



**LEADING TREASURY
PROFESSIONALS**

The Association of Corporate Treasurers

Examiners Paper, Solutions and Examiners Report

MCT ADVANCED DIPLOMA GENERAL EXAMINATION

October 2013

QUESTION 1

VorGas AG, an A-rated German gas producer, is planning an acquisition of a US healthcare company, valued at circa USD 4.6 billion. As part of the acquisition funding they plan to issue a EUR 1.0 billion 8-year bond, targeted at institutional investors in Germany, UK and France. This will be the third major acquisition in the past 15 years, which have all been funded by varying mixes of equity, bank debt, bond finance and cash reserves. The company has a 30-strong treasury team. The Group Treasurer is quoted as saying “treasury is very much involved in all stages of an acquisition.”

Required:

Given the above scenario and the Group Treasurer’s quote, explain how and where the treasury team could particularly add value bearing in mind its involvement in the different stages of the acquisition process.

(10 marks)

QUESTION 2

It is argued that cash flow forecasting has become much more important in the post-Lehman environment. Consider the following questions about cash-flow forecasting in the context of a major global corporate with a complex international organisational structure.

Required:

- a) **What are the objectives of respectively i) short-term and medium-term forecasts (periods up to one year) and ii) long-term forecasts (over one year)?**

(5 marks)

- b) **What are the main practical difficulties and challenges in generating reliable cash flow forecasts, both short/medium and long term, given the context of a complex global corporate?**

(5 marks)

- c) **It has been argued that cash-flow forecasting is largely a waste of time and effort. Give an example of a corporate situation where the statement is arguably true and one where it is arguably false, justifying your choice.**

(5 marks)

(Total 15 marks)

QUESTION 3

You are Finance Director of a conglomerate which is planning to sell its healthcare subsidiary, a manufacturer of surgical dressings and equipment, to a private equity group. You have been asked to do some preliminary work on the likely financing structure, comprising junior and senior debt, mezzanine finance and equity, and the DCF valuation of the total enterprise based on what the private equity group would be likely to pay for the leveraged cash flow stream. A summary of the 2013 financials and the projections out to 2023 is given in Table 1 on the next page. Assume that LIBOR stands at 3% and assume that the private equity group aim to dispose of the business in 5 years' time, via either a trade sale or a flotation.

Required:

You will need to make several additional assumptions in answering the various parts of this question: please explain all assumptions made.

In this question we have provided you with a separate worksheet for the cash flow statement required in parts 3a and 3b. Please remember to fill in your student number on this worksheet. Hand the worksheet in with your answer book.

- a) **Based on the projected profit and cash flows plus the business assets, estimate the maximum amount of senior debt that could be raised (secured and amortising debt). Assume an appropriate interest rate spread over LIBOR and an appropriate repayment term. Based on your assumptions, demonstrate that the senior debt can be serviced, with adequate cash-flow cover, by feeding the loan interest and repayments through the cash flow statement, out to year 5.**

(8 marks)

- b) **Determine how much non-amortising junior debt can be serviced, with adequate cash flow cover, assuming an appropriate interest rate. Based on your assumptions, demonstrate that the junior debt can also be serviced by including the junior debt interest in your cash flow statement, out to year 5.**

(6 marks)

- c) **Assuming that no dividends will be paid and that surplus cash flows will simply accumulate, carry out a DCF valuation of the cash flows accruing to the private equity group, assuming on the basis of a disposal of the business at the end of year 5. The cash flows should be based on your debt structure from parts 3a and 3b. Assume an appropriate discount rate for a private equity investment.**

(6 marks)

- d) **Based on your calculations, what is the maximum price that should be paid for the total business (the enterprise value)? Comment on the resultant leverage.**

(3 marks)

- e) **How could a mezzanine-type instrument be used to reduce the equity required and what would be the reasons for doing so?**

(5 marks)

(Total 28 marks)

Table 1. Financial Results and Projections

Healthco.	P&L Account											
		Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Sep-20	Sep-21	Sep-22	Sep-23
	EUR millions	12	12	12	12	12	12	12	12	12	12	12
Total Revenues		747	869	938	1,023	1,110	1,201	1,262	1,325	1,391	1,460	1,533
	growth rate		16.4%	8.0%	9.0%	8.6%	8.2%	5.0%	5.0%	5.0%	5.0%	5.0%
EBITDA		216	281	305	335	367	397	417	438	460	483	507
	EBITDA margin	28.9%	32.4%	32.5%	32.7%	33.1%	33.1%	33.1%	33.1%	33.1%	33.1%	33.1%
	growth rate		30.2%	8.6%	9.6%	9.7%	8.2%	5.0%	5.0%	5.0%	5.0%	5.0%
Depreciation		(19)	(20)	(23)	(22)	(28)	(29)	(29)	(31)	(32)	(32)	(32)
EBIT		197	261	282	313	339	368	388	407	428	451	475
	margin - %	26.4%	30.1%	30.1%	30.6%	30.6%	30.7%	30.8%	30.7%	30.8%	30.9%	31.0%
	growth rate		32.6%	8.1%	10.8%	8.5%	8.6%	5.4%	4.9%	5.1%	5.4%	5.4%
Balance Sheet												
		Sep-13										
Tangible fixed assets		122										
Other long term assets		30										
Financial instrument		17										
Other		43										
Fixed Assets		212										
Stock		92										
Trade debtors		133										
Other assets		20										
Current assets		245										
Total assets		457										
Trade creditors		66										
Pension obligations		26										
Other liabilities		97										
Taxes		103										
Total liabilities		292										
Equity & Reserves		165										
Cash Flow Statement												
		Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Sep-20	Sep-21	Sep-22	Sep-23
EBITDA			281	305	335	367	397	417	438	460	483	507
Working capital			(27)	(11)	(11)	(18)	(18)	(16)	(15)	(15)	(16)	(15)
Total capex			(30)	(26)	(27)	(31)	(33)	(35)	(36)	(38)	(40)	(42)
Cash from operations			224	268	297	318	346	366	387	407	427	450
	growth rate			15.7%	10.0%	7.8%	8.9%	5.8%	5.4%	5.1%	4.9%	5.5%
	cash tax rate		21.7%	20.7%	14.7%	15.2%	13.9%	12.0%	11.6%	10.8%	11.3%	10.9%

QUESTION 4

Your company has just negotiated a £100m 10-year LIBOR linked credit facility to fund a step increase in production capacity. The loan amortises in equal instalments from year 6 to year 10, as has been the custom for similar loans in the past.

The company's policy for interest risk management in these circumstances is to swap to fixed at the outset in order to protect the project return, so the return has been calculated on the basis of hedging at the current 10-year interest swap rate.

This is the first major capex investment since 2008 at the start of the financial crisis. Outstanding term debt is £180m, comprising the amortising phases of three previous loans all at interest rates fixed to maturity.

The Finance Director believes that interest rates will continue at the current low level for some time to come and therefore is in favour of postponing a fix for the new facility contrary to past practice.

Before sharing his belief with the Chief Executive the Finance Director seeks your advice, as Treasurer, about how to implement his view without taking undue risk. Of particular concern is the need for a monitoring system to flag when action to hedge might be necessary.

As interest rates on term debt for capex have been fixed in the past, monitoring of swaps/hedges has been minimal, focusing only on collateral exposures.

Current interest rate data:

LIBOR: 3mth = 0.5% 6mth = 0.6%
Swap rate: 10 year = 2.0%

Required:

- a) **In responding to the Financial Director, explain how you would monitor and manage the interest rate risk arising from postponing the hedge to fixed interest rates?**

(8 marks)

- b) **Would you support the Financial Director in his preference to postpone the hedge? Explain your decision.**

(2 marks)

(Total 10 marks)

QUESTION 5

You are Treasurer of a UK-based Group with annual turnover of GBP 400m. The Group has a 70% majority stake in a manufacturing Joint Venture in Devland, a relatively stable developing country with GDP growth averaging 6% in recent years. The Joint Venture partner is a local industrial group holding the other 30% stake.

