ACT LEADING TREASURY PROFESSIONALS

The Association of Corporate Treasurers

Examination Paper, Solutions and Examiners Report

MCT ADVANCED DIPLOMA CASE STUDY EXAMINATION

April 2013

This exam is based on the Case Study 'Cognova'

QUESTION 1

All the valuation multiples for the company have fallen considerably since 2008. As an illustration you have selected P/E and EV/EBITDA ratios for Cognova and for various sector and peer group comparables.

P/E Ratios	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Cognova plc	14.0	14.0	11.6	13.1	8.2	8.8
UK defence & aerospace sector	18.1	19.2	8.2	13.8	12.1	12.8
European defence average	15.5	14.0	9.6	10.4	10.0	8.8
Total UK stock market	10.5	8.0	3.4	7.1	7.8	8.3

EV/EBITDA Ratios	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Cognova plc	13.2	13.9	8.8	8.6	8.2	8.7
7-company European peer group	11.2	11.4	7.8	8.8	9.3	8.0

Required:

a) **Identify the main positive and negative non-financial factors relating to the company, its strategy, the sector and the business environment that are important for the profits and the valuation of the company.**

(8 marks)

b) **Quantify the relative decline in Cognova's valuation multiples (not its share price). Summarise the most important valuation drivers and explain how they impact the multiples.**

(4 marks)

(Total 12 marks)

QUESTION 2

Required:

Summarise the main changes in the financial structure and performance of the company since 2010 and say what factors you think have been driving those changes.

(10 marks)

QUESTION 3

Required:

a) **Cognova plc has three Divisions: UK Services, US Services and Global Products. Firstly, how would you characterise each Division in terms of its business and financial features. Secondly, how do you see the revenue and profit contribution of the three divisions developing over the next five years?**

(8 marks)

b) **Given your analysis of the company's financials and non-financials and your response to 3a), what in your opinion are the five most important treasury/finance issues confronting Cognova plc at Group level in the medium term? Briefly justify your choice.**

(5 marks)

(Total 13 marks)

QUESTION 4

The level and detailed pattern of cash flows has fluctuated considerably over the last few years, so much so that one equity research house argues against using DCF methods of valuation for the company.

Required:

a) **Give your estimate of the level of sustainable cash flow for 2013, setting out your calculations, assumptions and reasoning for all the key cash flow items.**

(8 marks)

b) **Based on your figure for sustainable cash flow, what value would you put on the total business (EV) at March 2012, assuming a WACC of 7%. What do you conclude from the fact that the actual EV on that date was £1,148m, (based on the share price of 153 pence and 660.47 million shares)?**

(4 marks)

(Total 12 marks)

QUESTION 5

Questions 5 and 6 relate to the setting of a revised financial strategy for the company.

Required:

In light of your financial and non-financial analysis of the company, recommend a policy gearing level for the company going forward, fully supported by your analysis and arguments. What are the main practical implications of your recommendations for management of debt and equity going forward?

(12 marks)

QUESTION 6

Required:

Set out all the considerations relevant to the setting of a dividend policy for the company and make recommendations as to the total dividends per share for 2013 and thereafter, having regard to the company's dividend history and your recommendations in Question 5.

(12 marks)

QUESTION 7

During Phase One of the Renewal Programme treasury has been largely focussed on debt reduction and getting the legacy pension scheme under control.

Phase Two – Core, Explore, Test – is about Cognova learning how to capitalise on existing know-how to drive organic growth. This means identifying commercial opportunities covering the thousands of projects in hand and evaluating their viability in order to invest, divest, trade through the problems or close, ie "testing for value."

The policy is to "target the best point at which to crystallise value from technologies – through selling patents or retaining intellectual Property Rights, but outsourcing manufacture to reduce overheads and risk."

Required:

a) **Given the above and your views about the major treasury/financial issues confronting the company and the medium term prospects for the three Divisions, what functions do you expect to see developing in Cognova's treasury?**

(6 marks)

b) **How would you organise the treasury function (i) in terms of specific roles and structure and (ii) in terms of overall organisation profile, eg role, authority, response to risk, and type of organisation structure?**

(6 marks)

All three businesses are primarily engaged in consultancy projects but currently treasury is not directly engaged in the bidding process for these contracts.

c) **Contract bidding can give rise to significant financial risks. What are these risks? What role should treasury seek to adopt in relation to their management?**

(5 marks)

(Total 17 marks)

QUESTION 8

Cognova inherited a defined benefit pension scheme when it was created in 2001. As part of a restructuring/downsizing in 2008, scheme size and net liabilities have already been substantially reduced in negotiation with the Trustees as a basis for securing the survival of the business.

The current net pension fund liability under IAS39, after deducting deferred tax, is circa £100m, with market value of assets £1bn and present value of scheme liabilities £1.15bn.

The scheme is closed to new entrants, excepting entrants from the UK Government's public sector "protected schemes."

The scheme is open to future accruals, but there is an RPI inflation cap, Career Average Rate Pension calibration has been introduced instead of final salary and there is a Normal Retiring Age of 65 in line with the private sector.

The trustees have access to the best advisors.

Management's view is that the current scheme has again become unsustainable in terms of size and potential volatility. They believe that it is in the interests of both scheme members and the company to seek further significant reforms. By reducing the deficit and stabilising performance the scheme becomes more affordable and improves the likelihood of benefits being paid in the long run.

Required:

As a starting point, what suggestions would the company place on the table as an initial basis for negotiation with the Trustees about reducing the deficit and de-risking the dfb scheme, for the benefit of both the company and of scheme members?

(12 marks)

MCT ADVANCED DIPLOMA
CASE STUDY
BACKGROUND INFORMATION

Based on Cognova plc

April 2013

1.0 INTRODUCTION

1.1 Group Overview

Cognova plc is an international defence and security company which provides technology-based products and services to government and commercial customers. Summary financials are shown below.

Summary Financials	2011 £m	2012 £m
Turnover	1,703	1,470
EBIT	57	375
PAT	5	258
Gross Debt	375	249
Net Debt	272	132
Shareholders' Funds	458	599
Average Market Cap.	759	840

The company originated in 2001, bringing together academic and government based research interests. It was partnered by a private equity house in 2003 and embarked on a series of acquisitions with the objective of growing sales and profits on the back of the well-established UK and US Government defence business. It was floated on the London market in 2006 and now has over 10,000 employees.

1.2 Divisions

Quoting the Annual Report and Accounts:

"The Group operates three divisions: UK Services, US Services and Global Products; this enables us to leverage our expertise, technology, customer relationships and business development skills effectively.

Our Services businesses, which account for more than 75% of total sales, are focused on providing expertise and knowledge in national markets. Our Products business focuses on the provision of product-based solutions to meet customer requirements, complemented by contract-funded research and development on a global basis."

Revenue by business £m

	2012 £m	2011 £m
UK Services	**610.1**	652.7
US Services	**534.5**	607.3
Global Products	**325.0**	442.6
Total	**1,469.6**	1,702.6

Underlying operating profit by business £m

	2012 £m	2011 £m
UK Services	**63.0**	47.4
US Services	**32.1**	45.9
Global Products	**66.2**	52.1
Total	**161.3**	145.4

Revenue by major customer type £m

	2012 £m	2011 £m
UK Government	**482.8**	526.5
US Government	**730.5**	894.3
Other	**256.3**	281.8
Total	**1,469.6**	1,702.6

Revenue by geography £m

	2012 £m	2011 £m
United Kingdom	**570.1**	623.7
North America	**788.7**	949.2
Other	**110.8**	129.7
Total	**1,469.6**	1,702.6

Revenue by category £m

	2012 £m	2011 £m
Sale of goods	**253.2**	365.5
Services	**1,209.4**	1,330.0
Royalties	**7.0**	7.1
Total	**1,469.6**	1,702.6

Employees by Division

Employees	**2012**	2011
UK Services	**5,157**	5,337
US Services	**3,940**	4,686
Global Products	**1,083**	1,185
Total	**10,180**	11,208

2.0 BUSINESS PROFILE & ANALYSIS

2.1 Consolidation and "Renewal Programme"

In the years leading up to the start of the financial crisis in 2007 Cognova plc had benefitted from the ever-growing defence spend.

However, with a background mainly in the public sector it was ill-equipped to cope with the financial crisis. It had not taken the necessary measures to establish the company as a commercial enterprise.

By 2009, following the expansive acquisition programme and a drive for growth, often at the expense of profitability, Cognova plc appeared to have lost direction, had seen the cost base expand and the balance sheet become stretched. There were two profit warnings in 2009. A new Chief Executive was appointed who rebuilt the senior management team. In 2010 the new team committed to a 24 month "Renewal Programme" to transform the culture, to focus on the direction of the business by instilling commercial rigour and to strengthen the balance sheet by introducing greater financial rigour.

The benefits of the Renewal Programme are now being seen with a significantly restructured cost base, a balance sheet close to net cash, the restoration of the dividend and a shift to a more selective, focused portfolio of products and businesses.

2.2 Business Model

At the 2012 Prelims management announced the launch of phase two of the Renewal Programme: "Core – Explore – Test". This is the new business model, focused on actively managing the business portfolio to drive organic growth:

- **Maximize the core** (90% of revenues) - continue to grow those businesses that already have scale, defensible positions and sustainable strong returns.

- **Scale the explore** (8% of revenues) for those smaller businesses with defined customer bases, look to how to take them to being >£100m sales businesses. The choice is invest or divest.

