ACT LEADING TREASURY PROFESSIONALS

The Association of Corporate Treasurers

Examiners Paper, Solutions and Examiners Report

MCT ADVANCED DIPLOMA GENERAL EXAMINATION

October 2014

QUESTION 1

You have just been appointed Interim Finance Director of INFRADIG plc, a major infrastructure company which is about to announce its third profit warning in 18 months, namely a further £30m reduction in profits due to an unexpected loss on construction contracts. Pre-tax profits are expected to be around £145m, after interest charges of £72m, depreciation of £50m and amortisation of £35m. The share price is currently 285.2 pence, market capitalisation £1,950m. INFRADIG has total borrowings of £1,024m and cash of £604m.

The company also intends to sell its US consultancy services business (USCON), which was acquired for $642m in 2009, when sales were $2.34 billion and operating profit $107m. The company's investment bankers report keen interest from both private equity and trade buyers, Recent data indicates sector multiples some 50% higher than in 2009. Despite rationalisation of the acquired business USCON profits are only slightly higher than in 2009. The current USD/GBP exchange rate is 0.60.

Required:

a) **Calculate the likely revised share price, market capitalisation and enterprise value, following the profit warning but ignoring the effects of the potential US disposal, together with supporting arguments for your calculations and assumptions. Consider the likely impact on market sentiment of a third, un-expected profit warning as well as the direct impact of the reduced profit.**

(6 marks)

b) **Make an estimate of the likely sale value of USCON, supported by appropriate calculations.**

(2 marks)

c) **Calculate the impact on INFRADIG's operating profit, EBITDA, EV and equity market capitalisation, assuming that it concludes the US disposal at your estimated value and uses the sale proceeds to pay down debt. For the purposes of this question assume that there is no tax payable on the disposal proceeds.**

(9 marks)

d) **Calculate the new share price, based on your answer to part c and comment on the share-price changes since the start of the recent crisis.**

(2 marks)

e) **It has been suggested that, as an alternative, the cash from the disposal might be returned to shareholders as a special dividend.**

Quantify the resulting impact on profit and leverage of doing so and summarise the pros and cons of this alternative use of the funds, both for the company and for shareholders.

(6 marks)

(Total 25 marks)

QUESTION 2

Consider a global manufacturing group whose activities involve several hundred legal entities in around 100 countries. The group has doubled in size over the last five years, mainly by acquisitions. It has a centralised finance and treasury function and raises the bulk of its core debt via USD and Euro bond issues. As well as its 12 core relationship banks it also uses around 200 other banks.

Required:

Set out the likely reasons for the company having so many non-relationship banks.

(10 marks)

QUESTION 3

You have just received outline proposals for the structure of a joint-venture project to develop a USD 1 billion, capital-intensive mining facility in Australia. Your company, Mineralis AG, and an Australian transportation company, Austrans Pty, will be the two shareholders in a new SPV. Your immediate responsibility is to ensure that the proposal is broadly acceptable to Mineralis.

The mining concession is for a finite 30-year period. Mineralis will be responsible for the construction work but will also employ specialist sub-contractors, as appropriate. Mineralis will also operate the mine and purchase 100% of the mine's production. Austrans will build and then operate the dedicated railroad and port facilities. The local utility company will provide the required water and electricity. 40% of the capital assets will be imported from Europe and the USA, with the remaining assets sourced locally.

The intention is to raise USD 500m of debt from international banks and export credit agencies plus USD 200m debt from local Australian banks. The remaining USD 300m will be provided by the two shareholders. Both shareholders will invest USD 150m, Mineralis with USD 50m as equity and USD 100m as a shareholder loan. Austrans will invest USD 100m as equity and USD 50m as shareholder loan. Shareholdings will therefore be Mineralis 33.3% and Austrans 66.7%. The project is expected to deliver an IRR of 20% and generate both cash and profits after year 5.

Required:

a) **Set out the issues that need to be covered in the shareholder agreement from Mineralis' perspective, having considered the pros and cons of the proposed joint-venture structure.**

(7 marks)

b) **Identify the key risks to the project company and set out the main contracts that will be required to help reduce and manage those risks?**

(8 marks)

(Total 15 marks)

QUESTION 4

GloCon has a defined benefit pension scheme, closed to new accruals in 2010, with 6000 members based in the UK of which 1000 are retired and 5000 are deferred. It is Quarter 1 2014 and the Fund has just had its 3-year funding valuation which shows liabilities of £800m, calculated on a gilt yield curve basis, adjusted for a AA credit spread, leaving a deficit of £200m. The company has agreed with the Regulator a deficit reduction programme to complete within 10 years.

GloCon is a global company providing consultancy, design and management services to the construction sector. It suffered setbacks during the recession but is now making a strong recovery, particularly in its oil, gas and mining activities. Latest results disclose:

- Revenues of £1,300m
- EBIT £190m
- PBT £180m
- PAT £140m
- Market Capitalisation £1,000m

The pension fund is comprised of:

GLOCON PENSION ASSETS & LIABILITIES 2014 £m

LIABILITIES	**800**	Valued Qtr 1 2014
EQUITIES	**360**	
BONDS 10 year max.	**80**	
GILTS short dated	**160**	
ASSETS	**600**	Funded 75%

Liabilities are currently funded 75%. Gilts achieve an interest rate hedge for approximately 10% of liabilities. With a view to achieving a 100% interest hedged state as speedily and efficiently as possible, GloCon is considering adopting a Liability Driven Investment (LDI) strategy. LDI, by understanding clearly the nature of the liabilities, seeks to reduce risks over time and increase the match of assets with scheme liabilities. The strategies used can offer significant flexibility and capital efficiency compared, for instance, with standalone bonds but also add complexity.

…continued overleaf

The Fund liabilities are exposed to mortality, inflation and interest rate risk. However interest rate risk is the most significant currently, given the low level of hedging, the relatively low level of funding and the relatively much longer duration of Liabilities compared with the duration of the matching unhedged Assets. So absolute movements of unhedged Liabilities in response to yield changes will be much larger than corresponding movements in the matching Assets, for better or worse depending on direction of yield change.

LDI strategies are usually constructed to reduce real rate risks (interest and inflation) but for Glocon interest is currently the dominant concern. LDI strategies utilise cash, bonds, repos and interest rate derivatives. For instance, derivatives can alter duration and repos can provide leverage.