The Joint Venture is the Group's only overseas operation and accounts for 25% of Group turnover. The Joint Venture has no exports. Joint Venture market share in Devland is 12% and product market growth is running at two to three times local GDP growth.

The local currency exchange rate is managed against the US dollar and has been depreciating modestly but steadily at 2-3% p.a.

However the rate of depreciation implied by the interest rate differential is significantly higher at 6-8%. Devland's interest rates are expected to continue in the 8-10% range in the medium term.

The Joint Venture's product is manufactured locally. A large component of raw materials is an oil-based commodity priced in US Dollars, representing 40% of revenue, all of which is in local currency.

The product is consumer branded and the three major competitors are Japanese, US and local.

Your company is considering a further substantial investment in the Joint Venture to increase local capacity by 50%.

Required:

- a) **There is currency translation risk on the imported US Dollar-priced raw materials. How is this risk likely to be viewed by (i) the UK Group and (ii) the local Joint Venture partner? How would you propose to manage this risk?**
(6 marks)

The size of the new investment in the Joint Venture is significant for the UK Group and very significant for the local Joint Venture partner, given its smaller size and more limited access to finance.

- b) **What are the funding and risk implications of the new investment for (i) the UK Group, (ii) the local Joint Venture partner? What factors would you take into account when deciding how to source the UK Group's contribution and manage any associated risks?**

(6 marks)

(Total 12 marks)

QUESTION 6

Your company, ETI plc (Electric Trades International) is a UK-based supplier of electrical products to the trade and industry, eg to electricians, construction companies and general manufacturers. It has expanded by acquisition in Europe and the US and is now focussing on higher growth developing economies such as Eastern Europe, Latin America and the Far East in order to become a global player.

It has already rationalised about a third of its product lines, sourced currently from 78 core suppliers around the world, including UK, Europe (West & East), US, China, Korea, Taiwan, Brazil, India and Australia. A significant minority of these core suppliers are themselves international companies with overseas operations which can supply ETI branches direct on their home ground. Product-supplier rationalisation will be on-going and is a key factor in establishing and enhancing sustainable competitive advantage globally.

You are the newly appointed Group Treasurer. One of your top priorities is to be the Lead Finance Executive in the multi-function project team being set up to establish a new Central Sourcing Organisation (CSO). The CSO will act as the intermediary between the ETI branch network buyers of product globally and the core suppliers of product globally.

The concept is that CSO provides in-house branch network buyers in each country with product invoiced in their local currency on terms of trade, including cost, which ideally are favourable by local standards and at worst are competitive. This radical re-arrangement will allow local management to focus their energies on marketing and selling, without the distraction of supplier discounts, credit terms, transport costs, currency risk and similar issues.

So the mis-match between the necessary features of transactions with internal branch network buyers at country level and the negotiated features of transactions with external core suppliers needs to be intermediated by the CSO.

Required:

- a) What elements of the CSO's operations might involve treasury?**

(9 marks)

- b) Explain (how/why) you would envisage incorporating the CSO into the overall group organisation/legal structure, which currently comprises a UK parent and mostly wholly owned subsidiaries.**

(4 marks)

- c) What challenges might you expect from the rest of the business?**

(2 marks)

(Total 15 marks)

QUESTION 7

The financial crisis has heightened awareness of institutional vulnerability to shock events. Even before the crisis stakeholders put pressure on corporates to devise and maintain contingency plans as a routine.

From the treasury viewpoint, all unplanned business interruptions and disasters have financial effects. From the Treasurer's perspective, these financial effects split into those that affect business divisions or business units in the first instance, and those that impact directly on treasury functions such as liquidity, funding and risk management. At the heart of it all is the Treasurer's responsibility to protect value on the balance sheet.

Your company is a fast-growing, internet-based retailer of quality non-prescription drugs. Goods are manufactured at three widely separated sites in the UK and distributed from a single warehouse centrally situated in the Midlands. The business, until recently solely a manufacturer, has geared up, using a mix of capital market and bank debt, to compete at the e-retail end of the supply chain across the EU. It is currently rated BBB.

Required:

a) Identify the likely adverse impact at treasury level (eg on liquidity, funding and financial risk management) of:

- (i) Warehouse stock destroyed by faulty alarm which triggers a water sprinkler system**
- (ii) Cash management bank failing and in consequence the bank's systems becoming inoperable**
- (iii) Change to EU regulations unexpectedly re-classifying a major product line as "prescription only."**

(5 marks)

b) For each of (i), (ii) and (iii) propose a plan to eliminate or significantly reduce the adverse impact at treasury level of each event.

(5 marks)

(Total 10 marks)

ADVANCED DIPLOMA GENERAL EXAMINATION NOTE FORM ANSWERS

OCTOBER 2013

QUESTION 1: TREASURY IN ACQUISITIONS

(18.0 mins, 10 marks)

Marking scheme: I have 13 key topics to be covered. One full mark for each topic if well covered by three detailed points

Quote from the Group Treasurer “Treasury is very much involved in all stages of the acquisition”.

Question focuses on *how to add value*.

It's not clear at what stage the acquisition is at but we see the 'planning stage', but the price seems to be fixed. We therefore accept the valuation and we also seem to accept that it will be partly debt financed. There is, however, still some money to raise, say around USD 3.2 billion.

The answer should address the following issues:

- Short term approach to sourcing the funds
- Long term approach to sourcing the funds
- Future financial strategy
- Financial risk issues
- Integration issues

Short term approach to finding the funds

VorGas may have sufficient surplus cash but if not, then most common route is bridging finance, i.e. bank finance which will be refinanced by equity or long term debt. In some cases, often where shareholder approval is required, than an equity raising will be used prior to acquisition.

There will be implications for the rating. An A rating is expected to be quite 'sticky' and so we should not expect to go far from this in the short or long term. Debt investors may otherwise be upset.

The headline effect on eps (very important for equity analysts) to be understood.

Activities will include:

General involvement – structure the deal, secure bridge finance, lead the rating discussions and hedge the underlying risk. Plan and execute any associated equity and debt transactions and general bank syndication.

Assessing state of the bond market in advance, including likely coupon and likely demand from investors.

Maintain good working relationships with banks for confidential pre-announcement bridge funding at short notice to facilitate the bid. Also for contingencies as well as routine facilities e.g. longer-term loans, USD and other currency facilities for re-financing of temporary facilities.

Ensure the cash is available and in the right place to complete the acquisition, also assess and manage counter-party risk on banks involved in funds transfer.

Long term approach to sourcing the funds

This is also part of the future financial strategy but if we have chosen bridging finance then we need to plan an equity issue or further bond issuance. A timetable should be established to reduce the refinancing risk in the bridging debt.

Activities will include:

Help decide debt/equity mix bearing in mind impact on credit rating, eps dilution. Also consider USD.

Early support to the Board, advising on e.g. debt/equity structure for the acquisition, timing considerations, potential risks and how to mitigate them, valuations, any pension issues/problems, impact on ratings.

Detailed, close, confidential working with rating agencies at earliest. Decide size of debt and equity issues to preserve chosen rating, given ex-post financial position and business/strategic implications.

Manage equity book-building immediately after the announcement of the acquisition. Also managing syndications and bond issues after the announcement.

