3	8.4	325.8
Interest paid - total					(9.3)	(9.3)	(8.6)	(7.8)	(7.1)	(6.4)	(5.6)	(4.9)	(4.2)	(3.5)	(2.8)	(2.1)	(1.4)	(0.9)	(0.5)	(0.0)					(74.5)
Local loan repayment							(5.2)	(5.2)	(5.2)	(5.2)	(5.0)	(5.0)	(5.0)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)	(0.2)				(69.6)
Foreign loan repayment							(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(1.0)	(1.0)	(0.8)	(0.1)				(46.9)
Cash flow after loan servicing					12.8	12.5	3.8	4.2	4.6	4.7	5.0	5.1	5.1	5.3	5.3	4.1	4.0	6.7	6.4	6.3	10.9	10.2	9.3	8.4	134.8
Dividends					(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(6.0)	(114.0)
Net cash flow					12.8	6.5	(2.2)	(1.8)	(1.4)	(1.3)	(1.0)	(0.9)	(0.9)	(0.7)	(0.7)	(1.9)	(2.0)	0.7	0.4	0.3	4.9	4.2	3.3	2.4	20.8
Cash balance					12.8	19.4	17.2	15.4	13.9	12.7	11.7	10.8	9.9	9.2	8.5	6.5	4.6	5.3	5.7	6.0	10.9	15.1	18.4	20.8	

Loan interest rate

8.0%

#### Required:

- Setting aside the proposed financing structure, estimate the relevant un-gearred project IRR using discounting methodology and calculations. Is the project profitable enough, given the risks inherent in the project?**  
(5 marks)
- Estimate the IRR for the remitted return to shareholders, again using discounting calculations. How good is this return given the risks involved for shareholders?**  
(4 marks)
- The Loan Life Cover Ratio at 2015, when the loans are fully drawn, has a value of 1.37. Define this ratio, explain how and by whom it is used in project finance and give your opinion on whether this is an acceptable level for this project. How does it compare to conventional measures of asset or balance sheet leverage?**  
(4 marks)

This project will utilise locally-produced bagasse (sugar cane waste). Your company expects to provide both equipment and expertise to the special purpose company, Centrale Thermique Belle Isle, which will build, own and operate the plant. Your company has been invited to take a 30% equity stake as a joint-venture partner with the appropriate Government department (40%) and the local electricity generation and distribution company, Mauritius Thermique, (30%). The new company will be project financed, using loans from both local banks and an international development bank. After year 23 the ownership of the project will revert to the Government.

**Required:**

- d) **Given the nature of this particular project, what specific commercial contracts or financial undertakings would the banks require as a condition of non-recourse lending? The intention is that the lenders would not have recourse to the JV partners. Do not comment on the standard terms and conditions that banks generally apply to all corporate as well as project loans.**

**(5 marks)**

**(Total 18 marks)**

## QUESTION 5

You are a successful and profitable manufacturer of heavy engineering equipment for the oil and gas sector with turnover of £1 billion, rated A- stable (Moody's) and BBB+ stable (S&P).

Your entire debt is funded by banks. One of your main relationship banks provided your company with a 25-year £150m bullet loan priced at LIBOR + 30 bp in early 2007, just before the financial crisis. The loan was swapped to fixed rate by the bank at 4.9%, giving a fixed rate of 5.2% ( $4.90 + 0.30$ ).

This bank has now approached you with a proposition to refinance the remaining 20 years of the loan with a fixed rate publicly issued £150m bond priced at 2.00% over the 20-year swap rate, currently 3.00%. This approximates the current pricing at which you could borrow in the loan market for 20 years, ie LIBOR + 2.00%.

In addition, the bank will pay you the breakage cost on the swap, adjusted for the gain or loss to your company as a result of paying the coupon on the bond instead of the swapped cost of the loan.

### Required:

- a) **Make a rough estimate of the breakage cost on the swap.** (3 marks)
- b) **What are the advantages and disadvantages of this proposal for your company?** (5 marks)
- c) **How would you respond to the bank?** (4 marks)
- d) **What is the bank's motivation for making this offer?** (2 marks)

**(Total 14 marks)**

## QUESTION 6

Your company is a global business manufacturing large electric motors, transformers and switch gear. It has long-term contractual relationships with customers relating to plant maintenance and business continuity.

The business has 100 subsidiaries in 50 countries trading in 25 currencies and has 75 relationship banks. The company assists with customer finance which in part explains the large number of banks.

Turnover is £10 billion p.a. with 30% in US\$ and a further 50% non-sterling. Drawn debt is £1.5 billion of which £1.0 billion is bonds and the balance bank loans.

Average daily gross cash balances are £1 billion. This level of cash balances is considered necessary for the operation of the business and for meeting credit rating criteria.

A global cash management system sweeps individual banks accounts daily into regional accumulator accounts and invests the balances after netting off surpluses and deficits.

Due to ongoing concerns about the fragility of banks worldwide the Finance Sub-Committee of the Group Board has requested the Group Treasurer to propose limits for the placement of surplus cash on a daily basis, as detailed in (i), (ii) and (iii) below:

### (i) Aggregate Distribution of Cash Surplus by Credit Rating

Rating	Minimum %	Maximum %
eg AAA		
etc		
etc		

### (ii) Aggregate Distribution by Instrument

Instrument	Minimum %	Maximum %
eg Bank Deposit		
etc		
etc		



(iii) Bank Counterparty £ Limits by Credit Rating

Rating	Limit £m
eg AAA	
etc	
etc	

The focus of concern is on credit risk so ignore issues about maturity/duration.

**Required:**

- a) What factors would you take into account before populating the three tables above?  
(5 marks)
- b) Using the proforma, propose and justify rating levels, instruments, percentage limits and sterling limits for (i), (ii) and (iii) above by populating each of the three tables.  
(5 marks)
- c) What triggers would you use for reducing or closing down exposure to bank counterparties?  
(5 marks)

**(Total 15 marks)**

## QUESTION 7

TLC plc (Transport Logistics Corporation), a FTSE 250 company, has five divisions: transport, estates, infrastructures, airports and biomass.

In early 2007 TLC sold a property portfolio to Propco Limited, a company controlled by TLC's Chief Executive Officer (CEO), a member of the founding family, and its Chief Operating Officer (COO). Both are Directors of Propco and together own 90% of the equity. TLC's Deputy Chief Executive and its Finance Director were also Directors of Propco.

The portfolio was valued at £150m, including debt of £105m, for which Propco paid £45m.

At point of sale the CEO and COO were given a dispensation to spend some of their future time managing Propco's property assets.

At November 2011 the portfolio was valued at £99m comprising net debt of £89m and equity of £10m.