The Fund Trustees and GloCon's Finance Director have been discussing with pension fund advisers BPO the establishment of an LDI portfolio within the Fund which BPO would manage. BPO are due to do a presentation to the Fund Trustees and the Finance Director's immediate reports, including you as Treasurer, about LDI.

Required:

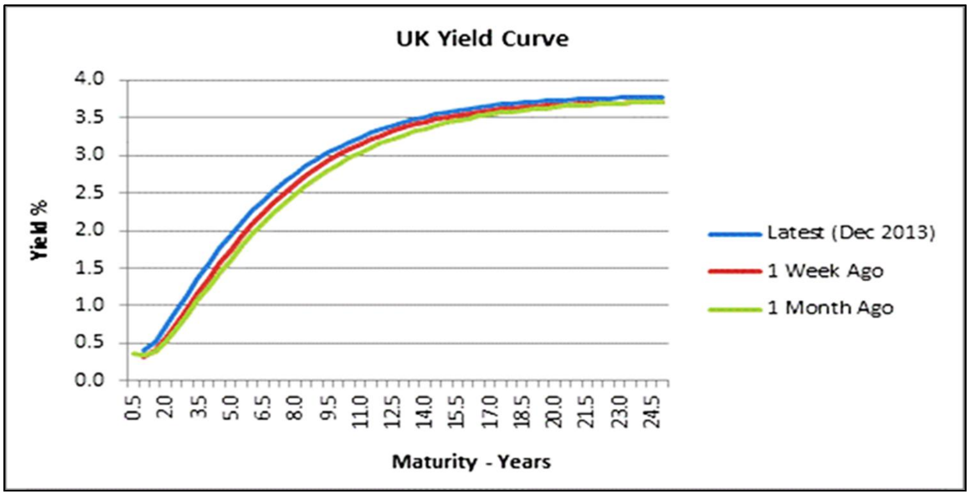
a) As GloCon Treasurer, list the issues which you would wish to raise with BPO.

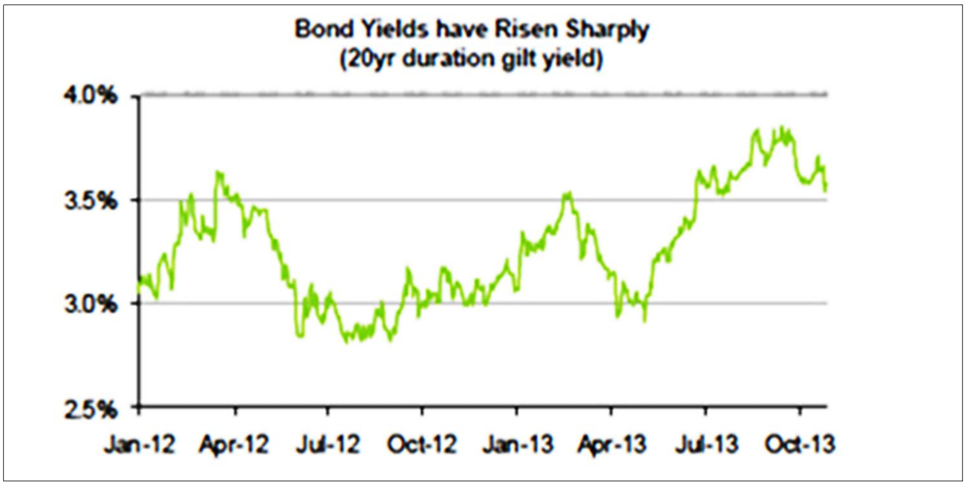
(3 marks)

b) List the issues which you would expect the Trustees to raise with BPO.

(3 marks)

As a first step, BPO are proposing that the Trustees now consider transferring their existing holding of £160m of gilts into a BPO managed LDI portfolio. Following a recent rise in gilt yields BPO believes that over a three year view the market is now pricing in future yield rises (see chart on page 5). Therefore if yields rise as the market expects the Fund will not benefit much in terms of falling liabilities as this is already accounted for in the discount rate used to produce the recent Liability valuation of £800m. However, on a five year view BPO think that the market has not sufficiently priced in gilt yield rises.





Required:

c) **Explain the potential impact of NOT hedging on (x) Fund Liabilities and (y) Funding Level if:**

- **i) BPO "expected" happens, ie yields rise as the market seems to expect**
- **ii) If yields rise more than expected**
- **iii) If yields rise less than expected**
- **iv) If yields stay where they are**

(2 marks)

d) **Explain briefly what the Trustees' response might be to the proposed LDI strategy.**

(2 marks)

e) **Explain briefly what the company response might be to the proposed LDI strategy.**

(2 marks)

(Total 12 marks)

QUESTION 5

You are the newly appointed Treasurer of Aquaflow, a profitable UK based engineering manufacturer with annual sales of £500m which designs, manufactures and sells to end users and to stockists domestically and internationally a standard range of pumps for liquids and gases with application across a wide range of process industries.

As someone coming into the business with a fresh mind the Finance Director has asked you to set up and lead a project team tasked with making significant reductions in Net Working Assets. NWAs (or working capital, ie stocks plus debtors minus creditors) equals 25% of Aquaflow's annual sales, (stocks 18%, debtors 30%, creditors 23%).

Required:

a) **Identify the business functions you would need to recruit to the project team.**

(3 marks)

b) **For each business function identified list and justify the actions which you would be expecting from each function in order to better manage NWAs.**

(7 marks)

c) **Quantify the range of savings which you might reasonably expect from better management of NWAs.**

(2 marks)

(Total 12 marks)

QUESTION 6

DoubleO is an independent specialist cycling retailer, established in the 1920s in London. In the 1970s/1980s it began to expand its sales outlets, mainly in south-east England. In the early 1990s it introduced mail order from a single centralised location and had added on-line access by 2000. Capitalising on the surge in interest in cycle road racing, it began to organise cycling sportifs around the country, ie cycling events often involving several thousand participants who can treat the exercise either as strenuous leisure or as a competitive sport – the new golf according to one leisure market analyst.