- **Test for value** (2% of revenues) for those smaller technology focused businesses that continue to be funded by customers or with interesting but, as yet, not commercialised technology, there are really just four choices: 1) invest 2) divest 3) trade through the problems or 4) close.

Cognova plc will build out its core into a leading technology-based solutions Group, applying the innovation and capabilities of its people across a number of market sectors.

This will enable mature core businesses to win market share and explore adjacent markets, while nurturing a small number of newer capabilities to determine whether their business models are sufficiently robust to deliver significant growth. Each new opportunity which emerges will be managed through a disciplined process to identify and expand those which can generate sustainable returns and crystallise early value within Cognova plc from those which cannot. The group will target the best point at which to crystallise value from its technologies – through selling patents or retaining Intellectual Property Rights, but outsourcing manufacture to reduce overheads and risk.

2.3 Structure

UK Services has a 25 year long-term partnership agreement with the UK Government, dating from 2008, to help manage various defence sites around the country. This involves the testing and evaluation of equipment and the training of personnel in its use.

The research which UK Services undertakes is entirely funded by third parties and is in many cases Government related.

Consequently the UK Government exercises a degree of control over the exploitation of the companies Intellectual Property Rights.

Similarly motivated elements of government control also apply to the activities of US Services which provides defence related services to the US Government. In this case, US Services must not act in any way which could be interpreted by the US government as evidencing control by a non-US party. This creates a significant barrier to achieving conventional synergies in international treasury such as cash management.

In contrast, Global Products is a potentially global business exploiting the Group's technology internationally.

2.4 A Summary from the Chief Executive

"We have very strong core businesses which account for around 90% of our revenue. Most of them fall within our UK and US services divisions – where our people's technological know-how helps create deep customer relationships.

The profits and cash flows of these businesses are relatively stable. The challenge is that many of these businesses operate in the defence market that is facing severe budgetary pressures. Our first task, therefore, is to retain our market share and then to use our strength to grow further."

"Short-term growth should come from gaining market share in our core businesses when defence budgets stabilise."

"In the medium to long term we rely on the "value pipeline" of new offerings at various stages of development or business readiness. Some will eventually graduate to join our core businesses, others may not prove to be economically viable. We are not short of innovation: for us the challenge is to find ways to turn 'raw' know-how and technology into commercial businesses. For sucessful developments there are a number of different "routes to market."

"The challenge is to diversify our portfolio by finding new sectors in which to apply our innovation and expertise. By using a rigorous combination of selective investments, partnerships and, where appropriate, selective acquisitions we can achieve our medium-term growth ambitions."

3.0 COMPETITION

3.1 Competition

There is limited competition for Cognova due to significant barriers to entry, greater than seen in many other industries. This trusted partner position does not exist for the products business.

There is no other single company in the UK that has equal capabilities to Cognova across the full range of the military to provide advice, and to test and evaluate their equipment. In the UK serious competition is limited to only one other company but in the US there is competition from three companies; SAIC, CACI and Mantech.

Equity analysts will often include quite a diverse selection of UK, European and US companies which are broadly in the “defence sector”, which may be relevant for investment risk purposes, but which Cognova do not regard as main-stream competition.

4.0 FINANCE AND TREASURY

4.1 Background

Cognova had its origins in the Government sector. When it was established, staff who transferred took with them their pension entitlements. This meant maintaining "broad compatibility" with their original peer group, eg non-contributory, final salary, inflation indexed, defined benefit scheme, retirement age of 60 years, with a lump sum cash payment in addition to the full pension entitlement.

This arrangement was unsustainable and in 2008, following protracted negotiations, the scheme was closed to new members from any source, excepting those in the public sector "protected schemes", eg military personnel. The scheme was amended to Career Average Rate rather than Final Salary and inflation capped. The Normal Retirement Age was raised to 65 in line with private sector schemes. However the Scheme remained open to future accrual. The Principal Employer was defined as UK Services, so there was no protection from the US group.

These amendments to the pension scheme were implemented in conjunction with a significant reduction in head-count, both designed to improve the sustainability of the company.

4.2 Treasury

The Treasurer was appointed in 2010. Priorities since then have been on retiring/restructuring the firm's long term debt as the balance sheet strengthened and currently on further renegotiating the terms of the legacy defined benefit pension scheme.

Currently the Treasurer's time is spent 25% on conventional treasury issues, 60% on pensions and 15% on insurance. The insurance is largely in relation to the UK sites managed on behalf of the Government. There is a Cognova captive insurance company to pick up a limited amount of loss and third party insurance to pick up extreme amounts.

Because of Government involvement in the two Services divisions there has been very limited opportunity for Treasury to add value. However the future succesfully "scaled-up" businesses which don't fit into either of the Service divisions will not be similarly constrained.

To date Treasury has not been directly involved in the bidding process, despite the fact that the Group overall may have as many as 3000 projects in progress at any time. As these are completed, they are replenished by new successful bids. These may involve bid bonds and performance bonds, sometimes as a retaliatory response to Cognova's request for a letter of credit to hedge the buyer's counterparty risk.

4.3 Recent Earnings

In four of the last five years earnings have been seriously impacted by a variety of exceptional items, both positive and negative. A summary reconciling underlying profit with reported profit attributable to equity shareholders is given below.

	2012	2011	2010	2009
Underlying profit for equity shareholders	94.8	92.8	72.8	103
Impairments amortisations, reorganisation costs, etc.	(72.1)	(90.7)	(156.9)	(29.2)
Restructuring recoveries and gains on disposals	235.2	2.9	20.8	19.3
Reported profit attributable to equity shareholders	257.9	5.0	(63.3)	93.6

NB Exceptional items are expected to be insignificant from 2013 onwards.

KPIs cover: lost time injury rate, employee engagement, customer satisfaction, underlying eps, organic revenue growth, underlying operating profit, underlying operating margin, underlying operation cash conversion ratio and gearing ratio.

4.4 Details of Net Debt

	2012			2011		
all figures in £ million	Assets	Liabilities	Net	Assets	Liabilities	Net
Current financial assets/(liabilities)						
US$ private placement notes – 5.44%	–	–	–	–	(94.3)	(94.3)
US$ private placement notes – 7.13%	–	(15.9)	(15.9)	–	–	–
US$ private placement notes – 7.62%	–	(67.3)	(67.3)	–	–	–
Bank overdraft	–	–	–	–	(0.3)	(0.3)
Deferred financing costs	–	0.6	0.6	–	0.6	0.6
Bank borrowings	–	(82.6)	(82.6)	–	(94.0)	(94.0)
Derivative financial instruments	0.1	(0.1)	–	–	(0.4)	(0.4)
Finance lease debtor/(creditor)	2.3	(2.2)	0.1	3.0	(2.8)	0.2
Total current financial assets/(liabilities)	**2.4**	**(84.9)**	**(82.5)**	**3.0**	**(97.2)**	**(94.2)**
Non-current assets/(liabilities)						
US$ private placement notes – 7.13%	–	(26.6)	(26.6)	–	(39.6)	(39.6)
US$ private placement notes – 5.50%	–	(30.4)	(30.4)	–	(78.9)	(78.9)
US$ private placement notes – 7.62%	–	(102.0)	(102.0)	–	(152.7)	(152.7)
Deferred financing costs	–	1.0	1.0	–	1.7	1.7
Bank borrowings	–	(158.0)	(158.0)	–	(269.5)	(269.5)
Derivative financial instruments	0.1	–	0.1	–	–	–
Finance lease debtor/(creditor)	6.8	(6.4)	0.4	8.2	(7.9)	0.3
Total non-current financial assets/(liabilities)	**6.9**	**(164.4)**	**(157.5)**	**8.2**	**(277.4)**	**(269.2)**
Cash	46.2	–	46.2	58.3	–	58.3
Cash equivalents	71.6	–	71.6	44.2	–	44.2
Total cash and cash equivalents	**117.8**	–	**117.8**	**102.5**	–	**102.5**
Total net debt as defined by the Group			**(122.2)**			**(260.9)**

4.5 Latest Share Prices and Prospects

At March 2012 the price was 153p. In the six months since that financial year-end the share price has touched 200 pence. Analysts' target prices for end 2013 range from 145p to 230p, mean 185p.

Analyst Estimates of Sales & Earnings	2013	2014
	low/average/high	low/average/high
Sales (bn)	1.33/1.39/1.42	1.30/1.37/1.46
Earnings/share (p)	14.30/16.77/18.72	12.70/14.69/15.84
EBITA (m)	145/151/161	129/137/147

4.6 Comparative Multiples

A recent analyst's summary of global defence-related sector historic P/Es for 2012 gave Cognova at 11.3, the pan-European average at 11.6, the defence-biased Euro average at 11.3, the UK average at 11.6, the US average at 12.9 and the US defence-biased average at 10.8.

4.7 Historical Growth Ratio – Peer Group

Historically organic growth rates for the defence activities of four major players have declined from 8% in 2008 to zero in 2012, but with a 2012 range of plus 8% to minus 4%.

