TREASURY, RISK AND FINANCE PROFESSIONALS

ACT

Examination Paper, Solutions and Examiner's report

Paper: MCT Case Study Exam

April 2009

MCT Case Study Background information based on TPT plc

CASE STUDY : TPT plc

SUMMARY BACKGROUND

- Metallurgical services to manufacturers providing outsourced capabilities in:

  - thermal processing (modifying physical structure of metal components)
  - testing and certifying metal components and other materials
  - primarily to aerospace, power generation, automotive and oil and gas sectors
  - > 30,000 customers
  - 2007 turnover of £650m, largest customer £4m
  - > 30 countries
  - only 10% in UK

- Virtually no cross border trade - serving local manufacturers from local factories.

- Historically decentralised business, small head office, a roll up of small acquisitions.

- No shared services, often not even within countries.

- Historic focus on the P&L.

- Treasury function established in 2005.

THE BUSINESS

It is November 2008. TPT plc is a market leader in providing outsourced heat treatment and testing services for engineering manufacturing industries. The company provides these metallurgical services through two divisions: Thermal Processing and Testing. The majority of engineering manufacturers maintain in-house processing capacity for heat treatment and testing. TPT aims to provide a commercial, outsourced alternative by processing customer-owned parts more economically and efficiently or to a higher technical specification, but it has to deliver products and services to standards on quality and delivery time.

The two divisions share the same business strategy of focusing on niche services that are perceived as specialist but non-core by engineering component manufacturers. Both businesses involve sophisticated, science-based technology.

Major customers include the aerospace, automotive, construction, energy, oil & gas, tooling, and defence industries, often the high-value, higher-tech. end of these businesses. The development and use of new materials and new techniques is typical of these industries, eg for fuel injection - turbine blades, medical engineering.

These essential services which TPT provides improve the wear resistance, strength and performance of metals and provide a wide array of validation, quality control, and specification compliance testing. The two divisions TPT operates have synergistic qualities that naturally lead to good cross-selling opportunities, although this factor is reducing as the testing business has expanded and diversified. Both businesses involve sophisticated, science-based technology.

To satisfy the need for rapid turnaround and minimal logistics costs, TPT locates its facilities in areas of dense manufacturing activity and has 320 facilities and laboratories in 35 countries. In most cases where TPT has entered into strategic partnerships to provide individual customer-focused facilities, utilisation is improved by infilling capacity with work from other engineering businesses in the area.

PRODUCT TECHNOLOGY

The business uses two distinct technologies:

• THERMAL PROCESSING:	- using heat to change the characteristics (eg durability) or workability of materials.
• TESTING:	- measuring, inspecting and certifying the quality and reliability of materials and components, including the types of materials which are thermally processed.

Thermal Processing Technology can be sub-divided into Heat Treatment Technology and Hot Isostatic Pressing Technology