Currently DoubleO, still a private company, operates as a multi-channel retailer through circa fifty stores, the internet and mobile channels, as well as organising sportifs events and cycling holidays. In strategic terms it seeks to support and promote the increasing popularity of cycling as a sport, a leisure activity and a mode of transport – the latter supported by UK Government subsidy via the ride-to-work scheme. All DoubleO's activities are currently based in the UK but recently it has been establishing local web domains in several different languages to attract more overseas interest.

Double O summary financials are shown on page 8 for 2010-2013.

Growth has been strong over the past decade, particularly for the non-store-based distribution channels and for organised leisure activities. However, growth, which is wholly organic, is tailing off. The Board now wishes to supplement organic growth by acquiring or investing in a local presence in overseas markets to support the web-based local domains already in place or by diversifying into related areas like energy drinks and food supplements.

The Board understands that any significant acquisition will require debt finance. And (i) leveraging to (ii) grow by acquisition/investment in (iii) overseas markets adds three new dimensions to the company's activities which together represent a potentially significant increase in business and financial risk.

…continued overleaf

DoubleO Accounts 2010-13

PROFIT & LOSS £'000

	2010	2011	2012	2013
TURNOVER	139,720	181,130	223,496	254,808
Cost of Sales	(91,244)	(120,204)	(149,894)	(172,569)
GROSS PROFIT	48,476	60,926	73,602	82,239
Admin Expenses	(38,474)	(47,089)	(58,052)	(65,555)
Distribution	(1,695)	(2,391)	(2,299)	(2,256)
OPERATING PROFIT	8,307	11,446	13,251	14,428
Profit on disposal of Fixed Assets	0	3	0	(3)
Interest receivable	21	10	12	12
Interest payable	(544)	(479)	(360)	(470)
PBT	7,784	10,980	12,903	13,967
Tax	(2,967)	(3,874)	(2,890)	(3,636)
Dividend	0	(4,300)	(4,000)	0
RETAINED PROFIT	4,817	2,806	6,013	10,331

BALANCE SHEET £'000

FIXED ASSETS	2010	2011	2012	2013
Intangible	4,691	4,824	4,803	4,244
Tangible (short lease, IT)	9,072	10,652	11,893	13,385
	13,763	15,476	16,696	17,629
CURRENT ASSETS				
Stocks	23,703	33,807	41,491	44,249
Debtors	6,293	5,982	6,492	7,044
Cash	6,834	8,869	12,449	14,027
	36,830	48,658	60,432	65,320
CREDITORS < 1 YEAR				
Trade	(16,486)	(20,630)	(24,752)	(23,770)
Bank	(672)	(4,842)	(2,029)	0
Other	(8,711)	(11,518)	(14,199)	(16,715)
	(25,869)	(36,990)	(40,980)	(40,485)
NET CURRENT ASSETS	10,961	11,668	19,452	24,835
TOTAL ASSETS less CURRENT LIABILITIES	24,724	27,144	36,148	42,464
CREDITORS > 1YEAR	(6,228)	(5,076)	(8,084)	(4,124)
PROVISIONS	(787)	(792)	(636)	(684)
NET ASSETS	17,709	21,276	27,428	37,656
CAPITAL & RESERVES				
Called up share cap	6,648	7,670	4,961	6,370
Sh Pr / Cap Contrib	5,507	6,205	6,323	4,035
Profit and Loss a/c	5,554	7,401	16,144	27,251
TOT S'HOLDER FUNDS	17,709	21,276	27,428	37,656

BANK DEBT, DEPCN, AMORT. £'000

	2010	2011	2012	2013
BANK DEBT < 1 Year	672	4,842	2,029	0
BANK DEBT > 1 Year	6,228	5,076	8,084	4,124
BANK DEBT Total	**6,900**	**9,918**	**10,113**	**4,124**
DEPRECIATION	1,662	1,932	2,467	2,799
AMORTISATION	538	801	914	1,078
DA Total	**2,200**	**2,733**	**3,381**	**3,877**

Required:

You are the recently appointed Finance Director. There is no separate treasury role. The Managing Director has tasked you, in the context of the company's financial profile, size and recent history, to prepare a note for the Board's consideration:

a) Setting out a range of alternatives for financing the future growth plan of the company and commenting critically on your choices.

(4 marks)

b) Estimating how much leverage the company could safely sustain, stating your assumptions and calculations.

(6 marks)

c) Explaining how the company might position itself over the short to medium term to merit an investment grade credit rating, should it become necessary.

(4 marks)

As the company embarks on this new growth phase, the Board wishes to retain tight control of this development by articulating its risk appetite clearly through a comprehensive set of KRIs and KCIs for the company. The Managing Director has also tasked you to execute this for the finance/treasury function.

Risk appetite can be expressed operationally in terms of Key Risk Indicators (KRIs) and Key Control Indicators (KCIS).

- KRIs identify the nature of the key risks which the company is willing to assume, ie its propensity to take risk.
- KCI's specify the quantum of each risk which the company is willing to tolerate, ie its propensity to exercise control.

Required:

d) Describe as KRIs what you consider to be the four key risks confronting the finance/treasury function in the coming 5-10 years, particularly in respect of growth, financing and overseas activities.

(4 marks)

e) Devise a KCI for each KRI.

(8 marks)

(Total 26 marks)

ADVANCED DIPLOMA OCTOBER 2014

GENERAL EXAMINATION - NOTE FORM ANSWERS

Question 1 **[45 mins, 25 marks]**

1.a. **(10.8 mins, 6 marks)**
[Marking scheme – 1/3 mark for each good point or valid calculation]
(A bonus mark of 1 point was available for work that showed a good understanding, excellent insights or valid, short-cut calculations).

Quick calculation using Equity/EBIT multiples, pre-tax profits to fall £30m, from the previous 175m i.e 17%, so assume share price falls by at least same percentage to 236p.

Alternatively use EV/EBITDA multiples, which is technically the superior method because of big disposal and debt re-payment.
EV was 1,950 + 1,024 – 604 = 2,370
EBITDA was 175 + 72 +50 + 35 = 332 m.
EV /EBITDA = 7.14
EBITDA is now 302m so EV = 302 x 7.14 = 2,156 (down 9.1%)
Market cap = 2,156 – 420 = 1,736, down 11% versus 17% above, and share price = 1,736/1,950 x 285.2p = 253.9p

So theoretical share price range is 236p to 254p.