5.0 FINANCIALS

Equity Analysis Model
Cognova Plc
Income Statement

Equity Analysis Model

Cognova plc

Income Statement

		Historical Data					
Month	*Accounts date*	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
March	*Currency / units*	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**
	Audit / man / fcst	**audited**	**audited**	**audited**	**audited**	**audited**	**audited**
	Number of months	**12**	**12**	**12**	**12**	**12**	**12**
Sales Revenue		**1,149.5**	**1,366.0**	**1,617.3**	**1,625.4**	**1,702.6**	**1,469.6**
Operating Expenditure							
b	(Personnel Costs)	(513.4)	(608.8)	(673.8)	(722.7)	(766.1)	(649.8)
b	(Depreciation & Impairment of Tangible Assets)	(31.7)	(33.0)	(33.5)	(59.1)	(39.5)	(32.5)
b	(Amortisation of Intangibles excluding Goodwill)	(15.4)	(23.0)	(32.4)	(90.8)	(37.8)	(29.3)
b	(R&D Costs)						
b	Other Operating (Costs) & Revenues	(495.6)	(592.2)	(749.5)	(736.0)	(713.8)	(596.7)
b	Exceptionals etc. +/-		(32.6)		(42.1)	(90.7)	201.7
Operating Profit		**93.4**	**76.4**	**128.1**	**(25.3)**	**54.7**	**363.0**
Non-operating Income & Expenditure							
	Exceptionals etc.	7.9	(7.0)	7.3	(6.2)	2.7	11.6
	(Amortisation & Impairment of Goodwill)						
Financial Income							
	Income from Investments, Participations etc						
EBIT		**101.3**	**69.4**	**135.4**	**(31.5)**	**57.4**	**374.6**
Interest Received & Paid							
	Other Financial Income & Expenditure	1.7	0.9	3.5	(2.8)	8.1	4.9
	Interest Received	2.1	1.7	1.0	0.4	0.6	1.3
	(Gross Interest Paid)	(15.8)	(20.6)	(25.9)	(32.2)	(39.5)	(49.2)
Profit before Tax		**89.3**	**51.4**	**114.0**	**(66.1)**	**26.6**	**331.6**
	(Tax charge)	(20.3)	(4.0)	(20.4)	2.8	(21.6)	(73.7)
Profit after Tax		**69.0**	**47.4**	**93.6**	**(63.3)**	**5.0**	**257.9**
	Extraordinaries, Discontinued Operations etc						
	Minority Interests						
	(Preference Dividends)						
Net Income / Earnings for Ordinary Shareholders		**69.0**	**47.4**	**93.6**	**(63.3)**	**5.0**	**257.9**
	(Ordinary Dividends)	(24.1)	(28.0)	(31.1)	(4.8)	(10.5)	(18.8)
Retained Profit for Year		**44.9**	**19.4**	**62.5**	**(68.1)**	**(5.5)**	**239.1**
	Statement of Gains and Losses						
Income after gains and Losses		69.0	47.4	93.6	(63.3)	5.0	257.9

EBITA (before exceptionals & Goodwill Amort.)	**93.4**	**109.0**	**128.1**	**16.8**	**145.4**	**161.3**
EBITDA (before Exceps. Deprn, & all Amortisn.)	**140.5**	**165.0**	**194.0**	**166.7**	**222.7**	**223.1**
Cash Earnings (Before Goodwill, Exceps.& Extraords)	**61.1**	**87.0**	**86.3**	**(15.0)**	**93.0**	**44.6**
Cash Retained Profit (Before Goodwill, Exceps & Extraords)	**37.0**	**59.0**	**55.2**	**(19.8)**	**82.5**	**25.8**

Equity Analysis Model
Cognova Plc
Balance Sheet

Equity Analysis Model

Cognova plc

Balance Sheet

	Historical Data					
Accounts date	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Currency / units	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**
Intangible Fixed Assets	438.0	546.5	802.7	721.4	624.3	591.1
Property, Land & Buildings, Forestry Assets - net	260.7	252.2	237.7	209.0	195.5	186.2
Other Fixed Assets - net	80.8	80.2	94.7	76.5	65.4	60.4
Financial Investments, Tax & Pension Assets & Deriva	58.6	39.3	28.0	44.4	47.9	29.7
Medium-term Trade-related Assets						
Total Fixed Assets	**838.1**	**918.2**	**1,163.1**	**1,051.3**	**933.1**	**867.4**
Stocks, Inventories, Work in Progress	39.5	56.9	68.3	79.8	45.4	31.2
Debtors, Prepayments, Receivables etc.	401.2	469.0	532.9	423.8	389.5	404.8
Other financial assets & investments	8.0	8.7	3.7	10.1	5.3	3.5
Cash and Short-term Investments	20.0	24.5	262.1	63.9	102.5	117.8
Tax Assets, Derivatives, Assets for Sale & Other	1.8	4.8	10.4	5.1	7.5	5.1
Total Current Assets	**470.5**	**563.9**	**877.4**	**582.7**	**550.2**	**562.4**
Total Assets	**1,308.6**	**1,482.1**	**2,040.5**	**1,634.0**	**1,483.3**	**1,429.8**
Short-term Debt	15.9	11.8	22.1	8.9	97.2	84.9
Creditors, Accruals, Advance Payments etc.	340.0	374.4	447.2	396.4	465.6	498.7
Corporation Tax Payable	6.9			7.5	4.2	13.7
Provisions, Derivatives & Other Current Liabilities	1.1	31.8	4.3	16.1	20.4	3.4
Total Current Liabilities	**363.9**	**418.0**	**473.6**	**428.9**	**587.4**	**600.7**
Medium & Long-term Debt	327.7	415.3	792.6	530.2	277.4	164.4
Medium-term Trade-related Liabilities	5.5	47.7	48.7	35.2	23.8	20.6
Deferred Tax, Pension & Other Long-term Provisions	134.1	68.1	122.9	166.0	137.2	44.7
Total Non-current Liabilities	**467.3**	**531.1**	**964.2**	**731.4**	**438.4**	**229.7**
Issued Share Capital	6.6	6.6	6.6	6.6	6.6	6.6
Share Premium Account, Treasury Shares	147.6	147.6	147.6	147.6	147.6	147.6
Revaluation Reserve						
Other Reserves	26.8	18.6	79.7	82.2	61.7	59.7
Retained Earnings / Profit and Loss	296.3	360.1	368.7	237.2	241.5	385.4
Total Capital and Reserves	**477.3**	**532.9**	**602.6**	**473.6**	**457.4**	**599.3**
Minority Interests	0.1	0.1	0.1	0.1	0.1	0.1
Total Shareholders' Funds	**477.4**	**533.0**	**602.7**	**473.7**	**457.5**	**599.4**
Accumulated depreciation	124.5	153.9	193.3	241.8	256.3	281.8

Equity Analysis Model
Cognova Plc
UK-Style Cash Flow Statement

Equity Analysis Model						
Cognova plc						
UK-Style Cash Flow Statement	**Explanatory note**					
			Historical Data			
Accounts date	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Currency / units	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**
Number of months		**12**	**12**	**12**	**12**	**12**
CASH FLOW FROM OPERATING ACTIVITIES						
Operating Profit	93.4	76.4	128.1	(25.3)	54.7	363.0
Tangible Asset Depreciation	31.7	33.0	33.5	59.1	39.5	32.5
Dec(Inc) in Stock / Inventories	(15.5)	(17.3)	(2.9)	(13.1)	(5.1)	12.1
Dec(Inc) in Debtors / Receivables	(33.9)	(49.0)	4.4	89.9	45.6	1.2
Inc(Dec) in Creditors / Payables & Advance Payments	27.0	36.7	5.1	(29.9)	64.7	30.3
All other non-cash adjustments & Exceptionals	4.3	58.5	7.0	88.5	56.4	(197.2)
Cash Generated from Operations	**107.0**	**138.3**	**175.2**	**169.2**	**255.8**	**241.9**
Dividends Received from Associates						
Tax Paid	(3.3)	(17.7)	(2.5)	1.5	(42.9)	(23.3)
Net Cash from Operating Activities	**103.7**	**120.6**	**172.7**	**170.7**	**212.9**	**218.6**
CASH FLOW FROM INVESTING ACTIVITIES						
Dividends Received from Investments						
Interest Received	4.2	1.7	1.0	0.4	0.3	1.0
(Purchase of Tangible Fixed Assets)	(34.8)	(23.7)	(30.3)	(24.8)	(19.7)	(22.0)
Disposal of Tangible Fixed Assets	8.6	14.9			0.3	7.3
(Purchase of Subs, Intang., Financial & Forestry Asse	(158.7)	(135.9)	(102.0)	(53.6)	(18.2)	(1.6)
Disposal of Subsidiaries, Intangibles & Financial Asset	20.8		24.6	21.8	38.2	14.8
Net Cash from Investing Activities	**(159.9)**	**(143.0)**	**(106.7)**	**(56.2)**	**0.9**	**(0.5)**
CASH FLOW FROM FINANCING ACTIVITIES						
(Total Interest Paid)	(13.8)	(20.0)	(21.3)	(36.8)	(28.9)	(39.5)
New Shares Issued						
(Repurchase / Redemption of Shares)		(12.8)	(0.8)	(0.8)	(0.6)	(12.0)
(Costs of Issuing / Redeeming Equity)						
Total Increase in Debt	136.1	91.1	226.7	3.0	7.9	3.0
(Total Decrease in Debt)	(86.5)	(3.3)	(3.3)	(234.9)	(146.9)	(136.4)
(Dividends Paid on Ordinary Shares)	(22.7)	(24.9)	(28.9)	(31.6)	-	(16.4)
(Preference and Minority Dividends Paid)						
Miscell. Financing Costs e.g. derivatives, bank fees	(2.4)	(0.5)	(1.5)	(14.3)	(2.4)	(1.6)
Net Cash from Financing Activities	**10.7**	**29.6**	**170.9**	**(315.4)**	**(170.9)**	**(202.9)**
Net Cash Flow from Ops. Investing & Funding	(45.5)	7.2	236.9	(200.9)	42.9	15.2