THERMAL PROCESSING

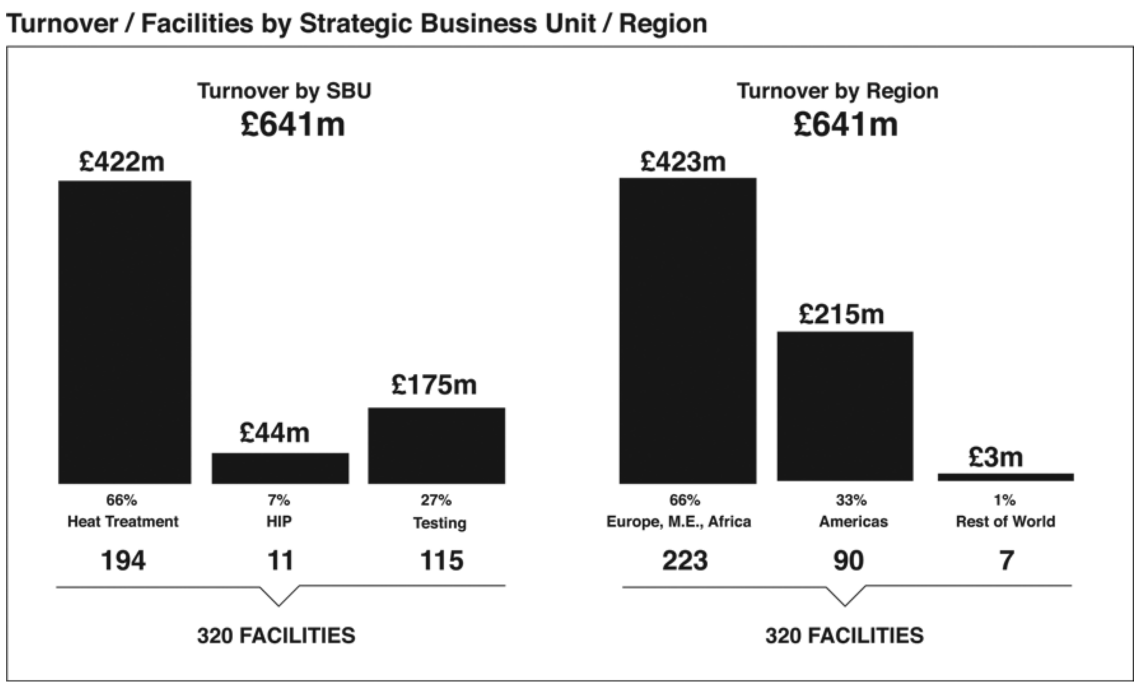
• Heat Treatment, Metal Joining & Coating:	- heat treatment of metals for hardening, tempering, joining is an age-old process eg as practiced by blacksmiths. TPT plc makes use of sophisticated science-based technology and highly controllable processes to improve the mechanical strength and durability of ferrous and non-ferrous alloys for extreme engineering applications eg aero-engine turbine blades.
• Hot Isostatic Pressing (HIP):	- uses high temperature and pressure to achieve structural changes in metals and other materials. For example, HIP technology enables critical castings to be densified, powdered metal products to be 'near-net-shape' fabricated and unusual material combinations to be created.

Testing addresses four areas: Materials, Health Sciences, Engineering and Technology, Environment.

TESTING

• Testing:	- TPT plc majors on Materials Testing eg mechanical, metallurgical, physical, chemical and radiographic testing of ferrous and non-ferrous alloys, plastics, oils. - Testing also provides services to Health Sciences (food, pharmaceutical products), Engineering and Technology (airframe and engine material, corrosion testing), Environmental (hazardous materials, soil, water, chimney emissions).

PRODUCT-MARKET DATA



Customer Base

	Sector %	Cumulative %
Automotive	24	24
- Cars & Light Truck	*19*	
- Heavy Truck & Bus	*5*	
Aerospace/Defence	20	44
Construction, Agricultural, Railways & Marine	18	62
Tooling	7	69
Oil & Gas	7	76
Medical, Health, Environment	7	83
Consumer Products	6	89
Power Generation	5	94
Electronics & Telecoms	3	97
Miscellaneous (eg pulp & paper, nuclear)	3	100

The location of facilities is concentrated in half a dozen countries:

Country	**USA**	**UK**	**France**	**Canada**	**Germany**	**Sweden**	**Other**
Cumulative %	23	44	57	65	72	79	100

ORGANISATION

The Thermal Processing division is organised on a geographical basis with a separate opco in each country of operation.

The Testing division is organised by type of testing ie Materials, Engineering, Health Sciences, Environmental. Within each country where Testing operates each type of testing will have its own opco.

The Treasury function, created in 2005, consists of the Group Treasurer who was appointed in early 2005 and the Assistant Treasurer, appointed shortly thereafter. Prior to 2005, treasury related activities were undertaken as necessary by the group Finance Director and Chief Accountant.

Structure

There are a large number of small operating units sited close to customer plants.

Historically small bolt-on acquisitions have accounted for around half of annual growth. There is a high level of operational gearing (see Financials and Operational Gearing - 2007 on Page 8).

So the management of the business has tended to be de-centralised eg in terms of pricing, cash management, energy hedging, with local site managers exercising considerable discretion in order to manage the local P & L account.

One of the first tasks undertaken by the new Treasury team was to rationalise the loan documentation prior to a refinance in 2005.