Future financial strategy

Financial strategy will include:

- Return target (considering peer group), both enterprise and equity
- Rating target
- Dividend policy (considering peer group)
- Leverage
- Sources of debt
- Maturity of debt
- Interest rate risk
- FX translation risk
- Need for financial flexibility (probably lost for a while here)

With a large acquisition, all these need to be addressed and the sooner the better, even though management will be focused on doing the deal. That's where the most value can be added.

Financial risk issues

Increasing the debt will increase interest rate risk, so the policy and its KPI must be established and lead to a fixed floating ratio and execution plan. Note that the risk is contingent until the acquisition is certain and bridging finance might seem short term but often have a tendency to be long term.

Whatever the source of funds, we have to find US Dollars, so there must be adequate facilities to manage any derivatives required. The ultimate currency split of debt needs to be calculated, bearing in mind what is important, e.g. covenants, and setting a KPI. Again, note the contingent nature of the exposures until the acquisition is certain.

Also under this category is pension issues, which are hopefully in the price, but will need management. Existing debt (and bank relationships) in the target also needs examination, some might become on demand following the acquisition. Other facilities, such as derivatives and settlement lines, may also fall.

Consider hedging Euro proceeds.

Detailing target's existing debt and bank facilities/ relationships, planning post-merger strategy for same. Plan for re-financing if it has to be repaid.

Decide and implement fx hedging strategy for all aspects of the acquisition.

Integration issues

The target company will have a treasury, with people, and will have a role in funding, cash management and so on. Maybe this will need to be retained as a regional treasury or maybe there is already a US presence onto which the acquisition can be tagged. The firm may have operations worldwide. Either way the people must be managed, to maintain motivation. Plans must be made to implement cash management arrangements, derivatives, letters of credit, netting, intercompany loans and so on. However, these can often be done in slow time rather than urgently.

Activities will include:

Plan for integration of the treasury function of the acquired business ASAP after completion. Understand and manage target's intra-group funding. Afterwards, ensuring funds are flowing from day one to all parts of the acquired company, more complex if a large group.

QUESTION 2: CASH FLOW FORECASTING

(27.0 mins, 15 marks)

Marking scheme: 1/3 mark for each good point

2a) OBJECTIVES OF FORECASTING

(9.0 mins, 5 marks)

2a) i) Short-term and medium-term.

All cashflow forecasting is primarily about ensuring availability of cash and managing liquidity risk.

Short-term forecasts are for managing "day-to-day" cash requirements, usually based on "receipts and payments" method. However, some bank information systems will include future clearings, e.g. in the US check based system. The key objective is to ensure there is sufficient liquidity for all obligations as they occur, thereby avoiding the use of expensive, unplanned emergency funding or worse, failure to obtain funds thereby constraining normal business operations.

Predicting periodic cash surpluses and shortfalls from the detailed pattern of "internal factors" enables internal optimisation e.g. via phasing of capex, managing working capital via stock-holdings, receipt and payment terms/procedures, intra-group transfers etc. Also the planning of external sources of finance – minimising external facilities, choosing the most appropriate instruments in relation to time-scales and negotiating the best terms available. Plus the efficient investing of surplus cash.

Also helps in avoiding un-necessary cross-currency/cross-border transfers, which can be regulated, costly and time-consuming. Forecasting by major currency also advises and supports FX risk management as well as the efficient intra-group management of cash by each currency.

In bigger, more complex, global groups cash flow forecasting is more critical – central departments have some of the biggest payments to make for dividends and interest.

Sensitivity analysis, informed by the historical pattern of cash flow volatility, will indicate the degree of confidence in the forecast and the amount of head-room advisable.

Short term forecasts are all about the day to day aspects of cash management whereas medium term forecasts are about planning debt facilities, derivative facilities and medium term approaches to currency mix of debt and interest rate risk.

2.2 ii) Long-term

On the same principles l-t forecasting seeks to identify structural surpluses or shortages of cash, based on “business-as-usual” cash flows, plus strategic acquisitions/disposals, rationalisations or major capex programmes. This dovetails with broad issues of financial strategy – capital structure, funding policy, credit ratings, dividend policy, longer-term tax and pensions issues. These forecasts are about allocating the long term generation of funds to capital expenditure, debt repayment and shareholders, thus addressing financial strategy.

They allow a business to plan its long term expansion plans as well as funding and financial strategy.

Long-term funding, whether equity or debt, requires even longer lead-times than short-term funding to ensure the most appropriate funds are obtained on the most favourable terms. Understanding the degree of flexibility in the time-table for fund raising is crucial, given the cyclical, supply-demand imbalances and the general unpredictability of financial markets.

Longer-term forecasts are usually based on the profit and loss account plus structural balance sheet changes in assets and liabilities, as in the typical Report and Accounts format.

L-t forecasts may also be required by the various categories of investors, rating/credit agencies or regulatory/government entities.

2b) PRACTICAL DIFFICULTIES

(9.0 mins, 5 marks)

Marking scheme: same marks but a lot more “easy” points to be made so ¼ mark for each good point but looking for coverage of both “inherent” problems and managerial/systems ones.

Short-term difficulty in the precise timing of expected receipts in particular.

Long-term difficulty is more about quantum than precise timing – more of the fundamentals likely to change.

As well as the inherent volatilities and unpredictabilities of the business, which will vary considerably as to nature and degree from company to company, sector to sector, internal “management” problems can be the biggest obstacles e.g. internal communications, culture, systems challenges, quality of data, lack of resources expertise. There may be considerable apathy or scepticism about the accuracy and therefore the practical usefulness of cff. In modern cash management systems where operating units are funded automatically, there is no incentive to forecast cash.

Operating unit personnel need to understand and buy - into the process – communication, education and training required e.g. that forecasting is aimed at more efficient management of the business not merely a control function. One key aspect is ensuring that operating units’ understanding of which are the less predictable variables (plus their likely volatility) gets communicated upwards, not just their best estimate of the likely outcome.

Capex programmes and acquisitions may be particularly difficult to model, as to both timing and amount.

In any sector there will be crucial external variables, with varying degrees of predictability, that influence or even dominate the company's fortunes and therefore cash flow e.g. commodity prices, the state of the economy, government spending budgets, the weather. For these key factors companies may need to build expertise and models to generate their own forecasts or interpret external ones, to integrate the resultant outputs with their own cash-flow models.

Specific difficulties in larger groups, especially for short and medium term forecasting, include:

- The difficulty in finding an opening position. Most cash flow forecasts are based on starting book balances, whereas treasury lives off cleared balances. Reconciling opening positions can be time consuming.
- The best cash forecasts are by collection account, i.e. by where the money is actually coming in and going out from. This includes currency and location. However, most cash forecasting does not take currency into account and merely forecasts general receipts and payments or profits and losses. Trying to drill down is a huge task. If a consolidation system is used for forecasting, then even the functional currency (which might have been a help) is often lost as sub consolidations are made.
- If intercompany trading occurs, then full agreement needs to be held on timing for the forecast to make sense.
- In some groups different units may make different general assumptions. For example, one division may forecast general economic growth of 2%, whereas another might use 3%. Multiply this across different countries and regions, makes consistency very difficult.

2c) ALL A WASTE OF TIME?

(9.0 mins, 5 marks)

Question relates to cash flow forecasting not profit forecasting.

i) True – a waste of time

- Business/sector is either very stable in terms of low business cyclicalities and absence of “specific risk” eg housing association, utility? Or “totally unpredictable” eg small oil and gas exploration company. But the first two are probably highly geared so have to forecast for debt purposes.

Stable

- Not only a stable p&l ie stable revenues as well as costs, but steady level of “small-item” capex ie not “lumpy”.
- Company with largely domestic business ie no fx translation issues, no foreign tax complications, dividend remittances etc.
- Company is relatively ungeared/cash rich with ample undrawn bank facilities and no constraining bank covenants.