Equity Analysis Model
Cognova Plc
Share Price Data

Equity Analysis Model

Cognova plc

Share Price Data

	Historical Data					
Accounts date	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Currency / units	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**
	12	**12**	**12**	**12**	**12**	**12**
Number of Shares & Eps						
Basic Earnings per Share (pence or equivalent)	10.51	7.22	14.30	(9.70)	0.80	39.60
Underlying Earnings per Share (pence or equivalent)	**11.29**	**13.41**	**15.90**	**11.10**	**14.20**	**14.60**
Interim Dividend Per Share	1.20	1.33	1.50	1.58		0.90
Final Dividend Per Share	2.45	2.92	3.25		1.60	2.00
Total Dividends Per Share (pence or equivalent)	**3.65**	**4.25**	**4.75**	**1.58**	**1.60**	**2.90**
Average number of common shares	656.6	656.2	652.7	653.5	654.6	654.5
Average number of preference shares						
Share Prices						
Common Share Price - Low (pounds or equivalent)	0.94	1.61	1.23	1.21	0.96	0.97
Common Share Price - High (pounds or equivalent)	2.22	2.14	2.44	1.69	1.36	1.60
Common Share Price - Average	1.58	1.87	1.84	1.45	1.16	1.28
Preference Share Price - Low (pounds or equivalent)						
Preference Share Price - High (pounds or equivalent)						
Preference Share Price - Average						
Risk rating						
Variability %	20	20	24	27	26	26
Beta (actual or estimate)	1.14	0.99	0.89	0.75	0.76	0.69
Assumed Market Risk premium	**4.50**	**4.50**	**4.50**	**4.50**	**4.50**	**4.50**
UK 10-year Gilt Yield	**5.52**	**5.04**	**3.69**	**3.38**	**3.13**	**1.72**
LIBOR or equivalent	5.32	5.89	2.71	0.61	0.76	0.76
Market Capitalisation						
Market Capitalisation - Common Stock	1,036	1,230	1,199	948	759	840
Market Capitalisation - Preference Stock	-	-	-	-	-	-
Market Capitalisation - Total	1,036	1,230	1,199	948	759	840
Minorities	0	0	0	0	0	0
Net Debt	324	403	553	475	272	132
Enterprise value [EV]	**1,360**	**1,632**	**1,751**	**1,423**	**1,032**	**971**

Equity Analysis

Equity Ratios						
Eps Growth %		18.8%	18.6%	(30.2%)	27.9%	2.8%
P/E Ratio	14.0	14.0	11.6	13.1	8.2	8.8
Market / Book Ratio of Equity	2.17	2.31	1.99	2.00	1.66	1.40
Dividend Cover	3.1	3.2	3.3	7.0	8.9	5.0
Dividend Yield %	2.3%	2.3%	2.6%	1.1%	1.4%	2.3%
Total Return to Shareholders %		21.4%	0.5%	(20.2%)	(18.9%)	13.1%
EV Valuation Multiples						
EV / Sales	1.18	1.20	1.08	0.88	0.61	0.66
EV / Book Capital Employed	1.70	1.74	1.52	1.50	1.41	1.33
EV / EBITA	14.6	15.0	13.7	84.7	7.1	6.0
EV / EBITDA	9.68	9.89	9.03	8.54	4.63	4.35
EV / Staff Costs	2.6	2.7	2.6	2.0	1.3	1.5

Equity Analysis Model
Cognova Plc
Cash Flow Analysis

Equity Analysis Model						
Cognova plc						
Cash Flow Analysis						
			Historical Data			
Accounts date	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Currency / units	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**	**£mill**
Cash Flow Summary	**audited**	**audited**	**audited**	**audited**	**audited**	**audited**
Number of months	**12**	**12**	**12**	**12**	**12**	**12**
CASH FLOW FROM OPERATIONS						
Operating Profit	93	76	128	(25)	55	363
Other Non-cash & Exceptional Items	2	58	5	74	54	(199)
Investment Income						
"Cash Profit"	**95**	**134**	**134**	**49**	**109**	**164**
(Increase) / Decrease in Net Working Assets	(22)	(30)	7	47	105	44
Tangible Asset Depreciation	32	33	34	59	40	33
Net Capital Expenditure	(26)	(9)	(30)	(25)	(19)	(15)
(Tax Paid	(3)	(18)	(3)	2	(43)	(23)
(Dividends Paid)	(23)	(25)	(29)	(32)		(16)
Free Cash Flow before Interest	**52**	**86**	**112**	**100**	**191**	**186**
(Net Interest Paid)	(10)	(18)	(20)	(36)	(29)	(39)
Internal Cash Flow	**43**	**68**	**92**	**64**	**163**	**147**
ACQUISITION & FINANCING CASH FLOWS						
(Acquisitions),Disposals,(Investments)	(138)	(136)	(77)	(32)	20	13
Increase / (Decrease) in Share Capital		(13)	(1)	(1)	(1)	(12)
Increase / (Decrease) in Debt	95	85	224	(229)	(143)	(133)
(Increase) / Decrease in Cash		(5)	(238)	198	(39)	(15)
Net Financing Cash Flow	**(43)**	**(68)**	**(92)**	**(64)**	**(163)**	**(147)**

Equity Analysis Model
Cognova Plc
Financial Profile

Equity Analysis Model

Cognova plc

Financial Profile	**Historical Data**					
Accounts date	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Number of months	***12***	***12***	***12***	***12***	***12***	***12***
Annual % Growth Rates						
Sales Growth		18.8%	18.4%	0.5%	4.7%	(13.7%)
Margins and Cost Structure						
Personnel Costs % Sales	(44.7%)	(44.6%)	(41.7%)	(44.5%)	(45.0%)	(44.2%)
Depreciation % Amortisation % Sales	(4.1%)	(4.1%)	(4.1%)	(9.2%)	(4.5%)	(4.2%)
Other Operating Costs & Revenues % Sales	(43.1%)	(43.4%)	(46.3%)	(45.3%)	(41.9%)	(40.6%)
Total Exceptional Items & Goodwill Amort.% Sales (+/-)	0.7%	(2.9%)	0.5%	(3.0%)	(5.2%)	14.5%
EBIT % Sales	8.8%	5.1%	8.4%	(1.9%)	3.4%	25.5%
Profitability / Return on Capital Employed						
EBITA % Capital Employed (pre-exceptionals)	11.7%	11.7%	11.1%	1.8%	19.9%	22.1%
Pre-tax Target Rate of Return 0n Book Value	22.8%	21.6%	15.5%	12.6%	11.8%	8.9%
EBITA % Market Enterprise Value	6.9%	6.7%	7.3%	1.2%	14.1%	16.6%
Pre-tax Target Rate of Return on Market Value	13.4%	12.4%	10.2%	8.4%	8.4%	6.7%
Asset Utilisation / Capital Intensity						
Sales / Total Assets	0.88	0.92	0.79	0.99	1.15	1.03
Stocks % Sales	3.4%	4.2%	4.2%	4.9%	2.7%	2.1%
Debtors % Sales	34.9%	34.3%	32.9%	26.1%	22.9%	27.5%
Creditors & Advance Payments % Sales	30.1%	30.9%	30.7%	26.6%	28.7%	35.3%
Net Working Assets % Sales	8.3%	7.6%	6.5%	4.4%	(3.2%)	(5.7%)
Tangible Fixed Assets % Sales	30%	24%	21%	18%	15%	17%
Depreciable Assets % Sales	7%	6%	6%	5%	4%	4%
Net Capex % Annual Depreciation	83%	27%	90%	42%	49%	45%
Average Age of Depreciable Assets (years)	3.9	4.7	5.8	4.1	6.5	8.7
Tax Ratios						
Effective Interest Rate [P&L] %	4.6%	5.3%	4.2%	4.8%	8.6%	15.8%
Effective Tax Rate [P&L] %	22.7%	7.8%	17.9%	4.2%	81.2%	22.2%
Cash Tax Rate [Cash Flow] %	3.7%	34.4%	2.2%	2.3%	161.3%	7.0%

Capital Structure & Credit Status

Balance Sheet Gearing & Leverage						
Leverage: (Net Debt % Capital Employed)	40%	43%	48%	50%	37%	18%
Net Debt % Enterprise Value	24%	25%	32%	33%	26%	14%
Interest Cover Ratios						
Interest Cover: (EBITA / Net Interest Paid)	6.8	5.8	5.1	0.5	3.7	3.4
Interest Cover: (EBITDA / Net Interest Paid)	10.3	8.7	7.8	5.2	5.7	4.7
Cash Flow before Interest / Cash Net Interest	5.5	4.7	5.5	2.7	6.7	4.8
Income Leverage (Debt Repayment Ability)						
Gross Debt / Cash Retained Profit (years to repay)	9.3	7.2	14.8	oo	4.5	9.7
Net Debt / EBITDA	2.3	2.4	2.8	2.9	1.2	0.6