But third profit warning means severe lack of confidence in management, so maybe down another 5%, giving a range of 224p to 241p (down 16% to 22%).
Using the average of 233p gives market cap. of 1,593, EV of 2,013 [16] and EV/EBITDA of 2,013/ 302 = 6.67.
Extra mark for close price valuation (224p to 241p).

1.b. **(3.6 mins, 2 marks)**
[Marking scheme – 1/3 mark for each good point or valid calculation. I have 10 points but most candidates just did the bare-bones calculation for the 2 marks].

Original price of USCON was USD 642.
Profits "only slightly higher", say 5%, but multiples 50% higher.
Likely sale value USD 642 x 1.05 x 1.5 = USD 1011.
Using USD = 0.6 GBP gives GBP 607 mill, say 600 rounded.

This is a different business in a different market so check multiples. Overall company Equity/EBIT multiple was 1,950/147 = 7.77, now reduced to 1,593/217 = 7.34.

USCO was bought on a multiple of 642/107 = 6.0. Current calculated price gives a multiple of 1.011/112.4 = 9.0. Is this optimistic or a function of it being a consultancy business?

If USCON D&A is GBP 23m, as estimated later, then EV/EBITDA =600/(67.4+23) = 6.64. This is very similar to the ratio for the Group.

1.c. (12.6 mins, 7 marks)

[Marking scheme – 1/2 mark for each good point or valid calculation because this is the trickiest part-question which requires both clear thinking and correct calculations.]

Quick calculation and basic principle; if USCON sold for "fair value" market cap will stay the same (GBP600m-value business replaced by 600 cash or reduced debt ;
EV = 2,013 - 600 = 1413m.
Market cap. = 1,593 –600+600 =1,593. – no change.
If sold "above value" market cap will increase.

[N.B.[Gross debt reduces from 1,024 mill to 424 mill, net debt to minus 180]
[mill. [Interest rate on company debt averages 72 / 1,024 = 7.03%,so interest]
[saving = approx. GBP 42 mill. N.B. This does not affect EBIT or EBITDA.]

Loss of USCON operating profit of USD 107 x 1.05 x 0.6 = GBP 67.4 mill.

After 30m loss INFRADIG operating profit was 145 + 72 = 217m,
EBITDA 302m.

After the US disposal operating profit goes to 217 – 67.4 = 150m.
EBITDA goes to 150 + 85 = 235m, before allowing for D&A in USCON. For the group ex-ante D&A was 85/247 = 34% of operating profit. Assuming a similar percentage of D&A on the US consultancy business, say 35% (proportionately less depreciation, more amortisation.). This gives US D&A of 23m and EBITDA of 212m

EV / EBITDA was 7.14 but estimated at 6.67 after the profit warning. Will it be lower still after the disposal of USCON.

Therefore new EV = (6.67 x 212) = 1,414m.
New market cap is 1,414 + 180 = 1,594m.

1.d. (3.6 mins, 2 marks)

[Marking scheme – 1/3 mark for each good point or valid calculation]

New share price = 1,594/1,950 x 285.2 = 233p – no change!

EV reduces but debt is also reduced and therefore the value of the equity, in theory, stays the same i.e. the disposal offsets the effect of the reduced profit.
Based on the calculations above the share price goes from 285.2 to 233p on the profit warning and remains there because the US disposal is on a similar multiple to the rest of the business.

But will a successful disposal have a further beneficial impact on the market and hence the share price? Or will the disposal raise concerns about the group's global strategy?

1.e. (10.8 mins, 6 marks)
[Marking scheme – 1/3 mark for each good point or valid calculation]
(Possibly should be 7 marks not 6).

Company's market leverage after the disposal is negative i.e. net cash of GBP 180m. If cash is returned to shareholders market leverage stays at 420/1,414 = 30% - a bit on the high side. It originally was 420 / 2,370 = 18% so quite a bit worse.

Debt/EBITDA leverage was420/332 = 1.27 – low. After disposal it is negative but after the special dividend it is 420/212 = 1.98, still OK but high enough.

EBIT interest cover was originally (175 + 72) / 72 = 3.43.
If debt is reduced after disposal cover goes to (247 - 30 – 67) / (72 – 42) = 5.0 - excellent. **Interest saved = 42m at the calculated 7.03%. If debt is not reduced, EBIT cover after disposal goes to (247 - 30 - 67) / 72 = 2.08 – rather low.**

Market cap would fall by 600m to 994m, share price 145p, down by the value of the chunky dividend, 87.75p (600/683.73). Shareholders would, no doubt, be pleased but the poor credit ratios put the company more at risk and leave shareholders with more longer-term concerns. Therefore, on balance, not advisable.

Management still has a lot to prove and a lot of recovery work to do. Cash will certainly be required so paying down debt with the 600m is again not advisable – it represents 40% of EV.

N.B. A bonus mark was available for Question 1 for overall comprehension and accurate, reliable calculations.

Question 2 [18 mins, 10 marks]
[Marking scheme – I have 24 points but there will be more, so 1/2 mark for each good point or valid calculation – pretty full and comprehensive answers were expected on this straightforward question]

The Group does not use conventional bank finance for its primary funding requirements. Some, maybe most, relationship banks will have been chosen for their capital market and acquisition expertise rather than provision of banking facilities.

Commercial banking facilities will be required in all of the company's operating locations for purchasing, payments, payroll, cash handling, money transmission. Also provision of **working capital and 'contingency facilities' plus** local currency and hedging facilities, maybe only available locally.

Acquisitions generally mean proliferation of banks and banking facilities with resulting duplication, complexity, redundancy – the acquisition inheritance. Strategic expansion globally means they will have activities all around the world, some no doubt small-scale, including many developing countries not well covered or not covered at all by their relationship banks. Local manufacturing means local suppliers with existing bank relationships.

Local banks may be convenient and competitive for small-scale, specialised local financing on grounds of favourable pricing, service or convenience e.g. overdrafts, leasing, asset finance, trade finance. Some overseas joint ventures may need to raise more substantial debt funding from or via local banks.

Local banks may also offer particular, valuable local expertise e.g. on tax, trading regulations, local culture, political contacts, local markets, competitors or particular product variants tailored to unique aspects of local conditions. M&A advice also.