TLC has now (January 2012) proposed buying back the portfolio from Propco, which is still controlled by the CEO and COO of TLC, for £101m, comprising £5m cash and new TLC shares worth £7m, in aggregate representing a premium over the £99m valuation of £2m. The company brings with it an £11m tax loss.

TLC's Chairman justifies the acquisition because of the upside potential in the portfolio and the value in the debt package, arranged at pre-financial crisis margins.

He claims that the decline in the value of the portfolio is due to the fact that the two controlling Directors had not been able to devote enough time to realising its potential.

A major TLC shareholder has commented that such deals went with having entrepreneurial Executive Directors and that as long as the price was correct it was worth doing. He agreed with the Chairman that one advantage of the deal would be to regain the 100% engagement of the CEO and COO.

### **Required:**

**You are a Non-Executive Director of TLC.**

- a) **Ethically, would you have voted for the sale to Propco and the point-of-sale dispensation for the CEO and COO, had you been on the Board in 2007? Justify your answer.**

**(5 marks)**

- b) **It is now January 2012. On what ethical principles should a decision about repurchase be based?**

**(6 marks)**

**(Total 11 marks)**

## QUESTION 8

Defined benefit (DB) pension funds have become increasingly sensitive to the persistent increase in longevity risk. Despite the absence to date of a liquid, traded market, DB schemes continue to seek ways to mitigate the risk. These usually entail structured deals with individual institutional counterparties, eg banks, insurance companies.

XYZ is a UK quoted company with £2bn revenues, £400m EBIT and £2.5bn market capitalisation.

The DB scheme is relatively mature, with approximate membership of 700 actives, 10,000 deferreds and 14,000 pensioners. On an IAS 19 basis the DB scheme has £2.4bn assets, £2.7bn liabilities and £300m deficit.

XYZ DB scheme has entered into a hedging (swap) structure with an investment bank which covers most of its pensioner population. The fixed payments to the bank include coverage of about 50% of the scheme's total exposure to longevity risk. The cost of the longevity element equates to an increase of about £50m in the DB scheme deficit on both an accounting and funding basis.

### Required:

- a) **What are the risks associated with this hedging structure for the pension fund and the sponsor?**  
(4 marks)
- b) **How could they be mitigated?**  
(3 marks)
- c) **What alternatives to this hedging structure could XYZ explore from the perspective of the pension fund and the sponsor?**  
(3 marks)

**(Total 10 marks)**

## ADVANCED DIPLOMA

### GENERAL EXAMINATION - NOTE FORM ANSWERS

APRIL 2012

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#### QUESTION 1

(Total 10 marks 18 mins)

1a.

(6 marks, 10.8 minutes)

**[Marking scheme – I have 16 points (there may be more) so 0.4 mark for each good point]**

Companies investing heavily in vans and lorries have to <sup>1</sup> maintain those vehicle fleets to maintain efficiency and competitiveness. Short-ish life <sup>2</sup> so capex is crucial to them and the financial pressures of the last few years have often resulted in capex being cut <sup>3</sup> back in the interests of cash flow and gearing.

Conventional bank finance has been very difficult <sup>4</sup> to obtain since the credit crunch/banking crisis and also more costly. <sup>5</sup>

Finance leases are formally off <sup>6</sup> balance sheet for now - gearing, covenants, etc. although credit ratings usually put them back on.

Leasing provides “automatic” cash flow <sup>7</sup> smoothing by spreading the capital purchase element.

Leasing provides financing <sup>8</sup> directly linked to the purchasing of vehicles - self-contained, self-secured, convenient all-in-one <sup>9</sup> purchase of vehicle plus finance. Also simplified <sup>10</sup> credit assessment process by financiers driven by the commercial objectives of the vehicle manufacturers.

Leasing contracts may limit lessee’s flexibility <sup>11</sup> eg regarding early disposal of assets before end of anticipated life. Or early replacement for technical developments may be penalised financially - but less critical for commercial <sup>12</sup> vehicles than eg computers?

Lessors may be able to offer tax-based <sup>13</sup> reductions in charges, the equivalent of which might not be available to lessees with accumulated losses. <sup>14</sup>

Historically marginally more expensive than bank finance. <sup>15</sup>  
Lessor carries residual value risk <sup>16</sup>

1b

(4 marks, 7.2 minutes)

**[Marking scheme – I have 11 points (but there will be others) so 0.4 mark for each good point]**

Captives set up by vehicle manufacturers provisionally as a means of promoting <sup>1</sup> sales for their core business - providing the attractiveness of a finance/vehicle <sup>2</sup> package. Gives opportunity to cross-subsidise <sup>3</sup> the purchase.

Just as leasing smooths the cash flows of lessees it helps to even out the potential fluctuations in the <sup>4</sup> capital investment cycle, so reducing lessors sales cyclicity and volatility.

A continuing credit <sup>5</sup> assessment function is required.

Funding is required on a much larger <sup>6</sup> scale - to fund customers' capital requirements on top of their own.

Extends manufacturers' risk on end users beyond normal purchase <sup>7</sup> period.

Effectively transfers banks' credit risk <sup>8</sup> to manufacturers rather than end users. Manufacturers end up acting as financial intermediaries. <sup>9</sup>

Issues of management / separation <sup>10</sup> of the two businesses – operational, financing and risk issues.

Lessor carries residual value and operational cost risks. <sup>11</sup>

## QUESTION 2

(10 marks, 18 mins)

2a

(7 marks, 12.6 mins)

**[Marking scheme – I have 20 points but an open-ended question so ½ mark for each good point]**

How critical is the availability of the undrawn facility to the development plan. <sup>1</sup> Is the other £40m undrawn facility “ear-marked” for other development programmes? <sup>2</sup>

If not, cancellation is not an immediate <sup>3</sup> or real problem, and repricing or reduced term simply represents an additional cost. <sup>4</sup>

The bank's consent seems to be absolutely <sup>5</sup> critical for the merger and may be “unreasonably <sup>6</sup> withheld”.

If the facility really is needed there is still the question of the cost (of a re-pricing or re-financing) and its likely impact <sup>7</sup> on the projected business plan, which will be a crucial merger document. £40 million x 200 bp = £800k <sup>8</sup> against £18 million of interest and £12 million of profit - not critical but to be avoided if possible <sup>9</sup> (£16 million extra cost over 20 years).

If facility is required - for what period is it really <sup>10</sup> critical eg the next 5 years, 10 years, 15 years, 20 years? Reducing the tenor may be the way <sup>11</sup> forward, but probably not below <sup>12</sup> 10 years, given likely timescales of merger and development (housing) programme.