MARKET POSITION & STRATEGY

Market Position

TPT is the largest of only a few global, medium-sized players in a very fragmented heat treatment market. TPT is the only provider with facilities in both Europe and North America. The competition primarily consists of manufacturers' own in-house heat treatment facilities and smaller, often family-controlled, companies with a regional or local presence. The nearest commercial competitor in Heat Treatment is the material technology division of Aalberts Industries (Netherlands) whose footprint is mainly in Europe and whose sales are less than 60% that of TPT in Europe and less than 30% worldwide.

In HIP, TPT controls approximately two-thirds of the capacity in North America and Europe.

Testing is an even more fragmented market with only a few medium-sized independent providers. Again the bulk of the competition comes from manufacturers' own in-house facilities.

TPT has a diverse customer base of over 30,000 customers and is not reliant on any one engineering sub sector, end market, or client. The largest customer represents less than 4% of total Group revenue and the top ten customers account for 14%. TPT's diverse client base provides the Group with balanced demand from a number of sectors, as shown earlier.

Strategy

TPT's stated strategy is:

> TPT will project itself as the subcontractor of choice to the engineering manufacturing industry.
>
> The conversion of in-house to contracting-out (outsourcing) is seen as the main source of organic growth, as companies in more and more markets seek to rationalise their costs and activities.
>
> TPT will invest in new geographical markets by acquisition or by forming strategic partnerships with key customers or others, where risk is mitigated by a suitable guaranteed base load and where technical competence, quality and service are key. The main focus will be to fill in gaps in the existing footprint and in contiguous geographies. TPT will exit processes and/or markets which are not sustainable on a long-term basis.

TPT's strategy for Thermal Processing has been three fold:

- Grow the proportion of sales that comes from long-term outsourcing contracts.
- To follow Western manufacturers moving to Eastern Europe and Asia.
- To acquire specialised heat treatment plants in US and Europe (and dispose of underperforming and commodity-orientated facilities as required).

TPT's strategy for Testing has been similar to that for Thermal Processing:

- Grow the proportion of sales that comes from long-term outsourcing contracts.
- Acquire laboratories with exposure to more regulated markets such as pharmaceuticals, food and water.
- Expand in Continental Europe, North America and Asia.

However the advent of a new Chairman in early 2008 has resulted in a review of strategy which has questioned the benefits of keeping the Testing business.

FINANCIALS AND OPERATIONAL GEARING (2001 - 2007)

See Exhibits A to E for a more detailed analysis.

Financials

	2001	2002	2003	2004	2005	2006	2007
Sales Revenue	479.4	440.1	448.4	426.4	470.9	558.6	640.5
Operating Profit	72.1	22.4	25.1	55.5	61.0	58.8	78.8
EBIT	69.4	22.4	(1.4)	54.8	60.0	56.7	76.3
Net Interest Payable	(13.9)	(11.2)	(9.7)	(8.1)	(7.3)	(10.1)	(7.8)
Profit/(Loss) before Tax	55.5	11.2	(11.1)	46.7	52.7	46.6	68.5
Earnings available for shareholders	37.4	6.3	(17.4)	28.2	40.7	43.1	52.8
Total Assets	832.5	827.6	773.2	858.4	893.4	889.4	999.9
Cash	52.3	43.5	35.2	142.1	124.8	34.7	37.7
Short Debt	89.5	95.3	16.3	8.5	7.8	5.8	10.7
Long Debt	204.8	182.4	229.2	223.9	225.5	189.8	225.2
Net Debt	242.0	234.2	210.3	90.3	108.5	160.9	198.2
Shareholders' Funds	390.9	390.2	371.8	442.0	433.5	453.9	496.6

At y/e 2007 market cap was £594m. The average number of employees was 11,008.

Operational Gearing

The business is characterised by significant operational gearing, with a high degree of fixed costs. The approximate cost base can be seen below:

	Heat Treatment	HIP	Testing	Total Group (incl. central costs)	% Fixed in Short Term
Labour	43%	30%	50%	44%	80%
Production overhead	7%	4%	5%	7%	100%
Energy	11%	6%	2%	9%	50%
Consumables	6%	9%	8%	6%	0%
Dep'n/Amort'n/Maintenance	12%	17%	7%	13%	100%
Sales, General & Admin	7%	7%	9%	7%	100%
Other	1%	0%	0%	0%	100%
Operating Profit Margin	**13%**	**27%**	**19%**	**14%**	**77%**
	100%	100%	100%	100%	

FINANCIALS (2007)

Bank Overdrafts, Loans and Leasing.