It may also be expedient or required by the authorities in some countries for foreign-owned subsidiaries to use local banks for various reasons and functions e.g. tax payment. Local M&A advice may also be required partly from local banks.

Given the pressure always to seek savings and economies there is a constant need to keep reviewing and reducing the number of non-relationship banks but essential services and grass-roots business relationships must be maintained. Credit status and counter-party risk are always key considerations regarding local banks.

In a fast-growing, acquiring group de-centralised local operations, including basic finance/treasury functions, may be unavoidable and, indeed, advisable.
Despite centralisation of finance and treasury some functions and operations still will need to be locally based because of e.g. market inefficiencies, imperfect information, local management expertise.

Question 3 **[27 mins, 15 marks]**

3.a. **(12.6 mins, 7 marks)**
[Marking scheme – I have about 30 points but there will be more so 1/3 mark for each good, relevant point.

Pros and cons of the proposed structure (legal and financing).

N.B. Not the pros and cons of the project itself.

Debt / equity ratio 70/30 – high-ish leverage but not unusual for this kind of venture.

Split between local and international sources of debt looks sensible – best terms and long-term debt from known international banks, deep markets. Local contacts very useful with local banks (Australia so no political and other problems) and probably best for flexible, maybe shorter-term facilities.

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Equal contributions from the two shareholders but with differing debt and equity contributions – not usually liked by international corporates. Impact on after-tax cost and probably driven by differences in tax situation of the two companies.

Mineralis has the biggest role in the project through the construction, operation and off-take from the mine, but the smallest shareholding. Austrans has two thirds shareholding, Mineralis one third, so local company has dominant position regarding control of the company and its policies. Therefore likely disputes over future policies and directions for the project company.

FX issues regarding mis-match of assets and liabilities easy enough to manage (Aussie $, big Aussie banks).

Shareholder agreement issues.

Board membership and voting rights, possible vetoes in certain areas.
Dividend policy versus interest payments on shareholder loans. Relative contributions and debt/equity mix of any contingency finance.
Broad strategic objectives and operating plan of JV.
Rights regarding disposal of shareholdings / buy-out options.
Financial difficulty/ insolvency of other partner.
Acknowledgement of the interests of the two partners in the various J/V contracts.
Implications for shareholders of any particular bank covenants, ts and cs etc
Conflicts of interest and resolution mechanisms.
General managerial and technical support for the project and the J/V.
Non-competition on other projects.
Termination procedures at year 30.

3.b. **(14.4 mins, 8 marks)**

[Marking scheme – I have about 40 points and this should be a relatively easy, straightforward question so 1/4 mark for each <u>relevant</u> point, and comprehensive answers were expected]

Most key agreements are with the project SPV company.

Risk – illegal mining, operations etc change of law, taxation etc.
Concession agreements/permits from Aussie Government/State as required with appropriate safeguards against e.g. force majeure risks, if possible.
(Who owns the mineral right and the land?)

Risk – Construction delay/cost over-run (biggest risk?).
Fixed-price, design-and-build construction contract with agreed time-table, payment terms, penalties, liquidated damages, performance bonds etc with Mineralis.

Risk – sub-contractor failure/under performance

Also contracts between Mineralis and sub-contractors with JV interest registered, tying them in as tightly as possible to delivery on cost with penalties, liquidated damages etc for breaches.

Risk –Inefficient mine operation, higher costs, inadequate maintenance-reduced production levels. Operation and maintenance agreement with Mineralis, to establish operating and performance standards, remuneration in relation to costs incurred, events of default and consequent procedures.

Risk – lower than forecast mineral reserves - Independent geological assessments, Mineralis guarantee?

Risk - Lower sales income, due to price or volume - Off-take (take or pay?) agreement with Mineralis, covering volumes and pricing formula. Right to sell to third party if necessary.

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Risk – delay or cost over-run on construction transportation/port facilities – Construction contract, with appropriate safeguards as above, with Austrans, to ensure transportation network is built on time, maintained in good order and volumes of output can be transported.

Risk – inadequate or inefficient transportation/port operation - Operating and maintenance contract, with appropriate safeguards as above, with Austrans, to ensure transportation network operates efficiently, on cost and Transports required volumes of product.

Risk – deficiencies in supply of utilities – Supply contract with local utility regarding volumes, continuity of supply with adequate back-up, pricing formula.

Risk - late delivery of capital equipment or increased cost – Usual commercial supply contracts with fixed prices and delivery dates, penalties, guarantees, undertakings.

Risk – non-delivery of agreed finance – Credit ratings on banks, contingency finance lines with other banks.

Risk – covenant breach – Contract for independent audit and monitoring.

Counter-party risk on all the above – credit ratings plus right to change contracted party in case of poor performance, contractual default, insolvency etc.

Risk – cash-flow short-fall for whatever reason - SPV will need back-up financing agreements from either the two shareholders and/or the banks. Independent monitoring and auditing of cash-flows against budget.

Risk – normal or unforeseen problems, either managerial or technical, in SPV management - Contractual undertakings of support from the two shareholders for general support.

FX, interest and general treasury risks – Usual hedging contracts, policies and procedures plus an independent, competent treasury function.

Risk – environmental pollution**,** accidents, social disruption, bad PR etc – Normal insurance, environmental impact surveys and other mitigants.

Question 4 [21.6 mins, 12 marks]

[Marking scheme – 4.a for a pass, 4 credible issues; 4.b – for a pass, 3 credible issues; 4.c - ½ point for each of (i) to (iv); 4.d, 4.e – for a pass, 2 credible points].

The initial narrative and the latest results summary indicate a business sensitive to global shocks in the international construction sector and even in recovery mode a materially significant deficit.

The Trustees now have the comfort of a deficit reduction programme agreed with the Regulator, to the extent that the Trustees have faith in the continuing recovery of the business. The Company naturally wishes to limit its risk and reduce the overall deficit by any means which reduces their future agreed deficit reduction payments.