Equity Analysis Model

Cognova plc

Financial Profile

	Historical Data					
Accounts date	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Number of months	***12***	***12***	***12***	***12***	***12***	***12***
Annual % Growth Rates						
Sales Growth		18.8%	18.4%	0.5%	4.7%	(13.7%)
Margins and Cost Structure						
Personnel Costs % Sales	(44.7%)	(44.6%)	(41.7%)	(44.5%)	(45.0%)	(44.2%)
Depreciation % Amortisation % Sales	(4.1%)	(4.1%)	(4.1%)	(9.2%)	(4.5%)	(4.2%)
Other Operating Costs & Revenues % Sales	(43.1%)	(43.4%)	(46.3%)	(45.3%)	(41.9%)	(40.6%)
Total Exceptional Items & Goodwill Amort.% Sales (+/-)	0.7%	(2.9%)	0.5%	(3.0%)	(5.2%)	14.5%
EBIT % Sales	8.8%	5.1%	8.4%	(1.9%)	3.4%	25.5%
Profitability / Return on Capital Employed						
EBITA % Capital Employed (pre-exceptionals)	11.7%	11.7%	11.1%	1.8%	19.9%	22.1%
Pre-tax Target Rate of Return 0n Book Value	22.8%	21.6%	15.5%	12.6%	11.8%	8.9%
EBITA % Market Enterprise Value	6.9%	6.7%	7.3%	1.2%	14.1%	16.6%
Pre-tax Target Rate of Return on Market Value	13.4%	12.4%	10.2%	8.4%	8.4%	6.7%
Asset Utilisation / Capital Intensity						
Sales / Total Assets	0.88	0.92	0.79	0.99	1.15	1.03
Stocks % Sales	3.4%	4.2%	4.2%	4.9%	2.7%	2.1%
Debtors % Sales	34.9%	34.3%	32.9%	26.1%	22.9%	27.5%
Creditors & Advance Payments % Sales	30.1%	30.9%	30.7%	26.6%	28.7%	35.3%
Net Working Assets % Sales	8.3%	7.6%	6.5%	4.4%	(3.2%)	(5.7%)
Tangible Fixed Assets % Sales	30%	24%	21%	18%	15%	17%
Depreciable Assets % Sales	7%	6%	6%	5%	4%	4%
Net Capex % Annual Depreciation	83%	27%	90%	42%	49%	45%
Average Age of Depreciable Assets (years)	3.9	4.7	5.8	4.1	6.5	8.7
Tax Ratios						
Effective Interest Rate [P&L] %	4.6%	5.3%	4.2%	4.8%	8.6%	15.8%
Effective Tax Rate [P&L] %	22.7%	7.8%	17.9%	4.2%	81.2%	22.2%
Cash Tax Rate [Cash Flow] %	3.7%	34.4%	2.2%	2.3%	161.3%	7.0%

Capital Structure & Credit Status

	2007	2008	2009	2010	2011	2012
Balance Sheet Gearing & Leverage						
Leverage: (Net Debt % Capital Employed)	40%	43%	48%	50%	37%	18%
Net Debt % Enterprise Value	24%	25%	32%	33%	26%	14%
Interest Cover Ratios						
Interest Cover: (EBITA / Net Interest Paid)	6.8	5.8	5.1	0.5	3.7	3.4
Interest Cover: (EBITDA / Net Interest Paid)	10.3	8.7	7.8	5.2	5.7	4.7
Cash Flow before Interest / Cash Net Interest	5.5	4.7	5.5	2.7	6.7	4.8
Income Leverage (Debt Repayment Ability)						
Gross Debt / Cash Retained Profit (years to repay)	9.3	7.2	14.8	oo	4.5	9.7
Net Debt / EBITDA	2.3	2.4	2.8	2.9	1.2	0.6

ADVANCE DIPLOMA

CASE STUDY EXAMINATION – NOTE FORM ANSWERS

QUESTION 1 **(21.6 mins, 12 marks)**

1 a) **(14.4 mins, 8 marks)**

(Marking scheme 8 marks so ⅓ mark for each good point)

Not necessarily equal numbers of positive and negative points;

Positive

- Limited competition because of [1] established, strong positions in UK and US defence industries and high [2] entry barriers
- £1,200 to £1,400 million core [3] government business (UK & US)
- 20.4% operating profit [4] margin on Global Products
- Undoubted technological expertise [5] and applied customer knowledge [6] – product-based solutions to customer requirements
- Attracts contract [7] funded research moneys
- Significant barriers to entry
- Research and development generates [8] future business opportunities
- Global Products Business potential for growth independent [9] of US and UK defence budgets
- Worldwide political uncertainty may underpin demand in the long run.

Negative

- World recession and after-effects of global financial crisis still a depressant to revenue [10] growth?
- US and UK defence [11] budgets particularly under pressure
- US defence budget faces particular political uncertainty under second [12] Obama administration
- US Services business low [13] margin (6.0%)

- US business must not be seen to be UK controlled – constraining [14] factor
- Big exceptionals indicate scale of [15] re-organisations and write-down (financial cost, management time, strategic re-positioning [16])
- Barriers to entry make it difficult to break into [17] new defence markets eg Europe, Australia, which are also smaller
- "Non-commercial", public sector culture [18] seems hard to shake off
- Market Life Cycle – generally mature, [19] stable/declining? markets
- "Stalemate" [20] market environment, potentially "volume market" if defence spending growth resumes
- In terms of Porters 5 Forces

Positive [21]	high entry barriers, favourable competition dynamics Low supplier power, neutral threat of new products because of own R&D programme
Negative [22]	Very high buyer power

Porter conclusion: On balance one big negative balance [23], three positives and one neutral.

<u>Key to Value</u>

Profitability and steady growth, coherent strategy, management delivery on promises [24]

1 b) **(7.2 mins, 4 marks)**

Percentage changes in P/E ratios since 2007 [1]
Cognova – 37%
UK defence & aerospace sector – 29% [2]
European defence average – 43%
Total UK market – 21% [3]

Percentage changes in EV/EBITDA
Cognova – 34%
7-company European peer group – 29%

Cognova has generally [4] suffered to a similar degree as the sector. Worse than US, better [5] than Europe, much worse than the total UK stock market.

Higher multiples essentially reflect good growth [6] expectations and/or [7] lower risk.

Need to convince markets of viable, sustainable strategy [8] and management's ability to deliver growth in revenues profits and dividends.

Company floated in 2006 to great expectations of business growth, based on the strength of its extremely advanced technological knowledge – has proved much more difficult [9] than expected. Over-hyped by private equity partner? [10] So growth expectations revised downwards.

Company also struggling with transition from university/public sector mentality/culture [11] (bureaucratic rather than commercial) plus an associated high-cost base – depressed profit growth potential of profitable Global Products business.

Poor acquisitions [12] strategy and economic recession have meant big losses – exceptional losses – volatile and less predictable profit.

Sector always dependent on (UK and US) defence budgets – very much under pressure post [13] Iraq and with Afghanistan run down. Also background of austerity measures and economic recession, [14] post 2007. Growth and profit expectations revised downwards. Greater risk and [15] volatility overall.

QUESTION 2 **(18 mins, 10 marks)**

(Marking scheme - ⅓ mark for each good point)

<u>2010</u>

Two profit warnings in a few months. [1] Company loss making (31.5m
[2] operating loss) but about 55m extra amortisation and 48m other exceptionals.
Dividends drastically reduced in 2010 (only small interim, no final). [3]
Sales growth had tailed off with acquisitions. [4]
Even before exceptionals ROCE [5] consistently around 11/12% versus target of 13 to 22%.
Debtors and creditors falling but still high at 26% of sales.
Capex now only 42% of depreciation (average 61% 4 years) – [6] under investment.
Net debt 33% of EV, 2.9 times EBITDA, EBITDA interest cover fallen to 5.2 from 10.3.
Repayment ability 9.3 [7] to 14.8 years to infinity.
Credit rating ? BB ? – on cusp of investment grade and falling. [8]
Over four years £412m cash profit, £383m spent on acquisitions, 41% growth in sales, virtually no growth in underlying profits. [9]

<u>2010 – 2012</u>

Profits little changed pre-exceptionals [10] but dividends partly [11] restored.
Sales reduced by disposals [12] and rationalisations. [13]

Massive de-gearing [14] exercise – net debt now £132m, down by £330m (cash flow) or by £343m (balance sheet)
Reasonable cash generated from cash [15] profits after tax £207m, working capital £149m, [16] depreciation less capex £39m, [17] reduced dividends and disposals £33m. [18]

Net debt % EV down to 14%, net debt/EBITDA 0.6 times. [19]
Interest cover still falling but ok (EBITDA cover 4.7).
But repayment ability now 9.7 years.
Margins have improved [20] from 11% to 22% [21] as target rate of return has fallen with lower costs of capital. Non-personnel cost base being reduced. [22]
Creditors increased so net working assets now negative. [23]
Company has "bitten the bullet" on the pension deficit [24] and the expensive [25] and constraining debt burden.

So a financial strategy [26] of cost cutting, improving efficiency, cash generation and de-gearing – a company very much in transition so what comes next?

<u>Factors driving change</u>

More difficult operating environment [27]
New management regime [28]
New business strategy [29]
Strategy to reduce financial liabilities [30]
More difficult operating environment [31]
Rationalisation post acquisitions [32]

(18 mins, 11 marks)

QUESTION 3 **(23.40 mins, 13 marks)**

Having a clear view about Q3.a. and Q3.b. is important for responding to the rest of the questions, particularly Question 7.