	2007 £m	**2008 (H1) £m**
Bank overdrafts	3.4	
Loans	227.4	
	230.8	273.4
Under 1 year	9.0	15.6
1-2 years	0.8	
3-5 years	175.5	257.8
Over 5 years	45.5	
	230.8	273.4
Cash & equivalent	(37.7)	(38.1)
Leasing	5.1	4.0
Net debt	198.2	239.3

At y/e 2007 the other principal features of the Group's borrowings are as follows:

(i) Bank overdrafts are repayable on demand. No overdrafts are secured.

(ii) The Group has three principal loans which are secured by upstream guarantees by subsidiaries:

(a) Drawings of £175.3m (2006: £140.3m) under a Revolving Credit Facility of £225m. This unsecured facility commenced on 29 July 2005 for a period of five years. The multi-currency drawings under this facility carry an interest rate of between 0.50% and 0.75% above LIBOR (the margin at 31 December 2007 was 0.5%).

(b) Drawings of £44.1m (2006: £43.1m) under a Revolving Credit Facility of Eur125m. This unsecured facility commenced on 31 July 2006 for a period of seven years. The Euro drawings under this facility carry an interest rate of between 0.80% and 1.10% above LIBOR (the margin at 31 December 2007 was 0.8%).

(c) Letters of credit drawings of £4.6m (2006: £Nil) under a Revolving Credit and Letter of Credit Facility of $20m. This unsecured facility commenced on 17 August 2007 for a period of three years. The US Dollar drawings and Letter of Credit fees under this facility carry a margin/fee of between 0.50% and 0.75% above LIBOR (the margin/fee at 31 December 2007 was 0.5%).

At 31 December 2007 the Group had available £102.9m (2006: £125.8m) of undrawn committed borrowing facilities.

RECENT SHARE PRICES

Average number of shares in first half of 2008 = 318,606,650 (pence).

	J	F	M	A	M	J	J	A	S	O	N
High	190	203	196	246	246	237	213	233	233	176	149
Low	145	178	173	184	228	200	167	198	151	111	92
Average	168	191	185	215	237	219	190	216	192	144	121

Profit and Loss by major SBU (2007), as summarised in the 2007 accounts.

	Heat Treatment & HIP	Testing	Head Office & eliminations	Total
Revenue Operating profit	465.2 77.0	176.1 21.0	(0.8) (6.7)	640.5 91.3
Exceptional items	(5.5)	(5.3)	(1.7)	(12.5)
EBIT Depreciation & amortisation	71.5 37.4	15.7 8.6	(8.4) 0.2	78.8 46.2
EBITDA	108.9	24.3	(8.2)	125.0
EBITDA pre-exceps	114.4	29.6	(6.5)	137.5

Financial Data

Financial data for full years 2003 - 2007 and interim 2008 follows:

Exhibit A - Financial and Credit Profile
Exhibit B - Cash Flow Summary
Exhibit C - Share Price Data & Equity Analysis
Exhibit D - Income Statement
Exhibit E - Balance Sheet