Paying a fee instead of re-pricing looks attractive <sup>12</sup> if, as likely, it is less than £300k - seek professional advice regarding recent similar deals in the market place. <sup>13</sup>

The bank's vague arguments about reduced credit quality are probably just a smoke-screen <sup>14</sup> for re-pricing out of a contract that is now financially <sup>15</sup> unsustainable for them, after the banking crisis and its aftermath of much more onerous capital and liquidity requirements on banks. But the credit argument needs to be challenged <sup>16</sup> - strength of merged group (financial, managerial/synergies, cost savings, increased robustness re. risk. <sup>17</sup>

Do we need the relationship going <sup>18</sup> forward? In the short run – yes. In the longer term, with likely access to capital markets, other investors – no. <sup>19</sup>

How much do they value the relationship in the future or are they keen to reduce their sector exposure, especially at unprofitable rates asap and at any cost? <sup>20</sup>

Probably happy to lose the relationship to get them out of a hole.

**2b**

**(3 marks, 5.4 mins)**

**[Marking scheme – I have 8 points so ½ mark for each good point]**

Financial projections need to be re-run for the various <sup>1</sup> scenarios to test if any of the options suggested are real <sup>2</sup> “show-stoppers” or just how painful/bearable they are.

Quantify, in NPV terms, the cost of the various <sup>3</sup> alternatives.

Check out the MFSG's <sup>4</sup> (and via them the boards) risk appetite re. the different options.

Ensure we have our own best <sup>5</sup> legal advice regarding the loan documentation.

Decide a negotiating strategy <sup>6</sup> based on the above analysis with first, best and worst acceptable solutions clearly defined and agreed, to allow flexibility in negotiations. <sup>7</sup>

Prepare for exerting “political” <sup>8</sup> influence via any method possible eg MPs, local opinion, regulators.

### QUESTION 3

(Total 12 marks, 21.6 mins)

3a

(4 marks, 7.2 mins)

**[Marking scheme – I have 15 points in a full answer so  $\frac{1}{3}$  mark for each good point]**

Modigliani-Miller <sup>1</sup> theory of optimal capital structure ie the debt/equity mix to give the lowest WACC. <sup>2</sup>

Based on the tax-deductibility <sup>3</sup> of interest paid (and received), lower cost <sup>4</sup> and the priority of debt over equity.

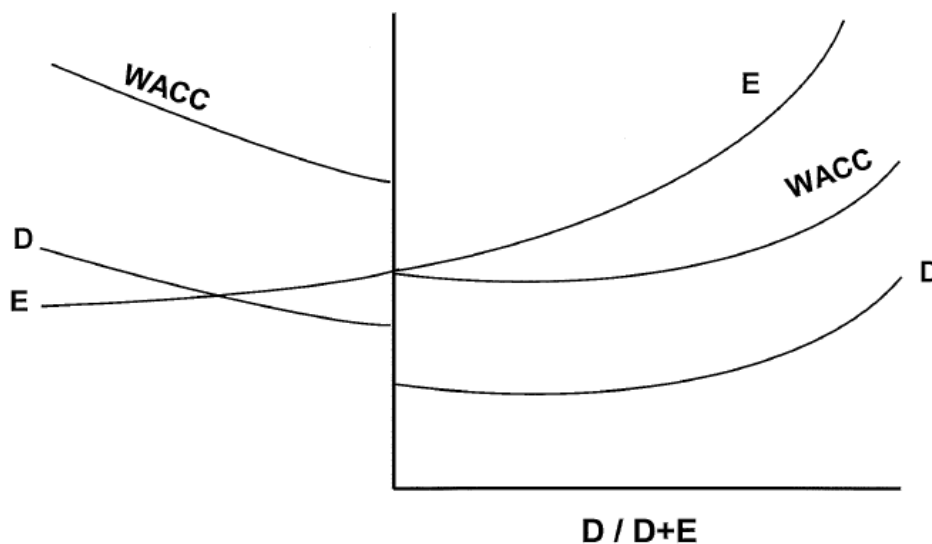
In the absence of taxes (and if no difference between corporate borrowing and depositing rates and the “risk-free rate” and no “bankruptcy effects”) the weighted cost of capital would remain constant, <sup>5</sup> irrespective of the capital structure. The increasing cost of equity (higher financial risk and beta) is exactly offset by the increased use of cheaper risk-free debt.

Tax shelter for debt interest means that increasing borrowing, up to a point, reduces the <sup>6</sup> WACC and adds the value of <sup>7</sup> a “tax wedge” to the EV (essentially  $d \times t$  ie debt times the tax rate).

The greater the tax rate the bigger the effect and vice-versa. So “too little debt” means a higher WACC and a lower EV. <sup>8</sup>

“Too much cash” <sup>9</sup> eg negative net debt is an even more extreme version of “too little debt”, exacerbated by the usual difference between borrowing and deposit rates. <sup>10</sup> The after-tax return on cash will be much lower than the after-tax cost of debt, the cost of equity and the WACC - so a loss-making arbitrage. <sup>11</sup>

“Too much debt” <sup>12</sup> - the so-called “bankruptcy effect” recognises the fact that, in practice, the cost of debt increases with increased leverage. <sup>13</sup> Other costs associated with borrowing, also increase eg fees, constraints on the company’s freedom to act via covenants (opportunity costs). <sup>14</sup> Arguably, also, shareholders also require an additional return (over and above CAPM) for highly-leveraged structures. <sup>15</sup>



3b

(4 marks, 7.2 mins)

**[Marking scheme – I have 15 points so 1/3 mark for each good point]**

Since 2008 companies have de-leveraged <sup>1</sup> as a response to the fundamental changes in a) the debt markets and <sup>2</sup> b) the global economy.<sup>3</sup> The overall level of risk has increased <sup>4</sup> - threat to sales and profits from the economy, threat of increased cost of debt, increased bank fees, <sup>5</sup> stricter application of borrowing covenants and associated penalties eg re-pricing, reduced available of bank debt.