Unstable

- Quality of business information and analysis/understanding of the business is poor and management information systems are inadequate in various ways.
- Business environment is so dynamic/changeable in terms of technology, customers, markets, suppliers that formal medium to long-term planning and forecasting are inappropriate, even harmful (“tactics is the best strategy”).

i) False – not a waste of time

- The opposite of the above.
- The ultimate would be highly leveraged structures with onerous, tight covenants where valuations as well as debt servicing are all based on cash flow forecasts.
- Otherwise any company with reasonable debt and normal covenants.
- Companies with “normal” demand and supply volatilities, or even more so, big reliance on commodity inputs or commodity-based product prices.
- Project based business where tendering is the normal way of getting business and therefore dependent on successful bidding.
- Companies with “lumpy”, infrequent capex.
- As in the question, global corporates with complex structures, subject to all kinds of local variations in business conditions plus different currencies.
- Also the above with big, quarterly dividend and tax payments to meet.

QUESTION 3: STRUCTURING AND VALUING A LEVERAGED DISPOSAL (45.0 mins, 25 marks)

Pre-amble – Valuation Fundamentals

- Quick sanity check – high growth P/E range, say 14/15/18
Based on 2014 EBIT taxed at 22% ($261 \times 0.78 = 203.6$) = 2,850/3,054/3,664
- Using other multiples with valuations based on year 5, discounted at, say, 9% for a leveraged structure ($1/1.09$) = 0.65

After year 5 assume unlevered WACC of say, 7%.

$$EV = EBITDA (417) \times 10 / 11 / 12 \times 0.65 = 2,711 / 2,982 / 3,253$$

$$EV = EBIT (388) \times 11 / 12 / 13 \times 0.65 = 2,774 / 3,026 / 3,279$$

$$EV = \text{Cashflow from ops., less tax @ say 15\% of EBIT}$$

$$= 366 - (388 \times 0.15) = 366 - 58 = 308 \times 0.65 = 200.2$$

$$\text{Discount at } 0.07 - 0.02 = 0.05 = 4,004$$

$$EV \text{ range therefore } 2,700 \text{ to } \underline{3,000} \text{ to } 4,000$$

$$\text{Total debt @ say 67\% } 1,809 \text{ to } \underline{2,010} \text{ to } 2,680$$

$$\text{Equity @ 33\% } 891 \text{ to } \underline{990} \text{ to } 1,320$$

3a)

(14.4 mins, 8 marks)

Marking scheme: ½ mark for each good point

[NB. Using an appropriate logic and implementing it correctly is more important than the particular assumptions and answers].

Senior debt;

Three ways to work out amount

- 1 asset security
- 2 interest cover
- 3 EBITDA multiple

Asset security

Check asset security value for security purposes, but probably minimal given leveraged deal – total fixed assets (50%?) 106m, stocks (25%?) 23m, trade debtors (80%?) 106m, total **239m**.

Interest cover

Assume minimum EBIT (alternatively EBITDA) senior interest cover of 3.0 times;

33.3% of year 1 EBIT = $261/3^4 = 87.0$ maximum interest (EBITDA cover of $281/87 = 3.23$)

Assume a LIBOR margin of 3.0% gives interest rate as 6.0 %.

Senior debt = $87/0.06 = 1,450m$.

EBITDA multiple

Alternatively assume maximum senior debt EBITDA leverage of 5.0 times; Note this is quite aggressive, maybe nearer 3 times might be more acceptable.

Maximum senior debt = $5 \times 281 = 1,405m$.

So, say senior debt = 1,400 (will actually be structured in tranches with different repayment terms – maybe 5 to 10 years. Assume £50m p.a. years 1-5 (and for information only, £100m p.a. years 6-10, £130m p.a. years 11-15). Note that it would be impossible for the whole of this debt to be repaid inside the five years as cash flow from operations is about this amount, never mind tax or increases in working capital. Assume all cash interest, payable at year end.

Year	1	2	3	4	5
Cash from operations	224	268	297	318	346
Senior loan repayment	(50)	(50)	(50)	(50)	(50)
Senior loan interest	(84)	(81)	(78)	(75)	(72)
Cash flow after senior debt	90	137	169	193	224

Check - Minimum senior EBIT cover = $261/84 = 3.107$ Senior debt/EBITDA = $1400/281 = 4.98$ Conclusion – good cash flow cover for senior debt

3b)

(14.4 mins, 8 marks)

Marking scheme: ½ mark for each good point

Junior debt;

Use the interest cover and EBITDA multiple techniques

Interest cover

Assume minimum EBIT total interest cover of 2.0 times in year 1;
50% of year 1 EBIT = $261/2 = 130.5$ maximum total interest (gives EBITDA cover of $281/130.5 = 2.15$). Subtract senior interest of 84 gives junior interest of 46.5. Note that this is quite aggressive.

Assume an average LIBOR margin of 3.5%. giving interest rate as 6.5%, therefore junior debt of $46.5 / 0.065 = 715\text{m}$ and total debt of 2,115m.

EBITDA multiple

Alternatively assume maximum total debt / EBITDA leverage of 7 times;
Maximum total debt = $7 \times 281 = 1,967\text{m}$ and junior debt of **567m**

So, say junior debt = 600m, interest cost 39 m.

Note that there will be no repayment of junior debt until the senior debt is repaid.

Cash flow after senior debt	90	137	169	193	224
Cash flow after junior debt	51	98	130	154	185

But we must allow for tax;

Year	1	2	3	4	5		
EBIT	261	282	313	339	368		
Senior Interest	(84)	(81)	(78)	(75)	(72)		
Junior interest	(39)	(39)	(39)	(39)	(39)		
Profit before tax	138	162	196	225	257		
Tax rate			21.7%	20.7%	14.7%	15.2%	13.9%
Tax	(30)	(34)	(29)	(34)	(36)		

Cash from operations	224	268	297	318	346
Tax	(30)	(34)	(29)	(34)	(36)
Total interest & repayments	(173)	(170)	(167)	(164)	(161)
Cash flow after interest & tax	21	64	101	121	149

Cash cover for debt service	1.12	1.38	1.60	1.74	1.93
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Note also;

EBIT/ Total interest = $261 / (84+39) = 2.12$ and
Debt/ EBITDA = $(1400 + 600) / 281 = 7.1$.

Cash flow grows strongly so scope for accelerated senior loan repayment

Note that the debt ratios are quite aggressive, so a senior ratio of around 3 and junior ratio of around 5 to 5.5 would also be acceptable as an answer. This would lead to debt of around 1,550m.

3c)

(10.8 mins, 6 marks)

Marking scheme: ½ mark for each good point

Equity valuation

Equity cash flow is simply the net disposal value of the equity stake at year 5.

To achieve this we add three amounts together:

- Accumulated cash balances from the previous 5 years,
- Debt outstanding at that time plus
- The value of future cash flows after 5 years.

Accumulated cash balances

Cash flows year 1 to 5, as above, simply accumulate to 456m plus minimal interest, so say 460m, ² they are part of the terminal value calculation – they are not cashflows to shareholders.

Debt outstanding

Debt outstanding at year 5 is 2,000 less 5 repayments of 50 to give 1,750.

Future cash flows

Required compound rate of return on leveraged equity, say, 25%.

Discount factor for year 5 = 0.3277

Growing perpetuity OK at year 5 since thereafter fairly stable-state sales, profits, cash flows, the latter growing at an average of 5.3%, but assume sustainable at 2% Euro inflation.

Un-gearred cash flow year 6 = 366, but deduct ⁶ tax at 12% on EBIT of 388 (46.6) = 319.