Exhibit A

Financial Analysis Model
TPT plc

Financial Profile

Accounts date	2003	2004	2005	2006	2007	2008 annualised
Months	**12**	**12**	**12**	**12**	**12**	**6**
Annual % Growth Rates						
Sales Growth	**1.9%**	**(4.9%)**	**10.4%**	**18.6%**	**14.7%**	**19.5%**
Operating Profit Growth	12.1%	121.1%	9.9%	(3.6%)	34.0%	28.9%
Net Income / Earnings Growth (pre Goodwill)	44.4%	431.9%	(3.5%)	35.8%	3.0%	6.0%
Profitability and Cost Structure						
Gross Profit % Sales	**29.7%**	**33.3%**	**33.7%**	**34.5%**	**34.7%**	**34.5%**
Overheads % Sales	**20.4%**	**17.7%**	**20.2%**	**20.8%**	**20.9%**	**20.8%**
Operating Profit % Sales	5.6%	13.0%	13.0%	10.5%	12.3%	13.3%
Personnel Costs % Sales	45.1%	47.2%	44.3%	44.6%	44.5%	
Depreciation % Sales	10.2%	10.2%	8.6%	8.0%	7.7%	7.6%
R&D Costs% Sales						
EBIT % Capital Employed (pre-exceptionals)	**4.3%**	**12.9%**	**12.2%**	**12.5%**	**12.8%**	**14.2%**
Pre-tax Target Rate of Return (market values)	10.1%	11.6%	11.6%	10.9%	11.3%	20.6%
EBIT % Market Enterprise Value	4.2%	12.2%	8.9%	7.8%	8.8%	12.4%
Asset Utilisation / Capital Intensity						
Sales / Total Assets	**0.58**	**0.50**	**0.53**	**0.63**	**0.64**	**0.69**
Stocks % Sales	4.1%	2.1%	2.5%	2.5%	3.1%	2.8%
Debtors % Sales	22.9%	25.4%	25.6%	26.7%	26.9%	27.0%
Creditors % Sales	21.0%	21.1%	21.0%	20.9%	20.5%	19.2%
Net Working Assets % Sales	5.9%	6.4%	7.1%	8.3%	9.5%	10.6%
Tangible Fixed Assets % Sales	107%	100%	94%	80%	79%	71%
Depreciable Assets % Sales	73%	68%	65%	57%	56%	48%
Net Capex % Annual Depreciation	84%	78%	107%	122%	134%	122%
Average Age of Depreciable Assets (years)	6.70	6.19	7.55	7.80	8.10	7.05
Tax Ratios						
Effective Interest Rate [P&L] %	5.4%	5.4%	5.4%	6.3%	5.1%	5.8%
Effective Tax Rate [P&L] %	(55.9%)	19.9%	22.4%	5.8%	21.5%	24.6%
Cash Tax Rate [Cash Flow] %	(44.1%)	11.6%	15.7%	18.0%	23.4%	19.9%

Equity Analysis Model
TPT plc

Capital Structure & Credit Status	2003	2004	2005	2006	2007	2008
Gearing & Leverage						
Leverage: (Net Debt % Capital Employed)	**36%**	**18%**	**20%**	**26%**	**29%**	**32%**
Net Debt % Enterprise Value	35%	17%	15%	16%	20%	28%
Interest Cover Ratios						
Interest Cover: (EBITA / Net Interest Paid)	**2.6**	**8.1**	**9.0**	**7.6**	**11.4**	**7.3**
Cash Flow before Interest / Cash Net Interest	2.4	5.9	3.5	2.6	2.1	1.1
Debt Repayment Ability (Years)						
Net Debt / Retained Profit plus Amortisation	**oo**	**3.1**	**4.1**	**3.9**	**5.0**	**4.7**
Net Debt / EBITDA	4.7	0.9	1.1	1.6	1.6	1.5