4.a. (5.4 mins, 3 marks)	**4.b. (5.4 mins, 3 marks)**
• Will Regulator allow use of derivatives, repos?	• Does Trust Deed allow derivatives, repos?
• How are collateral calls on derivatives managed/funded?	• Is there a downside, ie risk-return, stop loss triggers?
• Credit risks on derivatives (and repos)?	
• Could the LDI process lead to a reduction in fund income, leaving aside fees?	• Does "matching" reduce returns?
• Fee levels?	
• Will the LDI portfolio lock in today's return, ie forgo benefits of future interest rate rises?	• Lose upside if interest rate rises?
• Hedge/fund accounting	
• GloCon oversight, eg of instrument prices, decision-making performance	• How can Trustees exercise oversight, given complexity?
• Back-testing effectiveness?	• How have other DBP schemes fared with LDI?

Note the traditional treasury mantra about novel financial products:

- *Understand what, how, why?*
- *Cashflows*
- *Pricing*
- *Accounting*
- *Tax*
- *Exit*

4.c. (3.6 mins, 2 marks)

- (i) (x) falls a little; (Y) rises a little
- (ii) (x) falls; (Y) rises
- (iii) (x) rises; (Y) falls
- (iv) (x) rises a lot; (Y) falls a lot

4.d. (3.6 mins, 2 marks)

The Trustees already have a deficit reduction plan agreed. They may not wish to agree to complex structures where the upside benefits the company but the downside could weaken it, increasing Trustees risk.

4.e. (3.6 mins, 2 marks)

If do not hedge, the most likely outcome is (i) or (ii) above, so probably prefer to postpone past next valuation and hope to get a large fall in liability value and good reduction in deficit/increase in funding level.

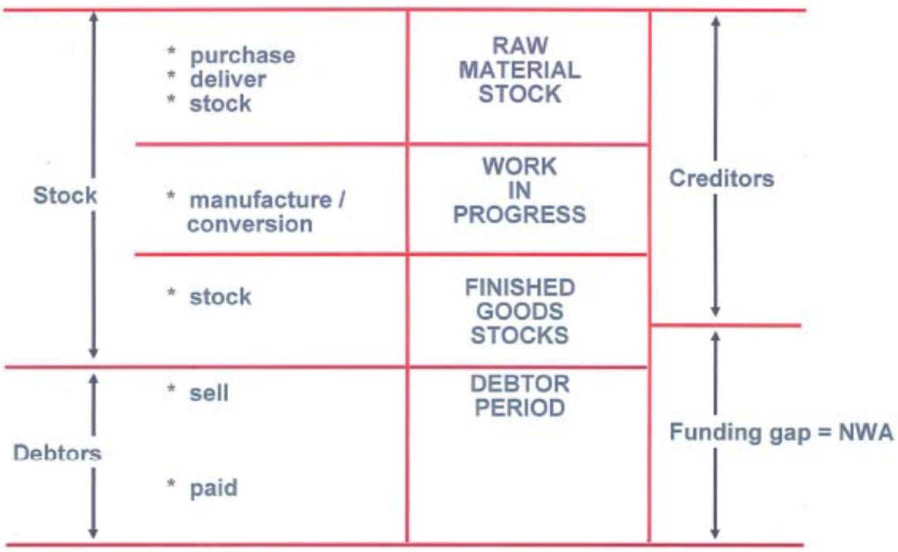
Question 5 [21.6 mins, 12 marks]

[Marking scheme – 5.a – minimum mention of procurement, manufacturing, sales for a pass; 5.b – minimum of 10 credible points for a pass then quality of justification, extra points for distinguishing first and second level responses; 5.c – pass for a credible number in relation to 5.b response].

Background

Working capital cycle for a manufacturing company is shown diagrammatically below:

Working Capital Cycle



The ***level*** of NWAs, expressed as % annual sales, varies enormously for different types of business. For instance engineering manufacturers might run at + 20% to + 30% and retailers at - 2% to - 8%.

The ***characteristics*** of NWA (stocks, debtors, creditors) are determined by several functional areas as exemplified below, and can be altered by day-to-day management responses (first level) and by longer term strategic responses, possibly requiring significant capex (second level).

Overall, significant change needs a functionally integrated approach with strong Board backing, using a structured "project management team" methodology and an "out of silo" response from line management. Very important is the involvement of external parties, eg big suppliers, big customers, possibly bank supply chain specialists. For a manufacturer, large savings may involve significant capex in equipment and technology.

(a) WHAT BUSINESS FUNCTIONS? (3 marks : 5.4 mins)	(b) WHAT ACTIONS? (7 marks : 12.6 mins)	
	First Level Responses **eg management**	**Second Level Responses** **eg capex**
Procurement	Terms of trade "Just in time" delivery	Supply chain Preferred Suppliers Supplier rationalisation
Operations **- Production Control**	Raw materials/parts stock Progress control (W.I.P.)	
- Manufacturing/Technical	Finished good stock	Plant layout Product handling, processing Quality control, shrinkage Manufacturing plant design Outsourcing
Logistics/Distribution	Delivery schedules	Transport/depot infrastructure
Sales Products/Markets **- Product/Technical**		Product design, value engineering Material substitution
- Sales	Terms of trade Forecasting	
- Marketing		Customer service
Financial Control	Creditor, debtor Control	Factoring
Treasury	Counterparty risk Supply Chain Finance	
Technical Control		Stock management/obsolescence
Legal	Standardise contracts	
I.T.	Routinise and 'real time' processes Visibility and transparency	
Board	Support	Investment

Some companies go to a third level, eg see Global Turbines PLC [MCT Case Exam October 2008], establishing JVs with suppliers which pay up front to participate and bear the cost of developing new engine parts in return for a share in profits several years later if the engine is successful.

Latterly, supply chain finance, for which some banks have developed specialist systems, provides a new perspective (or resurrects an old one? – Santander ACT Breakfast Session 17.06.14).

5.c. Materiality (3.6 mins, 2 marks)

NWA's require funding of £125m at, say, 5%, ie £6.25m. Saving of 1% on each of the three components (25% NWAs to 22% NWAs) reduces funding by £15m and interest cost by £0.75m. Estimates should be related to actions listed at 5.b. Of course some savings may have revenue/cost/capex implications which reduce savings.

Question 6 [46.8 mins, 26 marks]

[Marking scheme – 6.a. for a pass, at least four types of funding listed with comments as to feasibility; 6.b – for a pass, expect some high level metrics for, eg interest cover and repayment ability, related to riskiness of the business, resulting in a debt capacity number with assumption about interest rate; 6.c – looking for understanding of what a rating agency would look for and the steps which the company might take in preparation for the rating process – extra points for expressing a view about what rating the company might merit now].