So debt has got more expensive <sup>6</sup> (also a greater risk of interest exceeding profits so reduced tax-shelter benefit), business risks greater and increased “bankruptcy <sup>7</sup> effects.” The theory therefore would indicate a lower <sup>8</sup> optimal gearing level – on this basis the model has not been proved to be faulty.<sup>9</sup>

Also, companies large and small can no longer assume ready availability of finance from <sup>10</sup> banks so cannot rely on it. But they are seeking alternative sources of debt finance so maybe the model does still hold.<sup>11</sup>

One could argue that companies, as a consequence, have become “unduly” risk-averse <sup>12</sup> (managements’ attitude to risk is allowed for by the theory) or that the bankruptcy costs have become so onerous as to totally dominate <sup>13</sup> the model, thereby wiping <sup>14</sup> out the concept of an optimal balance between debt and equity. On this basis one could argue that the model has proved to be faulty.<sup>15</sup>



3c

(4 marks, 7.2 mins)

**[Marking scheme – I have 24 points (so should carry more marks) each mark based on breadth and depth of answer]**

1. Retain the cash <sup>1</sup>, on the argument that it will increase the company's credit rating, <sup>2</sup> making debt cheaper <sup>3</sup> and more available - but, in theory, destroying shareholder value <sup>4</sup> (but EV does depend on how the stock market reacts to the levels of debt and cash). <sup>5</sup>
- 1.a Repay debt – much as in 1 but reduces funding flexibility if credit lines expire.
2. Increase the level of dividends <sup>6</sup> under normal dividend policy, thereby reducing the cash balance gradually <sup>7</sup> over time but via a sustainable <sup>8</sup> dividend policy. A cautious approach. Need to "signal" <sup>9</sup> this to shareholders in advance.
3. Make a special dividend <sup>10</sup> payment to reduce the cash balance more immediately. <sup>11</sup> An even greater need to signal <sup>12</sup> this to shareholders - "clienteles effect" <sup>13</sup> in relation to tax situations and cash requirements.
4. Buy back shares <sup>14</sup> - similar effects and issues as in 3. <sup>15</sup> but more extreme. Impact on eps <sup>16</sup> needs to be evaluated and communicated. Alternatives may need to be offered to suit differing needs of shareholders. <sup>17</sup>
5. Look for acquisitions <sup>18</sup> or new capital projects - regarded as dangerous <sup>19</sup> if only prompted by the surplus of cash. Such a strategy has been proved, in the main, to destroy value. <sup>20</sup>

Over-riding principle - "if you can't find profitable investment projects within the company's existing strategy give the cash <sup>21</sup> back to shareholders so they can re-invest it where they think there are profitable opportunities."

All of these actions except from 1. will have an adverse effect on the credit status and therefore may not be welcomed by lenders. <sup>22</sup> Policies 2, 3 and 4 are intended to increase shareholder value <sup>23</sup> - the ultimate justification. Policy 1. makes life easy for the company's financial management. <sup>24</sup>

**QUESTION 4****(18 marks, 32.4 mins)****4a****(5 marks, 9 minutes)**

**[Marking scheme – discount calculation takes time but rest is easy so ½ mark for each good point, but penalties if no discounting attempted]**

To assess profitability of the project before financing (ungeared analysis), discount second block of cash flows from the table (profit, capex, taxation, NB no working capital);

(11.9), (61.1), (81.4), 22.1 minus 5.2, 21.9, 21.6, 21.2 .....9.3, <sup>1</sup> 8.4 <sup>2</sup>

In other words take cashflow before debt service and subtract Equity and Loans introduced. <sup>2</sup>

Since IRR calculators not allowed choose an approximate <sup>3</sup> discount rate and calculate NPV. Interest rate <sup>4</sup> is 8.0%, profit averages 16.6 <sup>5</sup> (332.1/20) per annum on investment of 160 = about 10%, so discount at 10%. <sup>6</sup>

NPV at 10% = negative 7.57, <sup>7</sup> <sup>8</sup> so project IRR a little less than 10%, <sup>9</sup> (actually 9.0%).

Conclusion – the rate of return is not much <sup>10</sup> greater than the interest rate on the debt, so not very profitable for the risks involved. <sup>11</sup>

Ideally adjust tax for interest shield but insignificant so don't bother in time allowed.

**4b****(4 marks, 7.2 minutes)**

**[Marking scheme – discount calculation takes time but rest is easy so ½ mark for each good point, but penalties if no discounting attempted]**

To assess the remitted return simply use equity invested and dividend flows, <sup>1</sup> plus cash balance <sup>2</sup> at end as a “final dividend”. Calculation simplified by constant dividends using compound discount factors.

(11.9), (31.3), 0, 0, 6, 6, .....6, [6+20.8] <sup>3</sup> <sup>4</sup>

Discounting equity cash flows after loan servicing <sup>5</sup> is wrong, because although all such cash is eventually remitted as dividends it is somewhat lagged (IRR actually 12.5%, better than remitted IRR).

Guesstimate of equity <sup>6</sup> rate for discounting, say, 11% (project 9%, interest rate 8%, funding 73% of project, so leveraging equity returns up, but then dividends a little back-ended bringing return back down a bit, so maybe 11%). <sup>7</sup>

	Year 1	Year 2	Years 5 - 23	Year 23 Cash	Total NPV
NPV (11%)	(10.7)	(25.4)	6 x 5.164 = 30.98	1.89	(3.23) <sup>7 8</sup>

At 11% Remitted equity NPV = negative 3.23, so actual IRR less than <sup>9</sup> 11%, actually 10.0%.

Conclusion again is that the return is not good enough for the likely level of equity risk involved. <sup>10</sup>

**4c**

**(4 marks, 7.2 minutes)**

**[Marking scheme – I have 15 points in a full illustrative answer, but an easy question so  $\frac{1}{3}$  mark for each good point]**

LLCR = NPV of <sup>1</sup> future cash flows over the duration of the <sup>2</sup> loan  
 (Discounted at the average cost of debt) <sup>3</sup>  
 Divided by the outstanding loan balance <sup>4</sup>

In this case =  $159.9 / 116.4 = 1.37$ , as at year 4 when the loan's fully drawn.

LLCR (plus Project Life Cover Ratio (PLCR)) is used as a credit <sup>5</sup> metric in project finance where the ability to service and repay debt depends on the (variable) cash flows <sup>6</sup> over the life of the loan, with a fall-back <sup>7</sup> on the cash flows to the end of the project. It averages the level of <sup>8</sup> cash flow cover for debt servicing throughout the life of the loan. For an unconventional <sup>9</sup> power plant in Mauritius this <sup>10</sup> looks like a low level of cover (maybe nearer to 1.8 <sup>11</sup> would be more appropriate.

Conventional cost-based asset leverage on this project is;  
 $(69.6+46.9) / 159.6 = 116.5 / 159.6$  <sup>12</sup> = 73.0% (not 87% as stated in the question)

[Not really used in project finance because of dubious sale value of assets].

In contrast debt to economic value over loan life, at year 4 =  $116.4 / 159.9 = 72.8\%$ , <sup>13</sup> the reciprocal <sup>14</sup> LLCR ( $116.4/159.9$ ). The debt to economic value over the total project life is 68.5%, <sup>15</sup> showing that the project does add some value after the loan is repaid.

Note A more profitable project would add more value to the asset cost and give a lower value on the two project finance measures of "leverage" and therefore higher value on the LLCR and PLCR. A PLCR of 2.0 implies economic value leverage of 50% versus cost-based leverage of 73%.