Exhibit B

Financial Analysis Model
TPT plc
Cash Flow Summary

	2003	2004	2005	2006	2007	2008	Period Total	Period Total
Accounts date	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**Period**	**Period**
Currency / units	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**Total**	**Total**
Audit / man / fcst	**audit**	**audit**	**audit**	**audit**	**audit**	**interim**	**2003-**	**2003-**
Months	**12**	**12**	**12**	**12**	**12**	**6**	**2007**	**2008**
Operating Cash Flows								
Operating Profit	25.1	55.5	61.0	58.8	78.8	50.8	279.2	330.0
Other Non-cash & Exceptional Items	12.7	(1.1)	5.5	23.0	15.6	(2.1)	55.7	53.6
Investment Income					0.7		0.7	0.7
(Increase) / Decrease in Net Working Assets	0.4	8.1	(3.0)	(9.0)	(20.4)	(17.3)	(23.9)	(41.2)
Tangible Asset Depreciation	45.7	43.4	40.5	44.8	49.3	29.2	223.7	252.9
Net Capital Expenditure	(38.4)	(33.9)	(43.2)	(54.7)	(65.9)	(35.5)	(236.1)	(271.6)
(Tax Paid	(4.9)	(5.4)	(8.3)	(8.4)	(16.0)	(8.9)	(43.0)	(51.9)
(Dividends Paid)	(15.7)	(15.7)	(19.6)	(20.6)	(22.7)	(9.0)	(94.3)	(103.3)
(Net Interest Paid)	(10.2)	(8.7)	(9.5)	(12.8)	(9.1)	(6.7)	(50.3)	(57.0)
Internal Cash Flow	**14.7**	**42.2**	**23.4**	**21.1**	**10.3**	**0.5**	**111.7**	**112.2**
Financing Cash Flows								
(Acquisitions),Disposals,(Investments)	1.4	10.0	(29.2)	(86.9)	(33.9)	(33.3)	(138.6)	(171.9)
Increase / (Decrease) in Share Capital	0.2	62.0	(1.4)	2.0	(5.5)	0.1	57.3	57.4
Increase / (Decrease) in Debt	(22.2)	(7.3)	(10.1)	(26.3)	32.1	33.1	(33.8)	(0.7)
(Increase) / Decrease in Cash	5.9	(106.9)	17.3	90.1	(3.0)	(0.4)	3.4	3.0
Net Financing Cash Flow	**(14.7)**	**(42.2)**	**(23.4)**	**(21.1)**	**(10.3)**	**(0.5)**	**(111.7)**	**(112.2)**
Balance check	0	(0)	-	(0)	(0)	(0)	(0)	(0)

EBITDA	**44**	**98**	**101**	**102**	**126**	**81**	551	1,059
Cash Profit	**38**	**54**	**67**	**82**	**95**	**49**	384	731
Cash Flow Before Interest	**25**	**51**	**33**	**34**	**19**	**7**	169	314

Exhibit C

Financial Analysis Model
TPT plc

Share Price Data

Accounts date	2003	2004	2005	2006	2007	2008
Currency / units	£ mill	£ mill	£ mill	£ mill	£ mill	£ mill
Months #	12	12	12	12	12	6
Number of Shares & Eps						
Adjusted Earnings per Share (pence or equivalent)	9.70	9.30	12.70	13.40	16.60	10.30
Dividends Per Share (pence or equivalent)	6.10	6.10	6.40	7.00	8.00	2.95
Average number of common shares	256.116	304.606	319.720	320.463	317.935	318.607
Average number of preference shares						
Share Prices						
Common Share Price - Low (pounds or equivalent)	1.14	1.24	1.54	2.13	1.79	1.45
Common Share Price - High (pounds or equivalent)	1.85	1.71	2.39	3.01	3.27	2.46
Common Share Price - Average	1.49	1.48	1.97	2.57	2.53	1.96
Preference Share Price - Low (pounds or equivalent)						
Preference Share Price - High (pounds or equivalent)						
Preference Share Price - Average						
Risk rating						
Variability %	51	48	43	39	31	31
Beta (actual or estimate)	1.21	1.23	1.30	1.18	1.20	1.19
Assumed Market Risk premium	**4.50**	**4.50**	**4.50**	**4.50**	**4.50**	**4.50**
Actual / Assumed 10-year Gilt spread over LIBOR	**0.86**	**0.30**	**(0.28)**	**(0.30)**	**(0.95)**	**(0.95)**
Market Capitalisation						
Market Capitalisation - Common Stock	382	449	629	824	804	624
Market Capitalisation - Preference Stock	-	-	-	-	-	-
Market Capitalisation - Total	382	449	629	824	804	624
Minorities	1	1	1	4	7	7
Net Debt	210	90	109	161	198	239
Enterprise value [EV]	**593**	**541**	**739**	**989**	**1,009**	**870**