After year 5 assume a WACC of about 7% ⁸ for a low-ish risk sector and normal gearing with LIBOR at 3% (not the leveraged equity discount rate).

Un-discounted perpetuity value = $319 / (0.07 - 0.02) = 6,380$

Alternatively EBITDA of 417 times multiple of say 12 = 5,004

Averaging these two give an Enterprise Value of 5,692

Equity valuation

So, say, 5,700 EV, less net debt of (2,000 – 250 – 460) = 4,410

PV = $4,410 \times 0.3277 = 1,445\text{m}$ = present value of equity cash flows.

3d)

(3.6 mins, 2 marks)

Marking scheme: ½ mark for each good point

EV and leverage.

Add back initial debt = 1,445 + 2,000 = **3,445m = EV.**

EV / EBITDA = 12.25

Balance sheet leverage = 2,000 / 3,445 = 58.1%, not particularly high.

EBITDA leverage = 2,000 / 281 = 7.1 times, OK.

3e)

(7.2 mins, 4 marks)

Marking scheme: ⅓ mark for each good point

A mezzanine instrument could be constructed as debt with interest deductible for tax purposes reducing the average cost of capital. The nominal cost of the mezzanine would be higher than the cost of junior debt (6%) but less than the cost of private equity (25%), so say 12% (after tax 10.2%).

Quasi equity because subordinated to junior debt and interest could be rolled up (but still charged to the P&L) in a PIK arrangement to avoid a drain on cash flows. In this case example mezzanine could, in principle, be used to reduce the pure equity stake to, say, 20%. 20% of 3,901m = 780m, mezzanine 821m.

Arguably the junior debt could be argued to be a form of mezzanine debt, although generally mezzanine is a bit more innovative with perhaps rolled up interest or an equity participation involved as a reward.

Illustrative Final Structure

	£m	%
Senior debt	1,500	38.5
Junior debt	800	20.5
Mezzanine	820	21.0
Equity	780	20.0
	£3,901	100.0%

Opportunity to tap mezzanine investors represent another niche in the market with particular risk/return requirements.

The accrued interest would be payable together with the principal on disposal (year 5 in this case).

If cash flows allow interest could be part payable /part accrued – allows flexibility in deciding the final financial structure based on pattern of free cash flows.

QUESTION 4:**(18.0 mins, 10 marks)**

Marking scheme – 4a: looking for evidence of how to monitor postponement (a benchmark, the effect of the changing time scale, trigger for action) as distinct from how to manage (execution of hedge). 4b: looking for a decision and some mention of riskiness, materiality and capability to manage a position as trade-offs.

4a) Monitor & Manage Postponement of Hedge**(14.4 mins; 8 marks)**

Firstly let's put some numbers around the whole problem.

There is £280m of debt, including the new loan of £100m. The £180m of older debt is comprised of the amortising principal of three previous loans, the most recent of which was borrowed in 2008. The new debt is 36% of the total. This new loan proportion will be rising over the next few years as the older loans all amortise and therefore becoming more material to total interest cost and weighted average cost of capital. So we would start at a fixed / floating ratio of 64 / 36. As time moves forward this will tend to less fixed.

Note also that because the new loan doesn't begin to amortise for five years, potential savings - and risk – from not fixing are higher in the earlier years, ie at current rates a saving of £1.5m p.a.

Because the yield curve is upward sloping then forward rates will be higher than current rates. So the savings of £1.5 m pa will be compensated by higher interest charges later on in the swap period, assuming that the future plays out as expected. So it could be that there is a materially higher interest charge later on in the loan.

On the face of it, it does not appear that there is high interest rate risk in this business. Interest rates are surely much lower than the expected return from the business.

A proper response to the finance director will involve a closer look at this risk and perhaps especially an analysis of performance under loan covenants and ideally incorporating the volatility of interest rates. With a steep curve, it is likely that volatility will be high, thus making the situation of a higher risk than if volatility was low and the curve was flatter.

The finance director must understand that the pricing indicates these rises and he should be challenged as to what he thinks will happen with interest rates and why he thinks the market has got it wrong.

Therefore a model of future rates can be built from the forward curve. If rates remain below this forward curve, then postponement was correct (from a speculative point of view). As time goes by, a breakeven fixed rate can be calculated over the whole loan term and if the actual fixed rate approaches this, then fixing at that time will bring you back to as though you had fixed at the outset.

The finance director should be aware that he is making a speculative bet and might be increasing risk (albeit not much) and should ensure that the risk / reward balance is correct. There may be short term pressure on earnings as well and it is always tempting for management to defer costs, perhaps until their successor is in place.

So one compromise approach is to transact a forward start swap to lock in the unusually low longer term rates and limit the floating position to the shorter rates. However forward starting swaps in a rising yield curve will seem very expensive.

Management of the position requires agreeing a facility with a bank at the outset to swap for the remaining maturity, drawing up the documentation and establishing the process to monitor and trigger execution.

Issues:

- CFO's risk appetite, eg possible impact on interest cover, p/l, collateral
- Monitoring frequency;
- Position valuation rates;
- Who to monitor the position
- Oversight of position
- Could limit risk by doing a forward start swap at the outset.
- Risk / reward balance
- Interest rate volatility
- Covenant breach risk
- Earnings pressure / management pressure

4b) Support/Oppose Postponement? (3.6 mins; 2 marks)

- Support** If you have the resources to monitor and manage and it's within the Board's risk appetite
If you can explain why you think the market has got it wrong
If you have a low interest rate risk and low chance of breaching covenants
If your mission is to develop expertise of treasury
- Oppose** If you believe that the FD is trying to foist a move to higher risk appetite against the preferences of the Board.
If there is some risk of breaching covenants
If there is not the expertise and systems in house to monitor and manage the position.

Note: Only 30% of candidates agreed with the proposal to postpone, mainly because the 10 year swap rates look good, the company is not set up to monitor and value derivative positions and the downside risk of rates rising outweighs the possible windfall savings from government engineered temporarily low interest rates.

QUESTION 5 (21.6 mins, 12 marks)

Marking scheme – looking for understanding of the impact of peg on transaction hedging (5a) in contrast with translation hedging (5b), on competitive advantage and on the viewpoints of the two JV partners.

5a) Hedging USD imports (10.8 mins, 6 marks)

Firstly the main issue described here is around transaction, or indeed economic risks of FX. Translation is around the results of the Devland JV when shown in the UK group accounts.

The USD-priced raw material counts for 40% of sales value. All the subsidiary's sales revenue is in local currency and there is no possibility of offsetting foreign currency revenues. So the potential hit on the p/l is substantial unless local prices can be increased in line with increasing USD costs.

If market share is 12% and growth in the product is higher than GDP growth then presumably there is an environment in which prices can be raised in line with costs. This in itself indicates that actually foreign exchange risk is quite low and tends to argue against any hedging.

However, there are three competitors, so depending on each company's approach to hedging, there is the potential for favourable or unfavourable shifts in competitive advantage.

If transaction risk is hedged using forwards priced off the interest rate differential, the forward cover will be consistently and substantially more expensive than the future spot rate (i.e. the unhedged position). This could put you at a continuing disadvantage to competitors with similar exposures which do not hedge.

So, if you believe that the peg will hold, you will leave USD transaction risk unhedged.

And even if you do not believe that the peg will hold, you may decide to leave transaction risk unhedged. This is because you will consistently save while the peg holds and if/when it fails you will take only one hit.

The JV partner will probably have faith in the strength of the USD peg and thus agree with the "no hedge" policy.

A close eye needs to be kept on competitor behaviour to see if anything can be learnt to maintain competitive advantage.