4d

(5 marks, 9 minutes)

**[Marking scheme – I have 17 detailed points so 1/3 mark for each good point]**

Essentially guarantees and undertakings to shelter the project company <sup>1</sup> and hence the banks against all <sup>2</sup> major risks e.g. fixed price performance contract <sup>3</sup> from civil engineer, supply and technical <sup>4</sup> performance of all equipment (from your <sup>5</sup> company the supplier), operation and maintenance <sup>6</sup> contract from whoever operates <sup>7</sup> the plant, (again, maybe your company) off-take <sup>8</sup> agreement (volume and price <sup>9</sup>) from local electricity <sup>10</sup> company, appropriate <sup>11</sup> consents and permissions from Government <sup>12</sup> to operate, use water, return it to rivers/sea <sup>13</sup> etc, supply of alternative fuel <sup>14</sup> for co-generation, at an agreed <sup>15</sup> price, maybe a guaranteed minimum level (and quality) <sup>16</sup> of bagasse from someone. <sup>17</sup>

Control of dividends and “cash cascade”, also veto on disposal of shareholdings would also be normal.

**QUESTION 5    Refinancing loan with bond                    (Total 14 marks, 25.2 mins)**

**5a    Rough estimate of swap breakage cost                    (3 marks, 5.4 mins)**

**[Marking scheme: method, answer – 3 marks; approximate method, answer – 1.5 to 2.5 marks; some evidence of method – 0 to 1.5 marks.**

**Results 4 attendees @3 marks, 2@ 0 marks, 5@ 0.5 to 2.5 marks]**

Breakage cost equals PV of 4.90% less replacement swap 3.00%, ie 1.9%, for 20 years discounted at 3%:

PV (150m x 1.9%) for 20 yrs @ 3% = £42.4m

**5b    Proposal pros & cons for borrower                    (5 marks, 9.0 mins)**

**[Marking scheme: pass for 6 credible points, including at least 2 on each of advantages and disadvantages]**

- Advantages
  - locks in the benefit of the low pre-crisis margin of 30 bp which would be at risk if there were any breaches of loan covenants
  - provides visibility in capital markets at low risk (eg no underwriting required)
  - removes potential swap collateral liability to bank
  - and also removes potential MTM risk on bank
  - diversifies funding sources
- Disadvantages
  - lose flexibility of bank debt
  - need to establish investor relationship role
  - fee (unless bank pays)
  - breakage cost & gain/loss on relative cost of bank versus bond debt

**5c Response to bank****(4 marks, 7.2 mins)****[Marking scheme: pass for 3 credible points]**

- Bank has agreed to carry swap breakage cost, adjusted for borrower's loss/gain on interest cost of loan versus bond
- On the numbers given (loan @ 5.2%, bond @ 5.0%) borrower actually gains, ie PV of 0.2% on £150m for 20 yrs, discounted (say) @ 3% swap rate as in (a) = £4.46m.
- So borrower could negotiate to retain this saving in view of the advantages of the deal to the bank (see(d) below)
- Borrower can also look to bank to pay issue fees
- How will the bank present this deal to the investors and how will this impact the borrower's reputation/credit status?
- Can the bank execute the deal or is it/ the market problematic?
- Can the bond include call options for flexibility?
- If the borrower likes the deal but feels the bank can't execute, would the lender be willing to novate the loan to a bank which could execute?

**5d Bank's motivation?****(2 marks, 3.6 mins)****[Marking scheme: 2/3 mark per credible point, max 2 marks]****Liquidity**

- eliminate Basel 3 regulatory cost of 20 year maturity mismatch P&L
- shed long-term low-margin asset at a one-off cost which probably will be swallowed up in much larger current write-offs
- also, if the bank can lend the repaid £150m @ say 1.50% for 10yrs instead of 0.30% the PV of the marginal extra income offsets most of the swap breakage cost over a 20yr time horizon

**Credit Risk**

- eliminates potential swap MTM risk on borrower
- reduces oil & gas sector exposure (if that is desirable for the bank)

## QUESTION 6 Surplus cash investment

(15 marks, 27 mins)

### General Observations

The company has 80% non-sterling revenues, some of it relating to long-term contracts . . . implying the possible need for long-term fx hedging; it also has interest risk exposure to hedge and trade finance exposure to banks. All in all, the company has a lot of credit exposure to banks to take into account before considering the surplus cash placements.

At the heart of the question is the very large amount of funds to be placed, given the uncertainty surrounding bank viability everywhere.

So the problem is a complex one. However the way the question is framed, ie providing the three tables as templates (i), (ii), (iii), limits the focus for the candidate to make the question manageable for the timescale (27 mins).

And part (c), which explicitly states the need to specify triggers for monitoring and reducing exposure, makes it easier to specify relatively large £ limits for individual counterparties to cope with the scale of funds to be placed.

The question stated that credit risk is the main issue and that maturity and duration is explicitly ruled out.

### 6a Factors to consider

(5 marks, 9.0 mins)

**[Marking scheme: Five credible points for a pass, with adjustment for quality of narrative if any]**

Materiality: Existing exposure to banks

- derivative MTM
- trade finance
- existing deposits
- loan facilities eg undrawn committed facilities

Availability of counterparties & instruments

- investment grade banks eg AA+
- deposit guarantees
- quality sovereign bonds
- other instruments

Consistency of treatment

- bank counterparties
- deposit guarantees
- currencies
- sovereigns
- subsidiaries
- potential of applying CRA methodology of global anchor rating adjusted by entity and sovereign qualifiers

Others

- offset deposit counterparty risk with relationship lending banks
- primacy of bank, currency, country in ranking list
- transferability of funds across border
- opportunities to regionalise / pool
- use non-bank instruments to escape the bank sector . . . . however, this carries with it exposure to market liquidity

## 6b Rating, Instrument, Bank Counterparty Limits (5 marks, 9.0 mins)

[Marking scheme: each candidate's choice of range for (i), (ii) & (iii) was classified as Low, Medium or High risk. The presumption is in favour of a low risk policy, subject to contrary arguments. For (i) having 50% above A+ was classed as Low (assuming other 50% is A- or above); for (ii) having just bank depos & MMF was classed as Low, taking into account also the rationale narrative, eg about inherent MMF risks; for (iii) having a max of £100m in a AA+ bank was classed as a Low risk. Three Lows and a credible rationale earned a clear pass, but some with higher risk appetites and a sound rationale narrative carried higher scores]

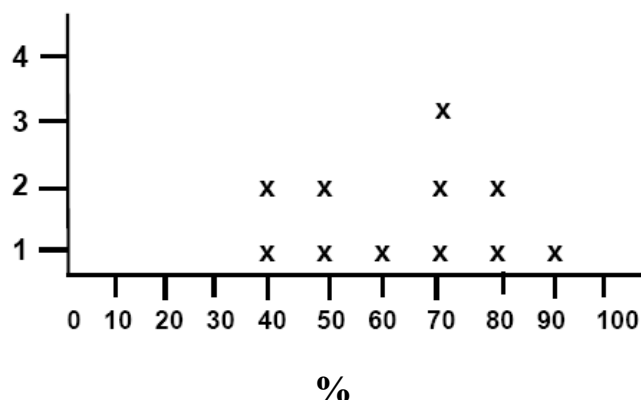
(i) eg

RATING	MIN %	MAX %
AAA	20	100
AA	0	80
A	0	40

ie, 60% min > A+

To give some feel for the range of responses (most candidates had a single A- floor):

Min, > A+



So choosing at least 40% above A+ signifies that the 60% balance is A- or above.