Equity Analysis

	2003	2004	2005	2006	2007	2008
Equity Ratios						
Eps Growth %	(8.5%)	(4.1%)	36.6%	5.5%	23.9%	24.1%
P/E Ratio	15.4	15.9	15.5	19.2	15.2	9.5
Market / Book Ratio	1.03	1.07	1.45	1.83	1.64	1.22
Dividend Cover	1.59	1.52	1.98	1.91	2.08	3.49
Dividend Yield %	4.1%	4.1%	3.3%	2.7%	3.2%	3.0%
Total Return to Shareholders %		3.0%	36.6%	33.5%	1.5%	(39.1%)
EV Valuation Multiples						
EV / Sales	1.32	1.27	1.57	1.77	1.57	1.14
EV / Total Assets	0.77	0.63	0.83	1.11	1.01	0.79
EV / EBITA	23.64	8.19	11.19	12.85	11.36	8.09
EV / EBITDA	13.4	5.5	7.3	9.7	8.0	5.4
EV / Sustainable Free Cash Flow	26.7	15.2	17.0	17.6	15.8	14.4
EV / Staff Costs	2.9	2.7	3.5	4.0	3.5	

Exhibit D

Financial Analysis Model
TPT plc
<u>Income Statement</u>

		2003	2004	2005	2006	2007	2008
	Accounts date	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
	Currency / units	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**£ mill**
	Audit / man / fcst	**audit**	**audit**	**audit**	**audit**	**audit**	**interim**
	Months	**12**	**12**	**12**	**12**	**12**	**6**
Sales Revenue		448.4	426.4	470.9	558.6	640.5	382.6
a	(Cost of Sales)	(315.4)	(284.6)	(312.1)	(366.0)	(418.1)	(250.6)
a	**Gross Profit**	**133.0**	**141.8**	**158.8**	**192.6**	**222.4**	**132.0**
a	(Total Overheads)	(91.3)	(75.4)	(95.1)	(116.4)	(133.8)	(79.5)
a	Other Operating (Costs) & Revenues		0.3	3.3	2.9	2.7	
a	Exceptionals etc. +/-	(7.5)	(11.2)		(13.1)	2.0	(1.6)
a	(Amortisation / Impairment of Goodwill)	(9.1)		(6.0)	(7.2)	(14.5)	(0.1)
b	Cost of Materials, Other External Purchases						
b	**Value Added**						
b	(Personnel Costs)	(202.2)	(201.2)	(208.5)	(249.4)	(285.3)	
b	(Depreciation & Impairment)	(45.7)	(43.4)	(40.5)	(44.8)	(49.3)	(29.2)
b	(R&D Costs)						
Operating Profit		**25.1**	**55.5**	**61.0**	**58.8**	**78.8**	**50.8**
Non-operating Income & Expenditure							
	Exceptionals etc.	(26.5)					
	(Amortisation of Goodwill)						
Financial Income							
	Income from Investments, Participations etc						1.3
	Other Financial Income & Expenditure		(0.7)	(1.0)	(2.1)	(2.5)	
EBIT		**(1.4)**	**54.8**	**60.0**	**56.7**	**76.3**	**52.1**
Interest Received & Paid							
	Interest Received	3.5	4.7	5.2	3.4	3.3	
	(Gross Interest Paid)	(13.2)	(12.8)	(12.5)	(13.5)	(11.1)	(7.4)
Profit before Tax		**(11.1)**	**46.7**	**52.7**	**46.6**	**68.5**	**44.7**
	(Current tax)	(6.2)	(9.3)	(11.8)	(2.7)	(14.7)	(11.0)
	(Deferred tax)						
Profit after Tax		**(17.3)**	**37.4**	**40.9**	**43.9**	**53.8**	**33.7**
	Extraordinaries, (amortisation of goodwill) etc		(9.0)				
	Minority Interests	(0.1)	(0.2)	(0.2)	(0.8)	(1.0)	(0.8)
	(Preference Dividends)						
Net Income / Earnings for Ordinary Shareholders		**(17.4)**	**28.2**	**40.7**	**43.1**	**52.8**	**32.9**
	(Ordinary Dividends)	(15.6)	(19.6)	(20.5)	(22.6)	(25.8)	(9.4)
Retained Profit for Year		**(33.0)**	**8.6**	**20.2**	**20.5**	**27.0**	**23.5**