6.a. (7.2 mins, 4 marks)

More obvious:

- Bank debt, preferably secured, but low debtors and fixed assets mainly short leasehold and computer/web related so security could be an issue
- ORB retail bonds, good for name recognition. Investors like names they can identify with, assess yield on absolute rather than relative basis so not as performance/credit sensitive as professional investors
- Private placement recently investing smaller amounts and offering more flexibility (eg draw down) than hitherto
- Bond market but company not rated so organic growth aspirations probably too small to interest investors.

Less obvious:

- Reverse take-over
- Joint venture
- Forgo dividends

- IPO

- Private equity link up.

6.b. **(10.8 mins, 6 marks)**

From 2010-2013 sales revenue CAGR is 22%. Company has paid two dividends totalling £8.3m and shareholder funds CAGR is 28%. In broad terms growth has been internally funded and net debt has been circa zero or negative.

Looking ahead, one possibility is to assume that for sales CAGR of 20%, perhaps 65% could be organic and 35% by acquisition. Currently organic growth is self-sustaining, so acquisition is possibly the bigger issue.

Re. debt sustainability and looking ahead to 6.c., assuming the target is A/BBB, then for average to high business risk, financial metrics might be:

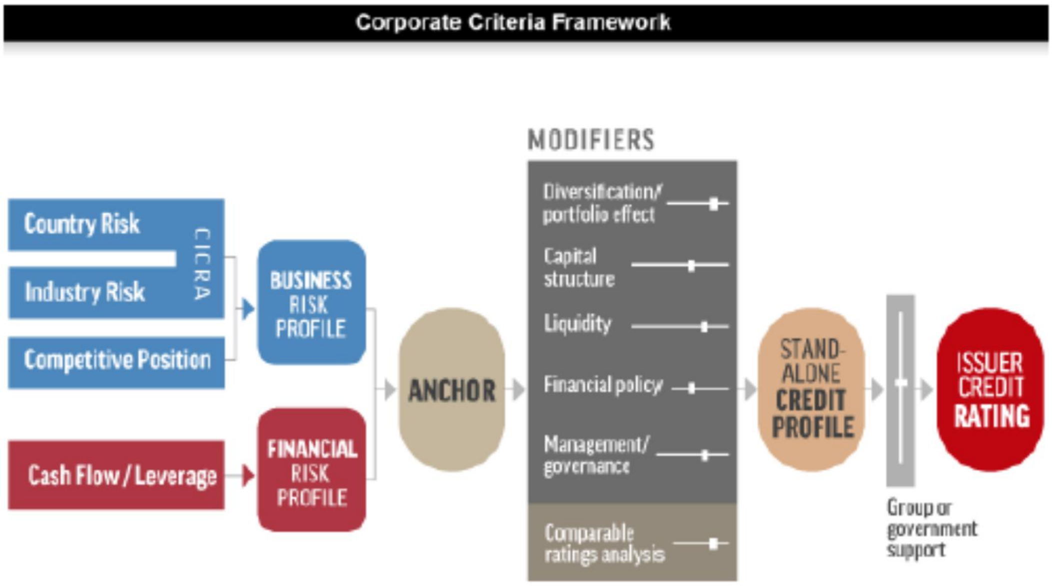
- Return on capital	> 20%
- Debt/capitalisation	< 35%
- EBIT/Interest times	> 8%
- Free operating cashflow/% Debt	> 18%

6.c. **(7.2 mins, 4 marks)**

Overall, assessing and stress testing everything that will impact positively or negatively on the ability to service and repay debt on time, eg:

- Business risk, ie industry prospects, competitive position
- Financials, ie interest and asset cover, liquidity
- Risk appetite and management
- Quality of management
- Corporate/legal structure (eg structural subordination)
- Special event risk
+ Likelihood of support from a third party or government
- All within the economic and political context of country where based

And/or a CRA corporate assessment framework, eg Standard and Poor's:



Source: S&P Rating Direct Corporate Criteria 26.06.12

- Decide on target rating level: initial reality check of current margin over LIBOR quoted by existing banker(s) against margin over swap for current comparable bond issues with target rating. Replicate a CRA methodology such as S & P with the help of in-house colleagues

- As a check seek advice from investment bank about how a rater would view the business . . . and the gap, if any, against in-house expectations. As for borrowing, business risk and sustainable cash flow to service and repay debt are key considerations

  OR if confident enough seek (and pay for) a confidential rating from a CRA (sometimes difficult to keep confidential!)

- In either event expect to have to provide for scrutiny by the CRA:

  - 5 year financials
  - company's presentations to equity analysts
  - equity analysts reports
  - existing loan documents
  - detailed business plan

- Expect CRA to ask about:

  - where the management is taking the business in the next 3-5 years
  - the level of risk with which the management is comfortable
  - evidence of the management teams execution capability
  - special event risk (if any) to which company is exposed

6.d. **(7.2 mins, 4 marks)**

[Marking scheme – 6.d – for a pass, up to 1 mark for determining each of the four KRIs to match the risks; 6.e – for a pass, up to 2 marks for determining each of the four KCIs – more difficult to define than the KRIs].

Re. business risk, earlier comments suggest that external perceptions of the current business might be average to high risk. So any significant increase in business risk appetite will mean tighter financial risk metrics for a given target rating.

Re major risks:

- 1. Acquisitions: too large, too many, poor due diligence
- 2. Funding: over leveraging to finance unrealised growth
- 3. FX: assuming fx risks unwittingly, eg cheap and available but unhedged debt
- 4. Inadequately controlled working capital.

6.e. **(14.4 mins, 8 marks)**

- 1. Eg limit on relative size
- 2. Eg tight control of metrics relating to desired credit rating
- 3. Eg comprehensive policies, low risk appetite
- 4. Eg monitoring and reward systems which sensitize businesses to the funding implications of working capital.