So the only problem may be if the UK parent decides that a policy of 100% transaction risk hedge policy is the technically correct one – an example of the potential distortion that can be caused by blindly following group policies when local circumstance dictates otherwise [ref solution for Case Exam Q6d).

5b Sourcing/Hedging New Investment

(10.8 mins, 6 marks)

There are a few issues here. Firstly how the funds sent from the UK might be raised, equity or debt. Secondly how the funds might be invested in the JV, as equity or debt. Thirdly is the issue of sourcing funds locally, either by debt (either recourse or non-recourse) or by equity from the partner. Finally and related to the last, is the balance between partner equity contributions which may change the shareholding proportions.

The choice between equity, debt and type of debt depends on your long term view about sovereign risk.

If you are worried about the political and economic stability of the country then borrowing from a local lender looks best, despite the high interest rate. In contrast, if you are bullish about the country you might wish to use the new investment to force up your equity stake at the JV partner's expense.

A more likely decision will be to gear up as far as prudence and thin capitalisation rules allow, borrow GBP or equivalent and swap the liability into local currency. Any shortfall on the funding required can be made up with equity if necessary.

For the parent the loan principal hedge is important. A future structural adjustment to compensate for the historic pegging of the currency may result in an unsustainable increase in loan repayments.

However there may be pushback about hedging from the JV partner for which relatively low GBP/USD rates will be attractive and who may not share your conservative views about the future.

So in contrast to the likely agreement about the transaction risk hedge policy in 5a) there may be significant difference of opinion here about hedging non-local current debt raised for the new investment.

QUESTION 6

(27.0 mins, 15 marks)

6a) CSO operations and treasury

(16.2 mins, 9 marks)

Marking scheme – 6a) 10 points to pass, demonstrating an overall grasp of the main treasury implications eg currency, working capital, transfer pricing, trade finance, transport cost. 6b) some evidence of a proposed structure with supporting narrative to justify. 6c) 4 points to pass, showing some realisation of the fundamental nature of the changes proposed.

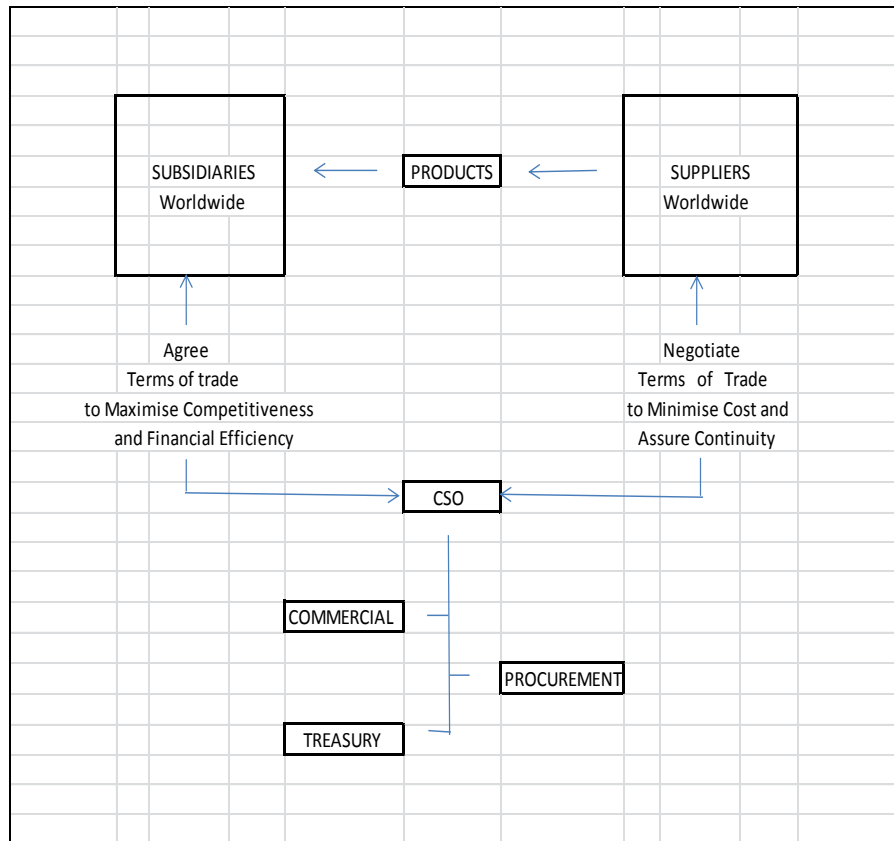
Issues of concern for treasury:

- Potential for reducing stock holding (working capital) by shortening delivery times, sharing stock inter-store
- Supplier financial strength assessment
- Business continuity contingency plans, insurance
- Terms of trade which help to secure supply continuity eg letters of credit for smaller suppliers
- Transport and shipping: pricing and related hedging (fuel), insurance, road transport contracts based on maintaining stock levels versus tonnage and kilometres travelled
- Currency risk management:
 - supplier or buyer risk?
 - level: country, region, central
 - “price list” issue
 - “transfer pricing” issue
 - sourcing JVs
- Cash management, payments to suppliers, intercompany collections

Here is a generic approach with a structure to help determine and classify issues under Supplier, CSO and Branch Buyer (including JVs):

<u>Supplier of Product Issues</u>	<u>CSO</u>	<u>Country Branch Buyer Issues</u>
	<ul style="list-style-type: none"> • Functional currency 	
<ul style="list-style-type: none"> • Financial strength • Reliability 	<ul style="list-style-type: none"> • L.C. to help finance? • Continuity risk 	
<ul style="list-style-type: none"> • Terms of trade • Finance • Currency 	<ul style="list-style-type: none"> • Transfer pricing • Working capital • Currency risk <ul style="list-style-type: none"> - transaction - price list - strategic 	<ul style="list-style-type: none"> • Terms of trade • Finance • Currency
<ul style="list-style-type: none"> • Transport 	<ul style="list-style-type: none"> • Cost, term contract • Fuel price risk • Insurance • IHC (intermediate holding company) • Tax • Sourcing JVs 	<ul style="list-style-type: none"> • Transport • All above

The key to the answer is to decide on the nature of CSO's *intermediary role* in the business. It has to hold the ring between two parties with different economic needs and resolve the consequent mismatches.



As an intermediary, CSO will need to transfer-price product in such a way as to insulate the buyer branch from supply problems which it cannot influence and/or has not got the expertise to manage, in particular currency risk from diverse suppliers.

At the same time it must satisfy the reasonable terms of trade required by these diverse suppliers to survive in business and provide continuity of supply.

These currency risks comprise primarily transaction, price list and strategic – all in the context of vigorous retail competition.

6b) CSO structure

(7.2 mins, 4 marks)

The intermediary role involves significant levels of currency risk management, transfer pricing, working capital management and possibly tax management.

Should these be in a separate legal entity with its own B/S, P/L or should these functions be executed on an agency basis?

The CSO's role is to establish policies and parameters for procurement, for the terms of trade with the subsidiaries and for the consequent transfer pricing, subsidiary w.c. funding and global hedging of the supply chain.

To have the power and authority to achieve this, especially during the implementation period, it needs to be a group level function reporting to the CEO, with its own KPI's.

It needs dotted line relationships with procurement, with the commercial side of the subsidiaries and with treasury. Given the global nature of the Group it may need regional representation to cope with differing levels of economic development, different languages and cultures, different legal and regulatory frameworks and different ways of doing business.

It may be that treasury would wish to establish an IHB to act as an intermediary transaction hub for reason of financial or fiscal efficiency and for visibility.