3 a) Divisional characteristics and medium term prospects
(14.4 mins, 8 marks)

(Marking scheme: Expecting both quantitative and qualitative characteristics for each division, eg revenue and profitability, business model. UK & US Services have similar characteristics so OK to discuss these as a pair. For a pass, evidence of a feel for each division as a separate business, and for the significant differences)

Characteristics

• UK/US Services - service contracts - relatively stable big portfolio - high reliance on domestic government spend - low-medium operating margin - degree of ring-fence - relatively high headcount	• Global Products - more product orientated - small portfolio, volatile - a little more commercial, international - high operating margin - no ring-fence - relatively low headcount

If these businesses were more conventional then a more generic list of differentiators would include:

- Capital intensity (working and fixed asset)
- Asset life
- Time to market
- Operational gearing

Revenue, profit growth

UK/US service low growth or some decline in revenue and profits.

Global Products potential for higher growth, also by its nature may be able to monetise value up front which a manufacturer might have to harvest over several years.

3 b) Five finance/treasury issues (9 mins, 5 marks)

(Marking scheme: Number of issues, quality of justification. For a pass, minimum of 5 issues)

- Pensions still a material issue
- Evaluation of the Test for Value businesses
- Bidding for UK/US government contracts, given the climate of cutbacks
- Availability of funding for growth if the core UK/US Services businesses take a knock
- Development of entity-wide treasury function
- Insurance and the captive company also probably, given the treasurer's time allotted
- Ring fencing of the US business and its effect on cash flow management and financing of the business – maybe on non-recourse basis
- Possible credit rating to help liquidity.

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

4 a) Sustainable cash flow 2013 **(14.4 mins, 8 marks)**

(Marking scheme - ½ mark for each good point)

Assume 2% [1] sales decline (based on latest analysts' projections).

	2013 £m	
Operating profit (2012 161m before exceptional items)	121 [2]	151m analysts' average [3] forecast of EBITA range 145 to 161, less amortisation of 30 – well down on 2012.
Amortisation of intangibles (2012 – 29m) [5]	30 [4]	estimate after recent exceptionals
Change in working capital	13 [6]	limited further squeezing,* sales slight decline
Depreciation	34 [9]	pretty stable, low capex [10] **
Capex at replacement level (deprn x 1.0)	(30) [11]	replacement capex 120-130% deprn. but historical spending at 45% [12]
Tax on operating profit (22.2% [15] x £121m)	(27) [14]	effective tax rate 2012
Cash flow for valuation purposes	141 [15]	(± 10m? range 131m – 151m? [16]

Interest – (probably heading for zero gearing

Dividends – to be decided.

* Change in net working assets

NWA 2012 was – 83.8m, (31.2 + 404.8 – 498.7 – 20.6)

Sales 2013 down 2% = 1470 x 0.98 = 1441

Assume NWA% Sales continues to fall, to, say, - 6.7%

Therefore NWA 2013 = 1441 x – 6.7% = - 965

Change in NWA ≡ + 12.7m**Historical capex looks too low to be sustainable but [13] 2009 capex nearly equals depreciation. Replacement capex might be as high as £43m but hard to assess for this services company.

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

(Marking scheme - ½ mark for each good point or correct calculation)

Valuation (2% decline per annum) 141 / (0.07 + 0.02) [1] = $\boxed{1{,}567\text{m}}$ [2]

The actual EV was 1,148, [3] therefore decline seems to be assumed, based on SCF of 141;

g = WACC – (SCF / EV)

g = 0.07 – (141 / 1148)
g = 0.07 – 0.123

g = – 0.053 [4] ie – 5.3%

Decline of 5.3 is below the bottom of the sector growth for 2012 [5] (+ 8 to - 4%).

Therefore the market definitely seems to be assuming longer-term decline of earnings. [6] The following matrix illustrates the impact of various combinations of WACC, SCF and growth rate for the given EV of 1,148. Decline ranges from - 4.4% to – 6.2% [7] for 7% WACC. Different WACC? [8] Undervalued? [9]

Growth rates for differing combinations of WACC and SCF.

(required for EV of 1,148million)

(g = WACC - (SCF/EV)

SCF	WACC	131	141	151
	6.0%	(5.4%)	(6.3%)	(7.2%)
	6.5%	(4.9%)	(5.8%)	(6.7%)
	7.0%	(4.4%)	(5.3%)	(6.2%)
	7.5%	(3.9%)	(4.8%)	(5.7%)
	8.0%	(3.4%)	(4.3%)	(5.2%)

QUESTION 5 **(21.6 mins, 12 marks)**

(Marking scheme - ½ mark for each good point or calculation)

Any risk assessment and associated capital structure choice is subjective. The methodology below is therefore more important than the level of the credit ratios chosen.

Credit status now quite strong [1]. Scope for gearing up to reduce [2] WACC, maximise shareholder value and provide debt funding [3] for requirements.

Choice of credit rating equivalent – defence sector, but low risk overall, need for new growth strategy [6] (via organic growth, acquisitions) – possibly single A? [7]

Debt/EV, say, 30% [8]	971 x 0.30 = 291m [9] debt
EBIT Interest Cover*, say, 5 times	121/5.4/5% = 484m debt
EBITDA Int. Cover*, say, [10] 8 times	(121+34+30)/8/5% = 463m debt [11]
Net Debt/EBITDA, say, 2.4 times [12]	(185 x 2.4 = 444m debt [13]
	Average 421m [14]

* NB Profit forecasts have been used from earlier answers.

N.B. Current interest obviously includes 'breakage costs' (effective rate 15.8%) so 5% used as more realistic.

Net debt is currently 84.9 + 164.4 - 117.8 = 131.5m so extra debt/reduced cash of £289m. [15]

Simply increasing the debt would give EV of 971 +289 = 1260 and Debt/EV of 33%.

Net debt peaked at £553m in 2009 (gross debt 815m). So this suggested policy is a return to previous levels [17] of debt, provided profitability can be restored [18] and maintained (controversial?). Company might well be more conservative [19] given current market uncertainties and bad experience of [20] 2010.

Potential problem: - how to spend the cash – company has generated £300m in 2011 and 2012 [21] (with low capex) and is paying down debt/building cash. Our forecast indicates sustainable cash flow of £122m [22] after tax-sheltered interest of 15.7m (£24m x 0.778) but before dividends. NB. Still £109m after "replacement" capex.

Acquisitions in 2007 and 2008 were £137m p.a. but not very successful. Maybe [23] acquisitions are needed to spend the extra debt. Company will need to explore [24] new sources of debt and decide a dividend policy (see next question). Share buy-backs? [25]

The following, alternative answer note gives the view of a practising treasurer. It presents the arguments for a more cautious approach to the question of gearing based on a more conservative assessment of the company's level of risk. The quantified answer note above gives a more aggressive “corporate finance” view. One could perhaps characterise the two contrasted approaches as one primarily concerned with minimising risk and the other concerned with maximising shareholder value.

Answer to Question 5, additional to the corporate finance based approach.

The information in the background is actually relatively scanty but we need to make some fundamental analysis of this business before we can address the financial strategy. The bulk of the business, ((483+730)/1470), or 83% is essentially an outsourced research arm of the US and UK governments. There are other aspects than research but they share the same characteristics. Its business model to carry out research is to gain a contract, then research. The key asset of the business is the staff and it is probably not heavily capital intensive. There are some fixed assets but they are relatively stable. The high receivables and payables (plus advance payments received) are unusual and a cause for concern but they do seem to be matched and therefore not require much capital.

Therefore this business rather resembles the typical ‘advertising agency’ model, where the key competitive advantage is the staff (who can walk out of the door) and not much else. Perhaps in the case of Cognova there is generated Intellectual Property, but without the staff it is not much use.

So for this part of the business there is no real fundamental demand for capital. Capital expenditure is likely to be quite low, restricted to testing machinery rather than manufacturing machinery. Taking this further, there is therefore no real need for this part of the business to be geared in any way.

However, acquisitions are a major part of the advertising industry and have played their part for Cognova as well, as the £591.1 of intangibles testifies. It is made up of £519.3 goodwill and £71.8 (presumably) IP. Note you can only know this from the accounts of Qinetiq but it is a crucial fact. Note also that they did a large write down of this goodwill in FY 13. So Cognova is in a sector where knowledge is often bought so this must factor into the financial strategy.

The Global products business is small but very profitable and amounts to a small manufacturing business. So this part of the business will need capital for research (unless cloned from the UK and US services), for capital expenditure and for machinery and working capital. Clearly this business should be grown and so needs capital.

Is Cognova a fundamentally good credit risk? On the face of it yes, because it has pretty good customers (UK and US governments) and some long term contracts (although we don’t know this from the material). However both these governments are on the back foot as far as spending money is concerned so arguably there is a credit weakness there. High creditors and advance payments don't help the credit story. For the Global business, surely it is actually a very risky business. The products are short runs, to possibly strange and volatile governments and the high returns also support the high riskiness. It is not churning large stable numbers of cans of coke at small margins. It is risky.

Does Cognova need to be a good credit risk for its customers? The UK and US governments will want it to be there in the long run, but what they actually want is for the staff and equipment to be there in the long run, and those assets can survive bankruptcy. The US government seems to have enforced some sort of ring fencing anyway so they probably could survive if the shareholder collapsed. For Global products, the customers probably would like a decent credit risk to be there to support the after sales aspects of it all.

So to lenders, this all seems to add up to quite a risky business and so lending to it really will be a rather short term affair, with bank facilities and perhaps private placements up to say 5 years maximum. It does not feel like a natural bond issuer.

And lending is really only needed to support acquisitions, with a short term repayment cycle, then start over again. Global Products is a slight wrinkle to this, but its riskiness tends towards lower gearing as well.