(ii) eg

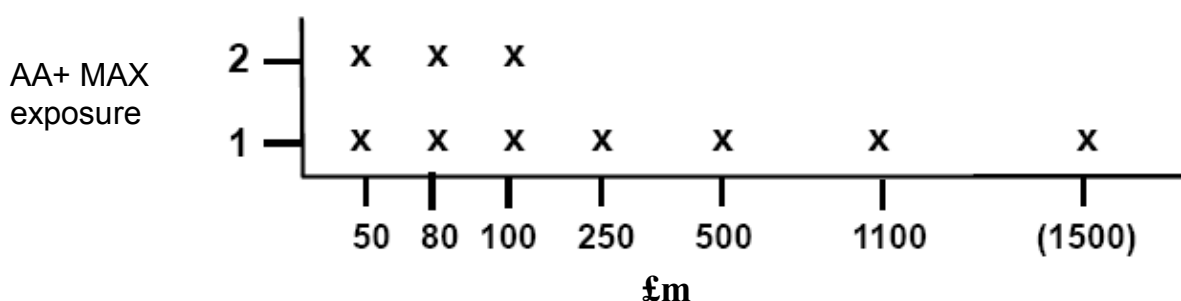
INSTRUMENT	MIN %	MAX %
Bank Depo	40	80
Government	0	40
MMF	0	30
Other	0	20

Every candidate noted bank deposits & MMF; 80% mentioned either two or three other possibilities, eg Government/Supranational, CD, CP.

(iii) eg

COUNTERPARTY								
Credit Rating	AAA	AA+	AA	AA-	A+	A	A-	BBB+
£m		100	90	80	70	60	50	40

To give some feel for the range of responses:



So choosing 80m max exposure at AA+ signifies that the max exposures to any lower rating will be less than 80m, with corresponding implications for the total number of banks required to park the funds.

## 6c Trigger measures

(5 marks, 9.0 mins)

**[Marking scheme: 3 credible points for a pass mark, qualified by some narrative]**

### Routine

- CDS Periodic movements (absolute/relative)
- Share Price Periodic movements (absolute/relative)
- Moody's Market Implied Rating (MIR)
- Rating Change in status (notch/outlook)

### Non-routine / occasional

- Media comment: specific to bank
- Review of new regulation impact, eg Vickers
- Media comment (general): eg LIBOR, Sovereign exposure, Eurozone



**QUESTION 7 Property portfolio sale to, & re-purchase from, Executive Director- Shareholders (Total 11 marks, 19.8 mins)**

**7a Initial sale: Yes or No? (5 marks, 9 mins)**

**[Marking scheme: 3 well-argued points with the emphasis on “well argued” for a pass]**

Issues:

- distraction of key executives
- If Telco/Propco directors are also shareholders, potential conflict of interest
- potential conflict of interest for company executives involved in implementing sale
- difficulty of being “seen to be fair” by external shareholders
- what is the business case?

The sale was immediately pre-crisis. The expectation would have been continued property price increases. Assuming the valuation is fair, the price reflects a loan to value of 70%, providing reasonable leverage to the purchasers.

The central issue here is whether the sale of these assets releases funds which can be better invested elsewhere (the business case) and if so whether the price is fair. We have no background on either of these questions.

Candidates therefore need to argue the case about whether the deal, as described, is justifiable to external shareholders: six candidates argued “no”, one argued “yes” and the rest were silent as to either.

**7b Principles/framework for decision (6 marks, 10.8 mins)**

**[Marking scheme: expect 3-4 credible “principles” with supporting narrative for a pass]**

Principles:

- valuation is fair and independent
- business case meets normal criteria and is independently validated
- potentially conflicted Telco execs, directors excluded from decision process
- major shareholders consulted
- judged by Board to be seen to be fair and acceptable to other shareholders and public opinion leaders

Part (b) like part (a) does not provide background on the business case. So part (b) asks for the *principles* on which one could base a judgment rather than a “yes/no” argument. About three quarters of candidates picked up the distinction but only 6/11 produced a credible and coherent list. Of the principles listed, “valuation” and/or “business case” were most mentioned; after mention of these, inspiration dried up for nearly half of candidates.

**QUESTION 8 Mortality swaps for hedging defined benefit pension scheme mortality risk (10 marks, 18 mins)**

**8a Mortality swap risks (4 marks, 7.2 mins)**

**[Marking scheme: aggregate of 5 Sponsor & Fund credible points with narrative to pass]**

<u>Risks</u>	<u>Sponsor</u>	<u>Fund</u>
(i) Bank and/or ultimate risk taker failure	*	*
(ii) Emergence of more efficient, cheaper traded market	*	*
(iii) Change in mortality pattern	*	*
(iv) Collateral call		*
(v) Account for liability now, impact P/L	*	

Only four responses distinguished between risks to sponsor and to fund.

**8b Mitigation of risks (3 marks, 5.4 mins)**

**[Marking scheme: 3 credible points with some narrative to pass]**

Mitigation

- (i) Collateral/CDS
- (ii) Break clause/ renegotiate/ novate
- (iii) Break clause/ renegotiate/ novate

**8c Alternatives (3 marks, 5.4 mins)**

**[Marking scheme: 2 credible points with some narrative to pass]**

Alternatives

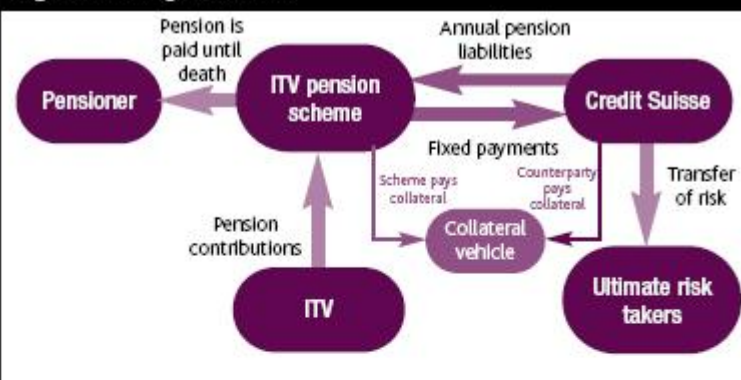
- Buy-out ie transfer of scheme assets & liabilities to regulated insurer
- Buy-in ie insurance policy covering selected scheme benefits for selected scheme members
- (• encourage transfers out)
- (• move to average salary from final)
- (• close to new employees)