Examiner's Report

Advanced Diploma - October 2014

OVERALL SUMMARY OF PERFORMANCE

	General Exam	Case Exam	Combined
Average mark	52.3%	50.1%	51.2%
Questions	6	8	14
Students	30	24	54
Passes # @50%	18	12	30
Passes # @45%	25	17	42
Pass % (50%)	60%	50%	56%
Pass % (45%)	83%	71%	78%

Range of marks 36.2% to 74.8% 30.8% to 74.7%

OVERVIEW

Overall these results were good – better than average.
Unusually the results on the General Examination this time were better than those on the Case Examination and quite a lot better than the average of recent sittings. Across the two papers the average mark awarded by GI on the Corporate Finance and Funding questions was 50.2% as against 52.1% awarded by JB on the Treasury and Risk questions. Behind these figures, however, the results on CFF were generally very disappointing, with 5 questions

failed out of 7 (TR 2 out of 7). The questions where the average mark was below 50% were questions 1, 3 and 4 on the General Exam. and questions 2, 4, 5 and 6 on the Case Exam.

General exam	**marks available**	**50% passes ex. 30**	**average mark**
Q1	25	13	48%
Q2	10	27	68%
Q3	15	11	48%
Q4	12		49%
Q5	12	15	53%
Q6	26	17	54%
		21	
Case exam	**marks available**	**50% passes ex. 24**	**average mark**
Q1	13	21	66%
Q2	9	5	42%
Q3	12	20	56%
Q4	10	10	43%
Q5	20	9	44%
Q6	10	10	48%
Q7	16	13	49%
Q8	10	16	53%

Examiner's Report - General Examination

Question 1 A 5-part question on company valuation given profit warnings and likely disposal of a US subsidiary.

Parts 1a and 1b, requiring valuations based on revised profit figures and possibly changed multiples, carried 8 marks and were generally well answered.

Parts 1c, 1d and 1e (17 marks), which required more complex calculations of prospective profits and share prices given the US disposal and either pay-down of debt or pay a special dividend, were very disappointing. There was widespread confusion of EBITDA, EBIT, pre-tax profit, after-tax profit and Earnings – and ignorance about their appropriate use in valuation multiples. Some candidates seemed never to have looked at the form of a published Income Statement. Sloppy thinking and sloppy calculations were much in evidence with many “howlers”;

EBITDA/number of shares = eps

Sell USco, reduce debt but keep its operating profit

Sell USco for fair value and thereby reduce market capitalisation

Use EV/pre-tax profit as a valuation multiple

Use market cap./EBITDA as a valuation multiple

Pay the dividend but also lose the interest on the debt.

Overall the level of understanding of the principles and the standard of number-crunching were not up to the required standard.

<u>Question 2</u> **Reasons for a global manufacturing group having hundreds of non-relationship banks.**

In complete contrast to question 1 candidates here did know their stuff, some giving very comprehensive answers covering both managerial and technical aspects of bank relationship management. The weaker candidates just did not write enough.

Question 3 **Risk analysis and contractual risk mitigation in a joint-venture mining project.**

The answers and pass rates here were generally mediocre, mainly because candidates did not focus strictly enough on the questions asked. Part 3a asked for issues to be covered in the shareholders' agreement given the pros and cons of the joint-venture structure – concerned mainly with the risks to the sponsor not all of the risks affecting the project or the project company. Some candidates did not seem to understand the role of the shareholders' agreement.

Part 3b asked what contracts will be required to reduce and manage the risks to the project company having identified them. The main faults in the answers were i) a failure to identify all of the main risks – simple enough if one runs through all the parties involved in the project and the key features of this mining project and ii) straying into non-contractual risk-reduction recommendations and iii) thinking only of treasury/finance risks, not the much more extensive commercial risks. Again the weaker candidates just did not write enough.

Question 4 **Pension fund restructure proposal**

This £800m pension fund is the liability of a global provider of design, consultancy and management services to the construction sector. The company is recovering from the financial crisis and wishes to address the £200m deficit in this defined benefit pension scheme. It is on track to do this over a period of ten years, agreed with the regulator. However it has been approached by pension fund advisors proposing that it should adopt a Liability Driver Investment (LDI) strategy. This holds out the prospect of speeding up the deficit reduction by pro-active management of the fund, involving the use of derivatives and repos to facilitate duration hedging and leverage. The core of the question is about the information which the company on the one hand and the trustees on the other should request of the advisers in order to decide whether such a shift is in either's interests.

The Question was in five parts to help candidates think their way through the issues. To pass they needed to (i) grasp how the pro-active use of derivatives and repos would impact the fund and (ii) see the choice from both the company's and the trustees' perspectives. There was a wide spread of scores on the Question, with a few candidates unable to answer some of the parts but overall half passed.

Question 5 Net working asset reduction

The manufacturer of a standard range of industrial pumps aspires to reduce net working assets significantly. The Treasurer is to create and lead a team to execute. Who should be in the team, what could each contribute and what reductions can be expected? Responses to a similar scenario several years ago elicited three levels of response: (i) focus on inventories, debtors and creditors, (ii) add on production and sales, (iii) involve customers and suppliers: the response distribution first time round was heavily skewed towards (i). This time round everyone included production and logistics although of 30 candidates only three included customers and suppliers, two a board member and one the bank. However three did mention the importance of having created a formally structured and resourced project team. Overall, the core Question was well answered and there were several distinction level responses.

A point worth noting- there were several examples of basic errors in analysis eg, aiming to improve creditors by 10% but reducing instead of increasing the "creditors/sales" % number.

Question 6 Bicycle retailer growth planning

A 26-mark, five part Question based on a successful cycle retailer with sales of £250m planning for further growth domestically and for new growth overseas. The five parts involved (i) a mix of funding, (ii) assessment of sustainable levels of debt, (iii) positioning for a credit rating and (iv), (v) devising KRIs and KCIs, including for the new overseas activities, to ensure that acceptable levels of risk appetite are determined and enforced.

The sources of funding were well covered, including the retail bond market, private placements and IPO. Sustainable debt levels was more testing and provoked a wide range of approaches – and a wide range of answers. For this part and the credit rating part it is necessary to form a view about the riskiness of the business, the credit rating that might be appropriate and how these two factors translate into parameters for return on capital, leverage, debt service, debt repayment and free cash flow. Relatively few opined on the riskiness of the business but those who did recognised it as at the high end, despite its very good financial performance to-date. KRIs were covered well, KCIs less so.

Overall a comprehensive Question requiring joined up thinking about the nature and riskiness of the business. Pass rate was 21/30, the second highest of the six Questions on the paper.