So to get to answering the question, I do not think that a gearing policy level is appropriate over the long run, unless it is zero. So if Cognova makes an acquisition, it does so with a suitable mix of short term debt and equity, with a target of zero gearing within the contract life horizon of say 4 to 5 years. To get that finance, it needs to be on good terms with its shareholders and bankers and be prepared to 'go junk' for a short while. So confidence in management ability to make acquisitions work is the key credit risk. A credit rating does not seem appropriate for Cognova as it may change too quickly.

QUESTION 6 **(21.6 mins, 12 marks)**

(Marking scheme - ½ mark for each good point or relevant calculation)

<u>Dividend history</u>

Up to 2009 dividends growing at 16.4% and [1] 11.8% then cut in 2010 (no final 2010, no interim 2011). [2]
Company could clearly [3] afford the dividend in cash terms so why cut? Signal to the market [4] of determination to sort out the finances after [5] 2 profit warnings? Prior to 2010, yield at a low 2.3 to 2.6% [6] (increasing), well covered at 3.1 to [7] 3.3 times (increasing).

Dividends resumed at a very modest level eg 2012 61% of [8] the 2009 level. Yield even lower and even better covered by underlying [9] eps.
Big problem has been difference between basic and underlying eps.

Totals 2007-2012	basic	23.13p	cover 1.23 x
	underlying	65.90p	cover 3.52 x [10]

The basic is what is actually available, the underlying is what "might have been" – so it is now time to deliver the underlying as the basic.

Considerations

Sufficient sustainable [11] earnings must be actually delivered over time to provide adequate cover (subjective [12] judgement, depending on volatility [13] and expected growth in earnings) meaning "no risk" of a further dividend cut from a [14] drop in earnings

Analysts estimates of eps range (high/low) = 14.3p to 18.72p for 2013 [15]

Also strength and stability in actual cash [16] flow available for dividend eg working capital and capex considerations – the cash conversion ratio issue. Depends on company's growth strategy. Over the 6 years cash before dividends = £842m as against earnings of £810m, [17] so no problems unless capex has been too low

Above all company needs to select and [18] communicate a sustainable dividend policy.

		re-geared	as is
Sustainable operating profit 2013		= 121m	121m
Assume interest if re-geared to reasonable level (5.0 times cover)		= (24m)	0
Tax @ 22%		= (21m) [19]	(27)
Profit after tax		= 76m	94m
No. shares 660.476m	eps	11.5p [20]	14.2
Assume comfortable dividend cover		2.4 times [21]	
given reasonably low risk business, strong cash flows, low growth	dps	4.79p [22]	(5% compound annual growth on the 2009 level)
ie dividends of £31.7m			

NB. The re-geared scenario above is very pessimistic – interest on new debt is included but spent on new acquisitions generating no extra earnings as yet.

	2013	2014
N.B. Analysts' forecasts of eps [23]	14.30/16.77/18.72 and	12.70/14.69/15.84

NB. Sustainable cash flow can [24] easily cover £32m of dividends. From above - £141m less tax-sheltered interest of 19m = £122m. [25] (or £109m with replacement capex.

So generated cash flow is available for investments and acquisitions, [26] supplemented by the new debt available, under the suggested gearing policy, [27]

Aim to grow dividends thereafter at, say, 5% p.a. [28]

Yield for a low growth "yield stock" 5% - 6%, based on dps 6.4p to 7.7p [29] and a price of 128p.

QUESTION 7 (30.6 mins, 17 marks)

7 a) Future treasury functions (10.8 mins, 6 marks)

(Marking scheme: Number of functions, coverage of key areas, quality of comments; evidence of translating "issues" (i.e. Q3 b) into treasury "functions".)

Question 3 b response provides a starting point for this part:

- Pensions
- Evaluating "Test for Value" businesses
- Bidding for UK/US government contracts in cutback conditions
- Funding for the business overall if UK/US services falter
- Insurance, eg of military assets
- Development of a pro-active entity-wide treasury function
- Ring fencing the US business
- Credit rating.

How to translate this into "functions"?

- Pensions and insurance, party as a legacy function
- Funding for the business overall; outward facing to financial markets and governments as well as inward facing
- The treasury-financial dimensions of project evaluation, project monitoring and value extraction as a joined-up long-term process in Global Services
- Participation in and oversight of the bidding process so that the out-turn adds to rather than destroys value for shareholders in the long-term; potential for the classic technical boffin – bean counter clash
- More conventional treasury risk management functions such as liquidity/cash management, currency, interest risk, commodity risk, trade finance, sovereign risk
- Corporate structure analysis, especially in the US for the ring fenced business, with possibility of separate non-recourse finance for it.

7 b) Future treasury structure (10.8 mins, 6 marks)

(Marking scheme: Evidence of ability to translate "functions" into an "organisation structure". For a pass, expect to see some acknowledgement of the ring-fence nature of the Service businesses and the more conventional nature of Global Products.)

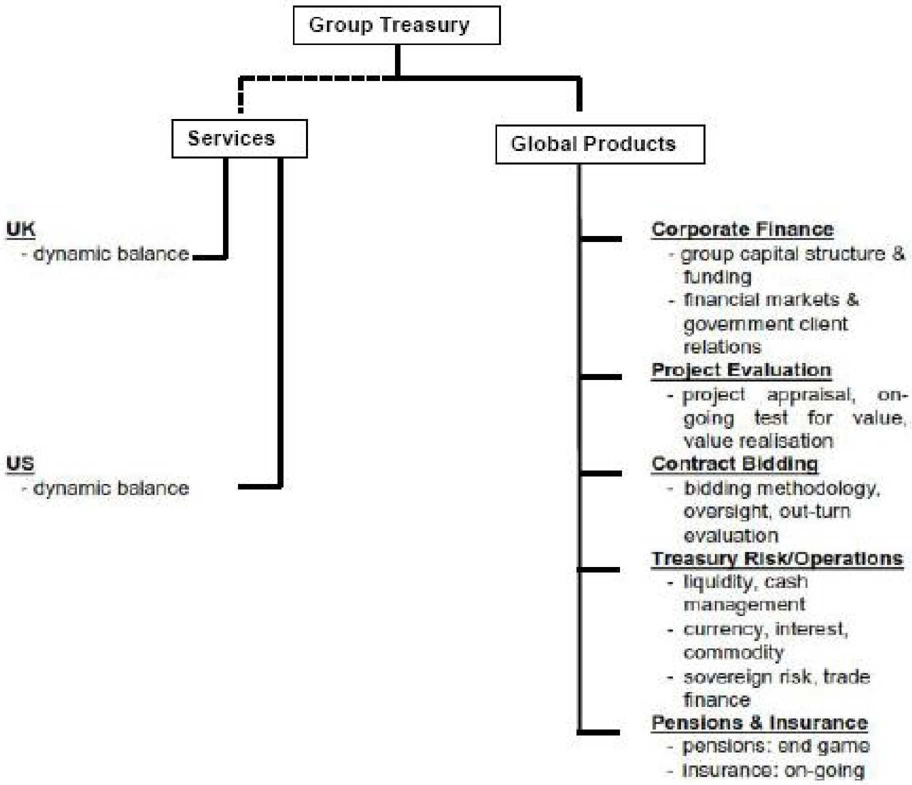
Treasury has existed for only three years, there is no current structure to displace, so this will depend very much on how the business develops. In fact there could be a pushback from management who may not see the relevance of treasury until a crisis develops somewhere.

Since recruitment in 2010 the Treasurer has been focussing on the key issues of pension deficit and stronger balance sheet. The potential for short to medium term revenue and profit growth is in Global Products, and possibly also the potential for greatest new treasury risks.

If this potential is realised then the firm may have in the medium term two partially ring-fenced static businesses (UK & US) and a non-ring-fenced low capital intensive high growth international business with conventional treasury management needs.

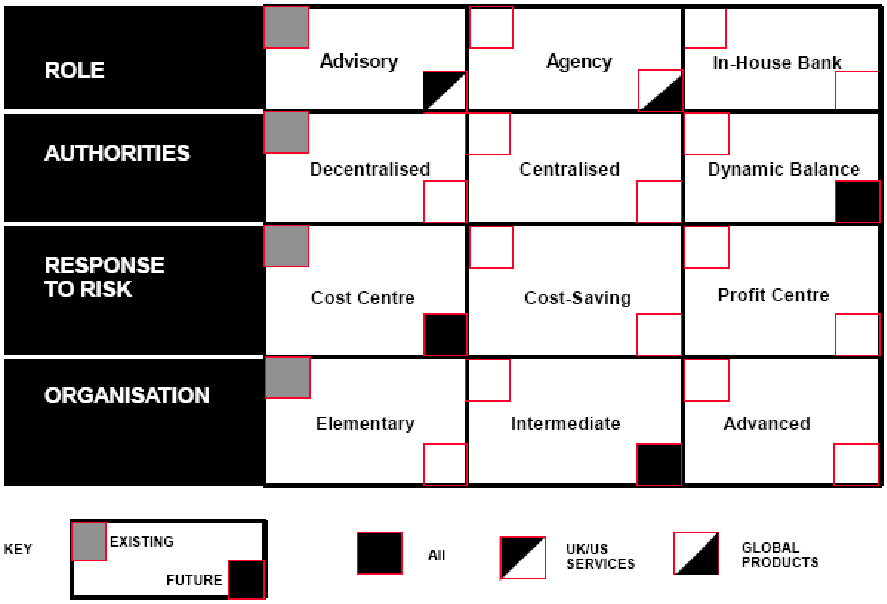
It may be that the legal structure of the Group needs to recognise the ring-fence issues in the UK and US (shades of the ICB/Vickers UK bank ring-fence). If so, then the treasury structure needs to recognise this too. Look at financing this business. Perhaps do this separately on a non-recourse basis. Argument may also apply to the UK defence division.
Ideally, the business needs a CEO/CFO who sees the long-term benefits in creating a consistent approach to financial performance and risk management across a group with a hi-tech culture, public sector/military orientation and in organisation terms formally siloed divisions to safeguard valid national security interests. For this to happen requires a group treasurer with strong political as well as financial skills, an understanding and respect for technology, persuasiveness and demonstrated unwavering support from top management.