**8. Overall**

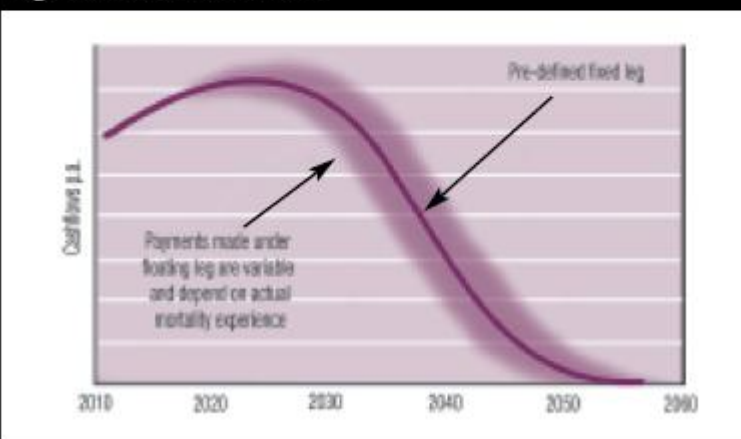
Pass rates overall (and for (a), (b), (c) respectively) were 4/11, (7/11, 2/11, 4/11). These responses were marked between 0 and 15%.

**Note:** Rolls Royce, BMW, ITV, British Airways and Babcock have done these deals with eg Credit Suisse, Deutsche. By end 2012 it is estimated that 25% of FTSE 100 companies will have engaged in these structures. See below for ITV-Credit Suisse structure, ref: The Treasurer Jan 2012 pp 32-33.

**Figure 1: Hedge structure**



**Figure 2: Potential cashflows**



## Examiner's Report Advanced Diploma - April 2012

### OVERVIEW

	General Exam	Case Exam	Combined
Marks	50.9%	49.6%	50.3%
Questions	8	8	16
Students	11	9	12
Pass #	6	4	10
Pass %	55%	44%	50%

The combined average mark is very similar to that achieved in recent sittings but the combined pass rate is better. Unusually the results for the General Examination this time are better than those for the Case Examination.

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

Overall the quality of answers on the nine corporate finance and funding questions across the two papers (103 marks out of 200) was good. There were 7 passes out of 11 candidates with an average mark of 53.1%. Furthermore the seven passes were clear passes, with two candidates close to distinction level. Two of the fails were marginal but the other two were bad fails. One re-sit candidate did well but one was poor.

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

There were seven questions on treasury and risk management across the two papers (97 marks out of 200). A typically, the average mark for the eleven candidates was 48.0% compared with 53.1% for CF & F, and only 5 of the eleven candidates passed. One of the six fails was marginal but the other five were clear fails. On average, candidates found the T & RM questions on the General Exam slightly more difficult than on the Case Exam

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

### **Question 1 (10 marks), average mark 54.5% passes 7/11**

**Pros and cons of leasing to lessees, who are heavily dependent on vans and lorries, and lessors, given the recent adverse economic and banking climate.**

On this very straight-forward two-part question candidates, surprisingly, had more to say from the perspective of lessors, which carried slightly fewer marks, than from lessees. The respective scores were 44% and 72%.

Most candidates discussed the advantages of leasing in relation to the scarcity and cost of conventional bank finance. However, some candidates did not relate their answers to the problems and challenges of companies that are heavy users of vans and lorries and therefore have a continuing, critical requirement for capital spending on their vehicle fleet. The coverage of wider issues like accounting implications, tax and cash flow advantages were differentially covered by candidates. On the lessors' side the wider implications, managerial as well as financial, of adding a financing intermediary activity alongside the manufacturing business were well covered by some candidates but not by all.

### **Question 2 (10 marks) average mark 59.5% passes 7/11**

**Candidates were required to assess the main issues involved in a tricky negotiation situation with a bank whose consent is required for an imminent housing association merger, weigh their impact and advise on a course of action, based on detailed background information.**

This question was generally well answered, but it sorted out the very good candidates who could see "the wood for the trees" in the detailed background information, from those that did not manage to focus clearly on the particular questions asked. Some went off at a tangent, answering other, long-term questions like rationalising the banking relationship, diversifying funding or seeking consent from the other banks (not required), rather than addressing the immediate problems, as clearly indicated in the question.

The bank can withhold consent to the merger “unreasonably” and the facility is critical for the 10-year house-building programme, partly because government grant funding is conditional on the banking facility. So the housing association has to concede some of the advantages of its current, very favourable facility e.g. shorter term, reduced un-drawn facility, additional fees or, to be avoided at all costs, re-pricing of the whole facility, which really is un-affordable. The ability to assess the critical nature of the facility by relating to the information given about the association’s finances differed greatly from candidate to candidate. The same can be said about understanding the importance of running sensitivity tests for various scenarios preparatory to negotiations with the bank e.g. repayment terms shorter by 5 to 15 years. There was one particular “howler”, namely that a 25-year facility is not required because the development programme only takes 5 years. A key lesson here – repayment of a loan takes longer than spending the money!

**Question 3 (12 marks) average mark 66.2% passes 9/11**

**The question required a critical review of the theory and practice of capital structure management, given the widespread and substantial de-gearing and accumulation of cash balances given the economic, banking and Euro crises of the last five years.**

This was a good result and the strongest answers were on part 3c; what to do with surplus cash? The weakest were on part 3b; has the Modigliani/Miller theory of optimal capital structure been proven faulty by the economic and banking crises of the last four years, given that companies are holding much more cash , much less debt? This was the most testing part of the question, inviting candidates to review established corporate finance theory in the light of recent corporate practice - and it certainly sorted out the better candidates. 3a was the straight theory question, but couched in everyday language which fooled some candidates i.e. why should companies not have too much cash, too little debt or too much debt? It was generally very well answered but still some candidates missed some easy marks by either just giving the bare bones of an answer, not elaborating with illustrations or examples, or by not referring specifically to the theoretical terminology e.g. Modigliani/Miller, bankruptcy effect, tax shield effect, optimal capital structure. Some candidates spent most of the time doing detailed, stand-alone WACC calculations rather than answering the question directly.