6c) Push-back from businesses

(3.6 mins, 2 marks)

The introduction of a CSO represents a significant move towards centralisation. And if the CSO is to act as principal intermediary, the discretion of country subsidiaries will be significantly reduced. So senior executives with profit responsibility for individual businesses may interpret the change as a real threat to their status, responsibility and earnings potential.

Specific issues:

- cut off from suppliers, so loss of influence on actual cost
- loss of control of terms of trade and cash flow
- more visible
- concerns about cost of running CSO, fairness of transfer pricing and impact on subsidiary/branch profits and management remuneration
- resentment about prioritising this project relative to others seen as more directly beneficial locally

However some executives may welcome the opportunity to focus on customer service and on driving sales. Those that don't will resist the change and/or leave. It is a fundamental culture change which will need thoughtful management.

QUESTION 7:

(18.0 mins, 10 marks)

Marking scheme – to pass, minimum three credible points per event about treasury impact and three credible points per event about mitigants.

7a) Adverse impact at treasury level

(9.0 mins, 5 marks)

7b) Plan to mitigate impact at treasury level

(9.0 mins, 5 marks)

7a Adverse Impact	7b Mitigants
<p>(i) Warehouse stock destroyed by water sprinkler fault</p> <ul style="list-style-type: none"> • stock replacement cost • sale revenue reduced • liquidity impaired • p/l impaired • b/s write-offs <p>(ii) Cash management system bank fails, system inoperable</p> <ul style="list-style-type: none"> • no payments made/received • technical defaults eg on debt, derivatives • fx hedging dislocated • supplier payment penalties/shipments halted • liquidity impaired • bad debts due to contested payments <p>(iii) Reclassification of “prescription only”</p> <ul style="list-style-type: none"> • rating downgrade likely • liquidity probably ok, funding main issue eg covenants • increase in debt pricing • long term strain on profits, cash generation • stock write-offs 	<ul style="list-style-type: none"> • proven contingency/business continuity plan (if none already) • business continuity insurance • two warehouses • working capital reduction eg reduced production cycle, reduce finished goods stock (lengthen delivery time?) • improve alarm system maintenance • bulk up stock in waterproof packaged units • contingency supply agreement with alternative supplier • liquidity buffer eg facility headroom <ul style="list-style-type: none"> • disaster recovery plan (if none already) • diversify placing of surplus funds • back-up bank • manual system as default? • precautionary deposit with alternative bank for payables, coupled with factoring facility • plan to notify suppliers and buyers immediately of emergency banking arrangements • investigate default waiver conditions <ul style="list-style-type: none"> • periodically reverse stress test this event if not already doing so • if surplus stock, discount to pharmacies • pro-active engagement with regulatory bodies • lobby for licence to fill prescriptions on-line • stay close to the business • review rating level, plan notch up as future precautionary measure? • longer term, reposition product range to reduce risk of future re-classifications.

General comments

The three events are characteristically different:

- (i) Operational risk, so needs a holistic approach
- (ii) Treasury risk, so mainly a treasury functional approach
- (iii) Core business risk, so mainly a business model/strategy approach

There were frequent references by candidates to credit rating impairment, but this is unlikely except for (iii) where there is a very material long term shift in the viability of the business model.

Adverse impacts are not always insurable. However re-insurance companies such as Swiss re, Zurich Re, Munich Re (the wholesale end of insurance) are continually developing insurance solutions to hedge or mitigate hitherto untransferable commercial risk such as weather, market demand. These solutions are sometimes referred to collectively as “ART” - alternative risk transfer.

Having a proven contingency/business continuity plan increases the probability of getting related insurance cover and reduces the cost. In the absence of a plan, a good “adverse impact” record may be interpreted as just good luck. Rating agencies, banks may take the same view.

Financial compensation for the immediate loss caused by an adverse event will not protect shareholder value if, for instance, your product’s lack of availability causes loss of market franchise.

Business continuity plans usually focus on the customer end of the supply chain and on disruption events with potentially long recovery times or with ripple effects across the business.

The related financial focus is on cash flow and profitability deterioration which can cause liquidity problems, covenant breaches or a ratings downgrade.

Examiner's Report

MCT Advanced Diploma - October 2013

OVERALL SUMMARY

OVERVIEW

	General Exam	Case Exam	Combined
Marks	49.3%	53.5%	51.2%
Questions	7	8	15
Students	22	18	40
Passes # @50%	10	12	22
Passes # @45%	13	14	27
Pass % (50%)	45%	67%	55%
Pass % (45%)	59%	78%	68%

Range of marks 36.2% to 63.9% 40.2% to 70.3%

This was a good set of results overall, very similar to those of the last diet but with the average combined mark a little lower than last year but the combined pass rate a little higher. Performance on the Case exam was again better than on the General exam. The general distribution of the marks across the two papers was not quite as strong as in April 2013 – the top 15% (last time 29%) achieved marks of 60 or above, the “middle slice” of 52% of candidates (last time 44%) achieved marks between 45 and 59, but the remaining 33% (last time 27%) achieved marks below 45%. The top candidate achieved an average mark of 66.9%, while two others averaged over 60%.

General exam	marks available	passes out of 22	average mark
Q1	10	14	50%
Q2	15	13	52%
Q3	28	14	54%
Q4	10	7	42%
Q5	12	12	49%
Q6	15	8	44%
Q7	10	17	55%
Case exam	marks available	passes out of 18	average mark
Q1	10	14	62%
Q2	10	9	52%
Q3	10	17	59%
Q4	11	8	46%
Q5	21	8	49%
Q6	18	13	55%
Q7	12	13	55%
Q8	8	14	57%

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

Corporate Finance and Funding Summary (both papers)

The average mark achieved on the seven questions on corporate finance and funding (105 marks out of 200) was 51.9% (April 2013 53.8%). There were 12 passes at the 50% level out of 22 (April 2013 12/19). Half of these achieved 60% or more, the top mark being an excellent 72.4%. Once again there were three candidates with sub-40% marks. Despite the reasonable marks, too many candidates only seem to know about corporate finance is WACCs, betas and credit rating, often mechanical learning of formulae and conventions without any real understanding of core corporate finance principles.

Treasury and Risk Management Summary (both papers)

The average mark achieved on the eight treasury and risk management questions (95 marks out of 200) was 51.7% (April 2013 51.5%). There were 13 passes at the 50% level out of 22 (much better than April 2013's 9/19). However, only three candidates achieved 60% or more, with a top mark of 67.1%. At the other end of the distribution there were five candidates with sub-40% marks.

Examiner's Report **General Examination**

Question 1 **Treasury's role in adding value throughout the total acquisition process**

This was a question with a very wide scope and candidates achieved a disappointing average mark of 49.5 but with a reasonable pass rate.

Very few people covered all the key areas. Valuation and risk assessment of the target were generally well covered (but with too much on DCF and WACCs), also liaison with corporate finance or other finance teams, pro-forma balance sheets and gearing covenants, delivery of cash and other mechanics, integration of the target's treasury and re-structuring target's debt.

Structuring the deal in terms of debt/equity mix, bond issue-related work (except rating agencies), and bridging and other debt finance were reasonably-well covered.

Less well covered were analysis and hedging of fx risk (surprisingly), general work with rating agencies and equity analysts, possible equity finance (almost non-existent), also pro-forma eps and divi cover.

Question 2 **Objectives, difficulties and usefulness of forecasting**

Question 2a Objectives of forecasting

Most candidates passed and were able to recite the more obvious declared objectives of forecasting, long and short-term, but many did not have much to say about the wider and more strategic implications of why forecasts are needed.