So the structure could be a group treasury which has a direct control of Global Products but advises/sets policy for UK and US Services and delegates operations.



The Treasury Organisation matrix below indicates where things might be expected to evolve in the medium-term. It is more likely to be "evolution" rather than "revolution", in the absence of a shock event.

Treasury Organisation



7 c) Role in Bid Process **(9 mins, 5 marks)**

(Marking scheme: Number of points, quality of comments, coverage of both risks and their management. For a pass, probably 6-8 points but "coverage" and "quality" more significant.)

Risks

- Tender to contract price risks, eg currency, commodity, interest, staff costs
- Sovereign, counterparty payment risks
- Fixed price risk and cost escalation
- Performance penalties and related insurance type bonds (bid bonds, advance payment bonds, performance bonds). Wording of bonds, central/local provision, monitoring of outstandings and cancellations. Difficulty in US market where US banks cannot issue guarantees so business underwritten by insurance companies which may need LCs.

Bid Process

- Oversight re accuracy of pricing of bid and profitability
- Advice and provision of facilities for financing dimensions eg bonds, lc's
- Financial Audit of success rates and out-turn.

Overall, involvement in the bid timeline from the start so financial dimensions, particularly, costs, risks, profitability and benchmark returns, are fully recognised.

QUESTION 8 **(21.6 mins, 12 marks)**

Suggestions for Negotiation **(21.6 mins, 12 marks)**

(Marking scheme: Number of points, quality and comments, coverage of both deficit reduction and de-risking the scheme – most of all evidence of trying to build in a balance of benefits to both parties as a basis for negotiation. For a pass probably around 8-10 good points, but coverage and balance important.)

The negotiations are about making the scheme affordable and predictable for the company on the one hand and certain as to payment for the beneficiaries on the other. In other words, the Question is about devising changes which benefit both parties rather than providing a list of risk mitigants. For example:

In favour of the Scheme:

1. Improved insolvency protection
2. One-off lump sum cash payment from Company
3. Contingent asset in the form of a 20 year asset backed funding arrangement using one of the Company's freehold properties
4. De-risking of investment allocation, increasing percentage of defensive assets by next valuation to an agreed level
5. Liability hedging.

In favour of the Company:

1. Switch of index from RPI to CPI for revaluing pensions in payment (subject to trust deed and unions)
2. Closure of the Scheme to future accrual
3. Liability management exercise to reduce size of the Scheme by transferring out benefits (ETV and TPIE) ie something now instead of something more valuable but uncertain in the future
4. Agreement to facilitate a closer collaboration on investment strategy (including liability hedging).

In favour of Both:

1. Buy out from insurance company (but likely to be expensive up front).

Extra marks for picking up that the US will also have similar pension problems, and will be managed separately from the UK scheme, so solving one does not necessarily solve both pension schemes.

Notes:

<u>Insolvency Protection</u>: If the company becomes insolvent, although the existing fund is protected, the company may owe the fund money (as with Cognova) and the fund becomes an unsecured creditor. It is however possible to negotiate a

higher preferential status in anticipation of insolvency.

ETV is enhanced transfer value exercises – whereby deferred members are offered an incentive to transfer their benefits out of their scheme

TPIE is total pension increase exchange exercises – whereby deferred members over early retirement age are offered to transfer out of their scheme and receive an augmented immediate pension in return for giving up their future pension increases.

Examiner's Report

Advanced Diploma - April 2013

OVERALL SUMMARY

OVERVIEW

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

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

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

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

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

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

Corporate Finance and Funding Summary (both papers)

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

Treasury and Risk Management Summary (both papers)

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

Examiner's Report - Case Study Examination

Question 1 Assessment of the positive and negative aspects of the business and its environment, and the implications for valuation multiples.

Part 1a. This question produced some very good analysis with an average score of 58% and 14 passes. There was a lot to write about and most candidates provided pretty comprehensive analysis, but the 2 fails wrote very thin answers. This is a variation on a predictable, generic question so candidates are expected to have researched the non-financials well, in advance, and have plenty to write about.

Part 1b was about quantifying and interpreting trends in the company's valuation multiples, relative to peer companies, sectors and market indexes. The data were messy, as is the norm, but it was possible to identify that the company had more or less suffered in line with its sector. What many candidates do not seem to understand is the difference between share prices falling because of falling profits on the one hand and falling multiples on the other hand. The big issue in this case is the market's concern that levels of existing business and profits in the defence sector are coming under increasing pressure and that strategies for future growth are not totally convincing.

Question 2 Main changes in the financial profile over the last two years and the main factors driving them

A good average mark of 56% and 11 passes on this question, but the five fails ere very poor and thin answers. This generic question on the financials is predictable but it is important to answer the particular question as posed by the examiners. The biggest weakness of the poorer answers was a failure to relate the financials to the non-financials i.e. "the main factors driving them".

Question 3 (a) Divisional business characteristics and prospects, and (b) five most important future treasury finance issues

Both parts of the Question invited students to pull together their analyses of the business and its financials (Q1, Q2). Both parts were answered well, particularly the evergreen part (b) with 14 passes out of 16 students. Part (a) was included to draw attention to the quite different characteristics and prospects for Global products when compared with the traditional Services businesses (11 passes).

Responses to this Question had particular relevance for Question 7.

<u>Question 4</u> Calculation of sustainable cash flow, valuation and comment

This question on core material was very well answered (66% average mark and 13 passes out of 16). A few candidates, however, did not have a reliable grasp of the methodology and, although most candidates produced plausible numbers the detailed calculations by some are mechanical and suspect e.g.1. simply using a five-year average even when the recent figures are very different from the earlier ones e.g.2. using last year's figures all multiplied by a constant inflation or growth factor. The objective is to use one's judgement as to what is a sustainable figure for each cash flow item, each considered separately in relation to the particular pattern of the last few years. On the valuation question some lost marks by not drawing any conclusions about their value and the company's actual market value – surprising in that the answers to the previous three generic questions lead into the issue of the apparent under-valuation of the company and the reasons for that.

<u>Question</u> 5 Recommend a gearing policy for the company.

A 66% average mark and 13 passes again on this question! I gave two candidates 100% and two candidates 29%. The general standard was good, but with varying proportions of quantification and discussion of the principals involved, and the best answers had both in equal measure. The best also built on their calculations of sustainable cash flow from question 4.

<u>Question 6</u> Discuss dividend policy principles and recommend a dividend policy given the company's past dividend record. Related to question 5.

A 50% average mark and only a 50% pass rate – the lowest on this paper! But one 100% mark and one 21% mark. The comment about balance or lack of it between words and numbers also applies here, with poor or no quantification being the bigger weakness. The earlier work on sustainable cash flow and policy gearing level are crucial here if one is to recommend an actual dividend payment, based on a view of what is an appropriate level of dividend cover.

<u>Question 7</u> Future Functions and Organisational Structure for Treasury, Including Treasury Involvement in the Contract Bidding Process.

Three-part 17 mark Question, requiring a good grasp of the overall business, its component parts and their future opportunities and challenges. Throughout responses needed to reflect the (partially) ring-fenced nature of Services and the more normal circumstances of Global Products. More perceptive students also recognised that introducing a group-wide treasury function when very little has existed beforehand in such a large and diverse organisation would be an evolutionary process. The first part of the Question was about translating the major issues already identified at Q3.b. into recognisable functions. The second part was about creating an organisational structure to execute these functions, giving a general indication of overall role, accountability/control, response to risk and complexity of structure. The third part focussed on contract bidding, an area of particular significance for all businesses.

All three parts of this testing Question were well answered, with a pass rate overall of 13/16 and by part 14/16, 11/16, 13/16.

<u>Question 8</u> Proposals for negotiating further changes to the Pension Scheme

Cognova migrated to the private sector with a defined benefit pension scheme which because of its unsustainability had already been renegotiated once to pre-empt the collapse of the business. The objectives this time are to further reduce the deficit and de-risk the scheme. The challenge in the Question is to determine a set of proposals as a basis for negotiation which of necessity must offer some benefits to both parties in terms of reducing the burden of the scheme on the company and providing more certainty and sustainability to scheme members.

So this Question was not just about listing dbp risks and mitigation but also about establishing a balanced starting point for negotiations. Perhaps because this Question came last, some answers were much too brief to earn 12 marks so the pass rate fell to 8/16.

Summary of Questions 1, 2, 4, 5 and 6, Case Exam (58 marks) – Corporate Finance and Funding.

Overall 13/16 passes, average mark 58.6%, range 40% to 76%, with four candidates in the 70s – an excellent performance, with some genuinely impressive work.

Summary of Questions 3 ,7 and 8, Case Exam (42 marks) – Treasury & Risk Management

Overall 14/16 passes, average mark 56.6%, range 44% to 71%, excellent performance and noticeably good pick up on nuances of the businesses.