**Question 4 (18 marks) average mark 46.3% passes 4/11**

**Calculation/ estimation of project and shareholder returns plus the use of Loan Life Cover Ratios and risk management structures/contracts in a project finance situation.**

The results on this straightforward but technical question were very disappointing, so I have given a rather fuller commentary. Only on the relatively easy but calculation-intensive DCF calculation of the project IRR (question 4a) was the average mark above 50%, with 7 passes out of 11 and an average mark of 61%. This required DCF calculations, maybe involving clever approximation routines, plus some informed “guesstimation”, which most candidates did very well. Three of the failing candidates did no DCF calculations at all and several candidates did detailed WACC calculations (don’t they just love doing them even when not required by the question!) which were un-necessary as a pre-requisite to the IRR calculation and a luxury in the time allowed for the question. All that was required was to relate the IRR to an estimate of the likely required rate of return given the level of project risk and also given the interest rate of project debt. The passes used either a full DCF calculation or a variety of short cut estimation methods often to very good effect, which was partly what the question was designed to test.

Part 4b similarly required estimation of the IRR on shareholders’ remitted returns. This was a much simpler calculation because of constant dividends for most of the period, but it was surprisingly poorly answered (4 passes, average mark 36%). Errors were i) using project cash flows not dividends, ii) using capex instead of equity invested, iii) assuming that the value of an annuity for years 5-23 is the same as that for a perpetuity at year 23 less a perpetuity at year 4.

Part 4c asked for a definition and explanation of the loan life cover ratio (LLCR) and a comparison with conventional credit measures. Again, these should have been easy marks but there were only 5 passes out of 11, with an average mark of 42%. Half the candidates did not know this ratio and I think only one defined it correctly and fully (NPV of project cash flows before finance flows, divided by the value of outstanding debt, discounted at the average cost of project debt. It can be seen as a multi-period cash interest cover ratio or as the reciprocal of economic value leverage, as opposed to conventional balance sheet asset-based leverage or EBITDA leverage or, indeed, single-period interest cover ratios, all of which work well enough in more-established businesses.

Part 4d was about contractual credit protection in project finance. This should have been an absolute gift, even if candidates didn't know much about project finance. They simply had to think about how to mitigate the risks faced by the project company and hence the bank, that were either given or easily deduced from the description of the project and the main counter-parties. Some candidates had nothing to say on this question, with the result that there were only 5 passes out of 11, with an average mark of 45%, which was disappointing.

### **Overall corporate finance and funding (4 questions, 50 marks)**

There were 8 passes out of 11, with an average mark for the 11 of 55.4%. The lowest mark was 39%, clearly someone seriously under-prepared, and the highest was 70%, someone well on top of all the material, both practical and theoretical. Overall this was a good result on what was a varied paper requiring a wide range of knowledge and skills.

### **Question 5 (14 marks) average mark 42.9% passes 4/11**

**Evaluation of a relationship bank's proposal to refinance the remaining 20 years of a relatively cheap pre-financial crisis long-term bullet loan, swapped to fixed, by issuing a 20 years fixed rate bond.**

Candidates were asked to (a) estimate roughly the breakage cost of the swap (passes 6/11), (b) indicate the pros and cons of the bank's proposal (passes 4/11), (c) determine the borrower's response (passes 3/11) and (d) speculate on the bank's motivation for making the offer (passes 9/11).

Surprisingly, as for Q1, passes were significantly higher for part (d), the bank's motivation, ie to shed a very long-term very low yield asset which will be deeply undesirable under Basel III. Part (a), requiring only a very simple financial calculator PV routine, defeated nearly half of candidates. Parts (b) and (c) were marked on quality of argument rather than conclusions and depended for a pass on a basic understanding of the pros and cons of bank versus bond debt.

In short, with the exception of part (d), this question was about very basic corporate funding features and the low pass rate is disappointing.



**Question 6 (15 marks) average mark 57.2% passes 9/11**

**This question is about determining criteria for the placement of £1bn of surplus cash for a business with 100 subsidiaries in 50 countries trading in 25 currencies and with 75 relationship banks. The main focus is credit risk and maturity/duration was explicitly ruled out.**

At the heart of the question is how to distribute such a large sum across banks (or markets), given worldwide uncertainties. Candidates were asked in part (a) to list the factors which they would take into account in part (b) when deciding (i) the aggregate distribution of cash by credit rating, (ii) the aggregate distribution by instrument and (iii) individual bank £ limits by credit rating. In part (c) candidates were asked to list the triggers to be used for monitoring/managing/reducing exposures. The templates provided for part (b) and the need to list explicit triggers for exposure reduction for part (c) were written into the question to prescribe the scope of candidate responses to an otherwise very broad ranging web of issues.

The overall pass rate was very good on this question, which like Q5 deals with a basic element of corporate treasury. Pass rates on individual parts were (a) 10/11, (b) 10/11 and (c) 7/11.

**Question 7 (11 marks) average mark 43.8% passes 5/11**

**This is an ethical question about whether a large UK company, with its fixed asset properties structured as a separate division, and which sells part of this property portfolio to executive director-shareholders in 2007 pre-crisis should buy it back in 2012 at a price reflecting a significant drop in value.**

Part (a) provides some baseline information about the 2007 sale. The candidate, playing the role of non-executive director, has to decide whether he/she would have supported the sale. Given that there is no business case data, candidates need to argue the case about whether the deal, as described, is justifiable to external stakeholders: six argued “against”, one argued “for” and the rest avoid committing (pass rate 5/11).

Part (b), about the repurchase of the portfolio, shifted the focus to the *principles* on which a decision might be based rather than the decision itself. Nearly half the responses failed to acknowledge this shift but almost all of those which did earned a pass (pass rate 5/11).

Generally, candidates did either very well or very badly on this question.

**Question 8 (10 marks), average mark 34.4%, passes 4/11**

**This question is about the risks associated with using mortality swaps to hedge defined benefit pension scheme mortality risk.**

Mortality risk is increasing but the mortality risk hedging market is immature. Hedges available are usually bilaterals with banks and insurance companies.

Part (a) summarised a recent (2011) UK mortality swap deal reported in The Treasurer and asked for responses identifying the risks, eg counterparty risk, emergence of a better “traded” market, change in mortality patterns. This part was adequately answered (pass rate 7/11).

Part (b) asked for ways of mitigating the risks identified (eg the three risks above). Part (c) asked for hedge alternatives. At this stage it became clear that four candidates had run out of ideas completely and that most of the rest were experiencing difficulties (pass rates: (b) 2/11, (c) 4/11).

**Overall treasury and risk management (4 questions, 50 marks)**

There were only 4 passes out of 11, with an average mark for the 11 of 46.9%. The average mark for the 4 passes was 59%. There were 2 marginal fails; the average for the other 5 was 36%.