Question 2b Difficulties of forecasting

I only passed five candidates (40% average mark) because answers only dealt with a part of the problem. The question generally revealed good knowledge of the practical internal difficulties of forecasting within a complete global corporate e.g. very strong on the difficulty of forecasting fx and interest rates. Candidates were not so good on problems due to the inherent business / economic factors behind forecasting and especially the differences in the level of difficulty between long-term and short-term forecasting. There was too much focus on financial issues like bank/debt/interest issues rather than the underlying causal factors.

Question 2c Forecasting a waste of time

This simple question was actually a little more demanding and answers were disappointing because there was not much generalisation of the principles why forecasting may be either a waste of time or absolutely essential. Or, when good examples were given, the reasons given for the choice were limited in scope - not very imaginative. Also many answers covered either the business reasons or the gearing/debt/cash reasons determining the need for forecasts but few covered both.

Question 3 **Structuring and valuation of a leveraged acquisition**

This was a very demanding question in terms of conceptual understanding about structuring leveraged deals plus the ability to crunch the numbers reliably. Overall the mark achieved of 53.6% was very good, but very few candidates mastered all five parts of this question. Despite picking up marks for bits of the calculations many candidates just did not understand the fundamental corporate finance principles and associated methodology. They were not aware of the "circularity problem" involved in trying to value a business using a calculated WACC or equity rate based on a leverage ratio,

which we do not know until we have valued the business and determined the capital structure. Although the instructions to maximise debt indicated that this was obviously a leveraged deal, candidates fell back on standard non-leveraged approaches e.g. asking for a credit rating to determine the credit spread on debt, assuming low (plc) levels of balance sheet gearing and EBITDA multiples or generous coverage ratios, and using un-levered betas.

In a sense the normal logic has to be reversed – cash flows determine maximum debt and drive the residual equity value, then the resultant leverage determines the level of risk and the associated costs of debt and equity. And balance sheet assets are essentially irrelevant.

Question 3a & b Determining the level of debt

Senior debt and junior debt calculations were reasonably well done but too many just assumed debt amounts or debt and equity proportions with no real argument or analysis, so most candidates did not push the limits of debt as would be typical in a leveraged deal. A quarter of candidates based leverage on the historical balance sheet share capital.

Question 3c & d Valuation of the EV and shareholders' equity

This proved to be the Achilles heel for a lot of candidates with an average mark of 40% and only nine passes.

Technical errors were myriad e.g. tax on cash flow not profits, confusion over which discount rate to use (geared or un-geared WACC, normal or leveraged equity rate), discounting company cash flows instead of cash returns to investors, confusion over what was an EV and what was an equity value.

All students used the wrong DCF valuation method despite the explicit instructions in the question.

Correct method – discount the calculated equity value at year 5 at a private equity rate. Equity value at year 5 = EV less outstanding net debt (all at year 5). Net cash flows in the first five years are not discounted because they are not paid out but simply add to the cash balance.

Most popular method used – discount first 5 years' cash flows, add a discounted TV based on a calculated sustainable cash flow and a WACC. Lots of ink and time wasted on calculations of WACC (often used incorrectly) and sustainable cash flow (year 6 cash flow given in the question is already SCF).

Question 3d The role of mezzanine finance

This was a 4-mark discursive question that was generally well answered.

Question 4 Taking a view from the short end of the yield curve

Your CFO wants to cash in on low floating rates for a new loan, ie 3m LIBOR at 0.50% versus 10yr swap at 2.00%, in the face of existing policy to fix. Your advice is sought about how this floating position could be monitored and managed if the fix were to be postponed and this is the main focus of the Question.

The CFO is taking the view that the short end of the yield curve will stay lower for longer than is priced into the 10yr rate. The situation is complicated by the amortisation feature but works to the CFO's advantage because most of the gains will occur early.

Most candidates struggled with this Question and seemed to find it difficult to visualise what could/would happen, particularly the dynamic dimension. Some played around with VAR as a tool but only a very few hit on fair value equivalence as a way of thinking

about the problem, ie using the 100% hedge as the benchmark and periodically re-valuing the unhedged position, adjusting for the time which has already elapsed and banking savings to date.

The Question also asked if you would support the postponement – only 30% agreed. The consensus was that the 10yr rate provided good value (pricing in current depressed rates) and that the hassle of monitoring and managing the floating position outweighed any likely gains.

The pass rate of 32% and the average mark of 42% were both the lowest for the paper.

Question 5 Fx hedging in a managed currency economy

This Question is about managing transaction and translation risk in a subsidiary where the local currency is pegged to the USD and forward exchange rates tend to be consistently out of line with future spot rates . . . building up the risk of a one-off large structural exchange rate adjustment sometime in the future. The situation is further complicated by the existence of a 30% minority JV partner and a parent for which this is the only foreign subsidiary and is therefore short on international experience.

The issues raised are (i) should the transaction risk on imported USD priced goods be left unhedged? (ii) should the translation risk on GBP debt to finance subsidiary growth be hedged? (iii) will your hedging decisions be influenced by local competitors who may adopt different policies (iv) will the JV partner take the same view as you? (v) will the Group level policy makers understand the local situation and agree with you? This is a good example of having to qualify relatively straightforward technical solutions to take account of an overseas subsidiary's local conditions.

The pass rate for this Question was 55% with an average mark of 49%.

Question 6 Supply chain intermediation

A growing international supplier of products to the electrical trades which fit out and maintain residential and commercial property has global aspirations. To this end it is setting up a Central Sourcing Organisation to centralise and rationalise terms of trade with suppliers and to do the same in-house for subsidiaries. The goal for suppliers is reduced cost, shorter delivery times and continuity of supply. The goal in-house is to reduce stock levels, to price goods competitively and refocus on customer sales and service by reducing supply side activities.

Candidates were tasked with identifying the elements of CSO operations which might involve treasury, propose where CSO should sit in the organisation structure and anticipate likely pushback internally.

Taking the task to its logical extremes, CSO would become an intermediary between suppliers and in-house buyers, negotiating/agreeing optimum terms of trade with both, transfer pricing, funding or investing positive or negative working capital and hedging risks (eg fx).

This was a really challenging Question, requiring candidates to take a business wide view. It was also a good discriminator. Those who passed picked up strongly on fx, payments and cash management. Gaps were in transport (overall costs and fuel hedging) and possible use of intermediate holding companies eg for tax efficiencies.

The weakest (and probably most difficult) part was how to structure in CSO . . . is it a Group policy setter, a globe-trotting negotiator, an operating entity?

Pushback by internal management was very well covered by some who clearly saw the fundamental nature of the shift, but others missed out here a bit.

Pass rate was 56% with average mark of 44%.

This general approach to supply chain management is becoming more commonplace in recent years and for global companies who get it right could provide substantial competitive advantage. The visibility of operations should also make it easier to add on internet selling.

Question 7 Contingency Planning

An e-retailer of non-prescription drugs is developing contingency plans for future possible shock events: (i) stock in the main warehouse destroyed by a faulty fire alarm sprinkler system; (ii) the cash management bank fails (iii) a major line of drugs is re-classified as prescription only. Candidates were asked to identify the likely adverse impact at treasury level and to propose mitigants.

The events had different functional origins: operations, treasury and business model respectively. So in two of the three examples, the impact on treasury was second order – highlighting the need to understand the business.

All three examples were well covered as reflected in the high pass rate. Two points are possibly worth noting: some candidates flagged rating downgrade as an impact for all three, but probably only (iii) is exposed here because this event is a direct hit on the business model with possible long-term loss of market franchise; and as for 3b) in the Case Exam, insurance was also mentioned a lot but may not always be feasible, underlining the need for in-house structural mitigants.

This last Question seems to have been a happy choice. The pass rate was 77% and the average mark 55%, the highest individual question scores on the paper and a welcome counterpoint to Question 4.