Exhibit E

Financial Analysis Model
TPT plc
Balance Sheet

	Historical Data					
Accounts date	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Currency / units	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**£ mill**
Audit / man / fcst	**audit**	**audit**	**audit**	**audit**	**audit**	**interim**
ASSETS						
Fixed Assets						
Intangible Fixed Assets	137.5	141.1	158.1	212.3	227.3	254.8
Tangible Fixed Assets						
Property, Land & Buildings - net	151.5	136.0	134.5	132.5	149.8	169.7
Other Fixed Assets - net	327.2	289.9	308.4	315.9	359.1	370.0
Financial Fixed Assets (Long-term Investments)	0.9	32.0	34.8	26.4	31.4	40.4
Medium-term Trade-related Assets		6.1	6.1	11.3	13.3	13.1
Total Fixed Assets	**617.1**	**605.1**	**641.9**	**698.4**	**780.9**	**848.0**
Current Assets						
Stocks, Inventories, Work in Progress	18.2	8.9	11.9	13.7	19.8	21.5
Debtors, Prepayments, Receivables etc.	102.7	102.3	114.5	138.1	159.3	193.6
Cash and Short-term Investments	35.2	142.1	124.8	34.7	37.7	38.1
Other Current Assets			0.3	4.5	2.2	3.8
Total Current Assets	**156.1**	**253.3**	**251.5**	**191.0**	**219.0**	**257.0**
Total Assets	**773.2**	**858.4**	**893.4**	**889.4**	**999.9**	**1,105.0**
LIABILITIES						
Current Liabilities (Creditors < 1 Year)						
Creditors, Accruals, Payables etc.	84.0	86.9	97.2	111.1	124.5	138.9
Short-term Debt	16.3	8.5	7.8	5.8	10.7	16.6
Corporation Tax Payable	3.2	2.5	3.3	6.7	13.0	16.5
Dividend Payable & Minorities	15.6	7.2	7.5	8.0	8.8	16.7
Other Current Liabilities		1.5	2.3	2.7	10.9	15.7
Total Current Liabilities	**119.1**	**106.6**	**118.1**	**134.3**	**167.9**	**204.4**
Non-current Liabilities (Creditors > 1 Year)						
Medium & Long-term Debt	229.2	223.9	225.5	189.8	225.2	260.8
Medium-term Trade-related Liabilities	10.3	2.9	1.8	5.7	6.8	8.0
Deferred Tax, Pension & Other Long-term Provisions	42.8	103.0	114.5	105.7	103.4	114.6
Total Non-current Liabilities	**282.3**	**329.8**	**341.8**	**301.2**	**335.4**	**383.4**
Share Capital & Reserves						
Issued Share Capital	25.7	32.1	32.1	32.2	32.4	32.4
Share Premium Account / Treasury Shares	244.4	300.0	300.3	302.1	305.0	305.1
Revaluation Reserve						
Other Reserves	14.2	16.9	10.3	5.8	11.9	21.9
Retained Earnings / Profit and Loss	86.6	72.0	89.4	109.4	140.7	150.6
Total Capital and Reserves	**370.9**	**421.0**	**432.1**	**449.5**	**490.0**	**510.0**
Minority Interests	0.9	1.0	1.4	4.4	6.6	7.2
Total Shareholders' Funds	**371.8**	**422.0**	**433.5**	**453.9**	**496.6**	**517.2**

Accumulated depreciation	306.0	268.6	305.6	349.4	399.4	411.5
Average Cost of Debt %	5.20%	5.20%	4.40%	5.10%	5.10%	5.10%

MCT Case Study Exam paper

You are required to answer ALL 8 questions.
(All questions relate to the TPT plc Case Study)

QUESTION 1 **[Total 12 marks]**

Required:

(a) How does a "thermal processing" business build and maintain competitive advantage? Use the relevant concepts of "non-financial" analysis in arriving at, and in support of, your answer.

(8 marks)

(b) How cyclical is the business and what steps can be taken to ensure survival in the current recessionary climate, bearing in mind your answers to part (a)?

(4 marks)

QUESTION 2 **[Total 13 marks]**

Required:

(a) Carry out a full analysis of the company's cash-flow performance and management over the period 2003 to 2007. In particular assess the adequacy or otherwise of internally generated cash flows to meet all operational, investment and acquisition requirements as well as servicing of capital. Comment also on the use of external funding.

(9 marks)

(b) Comment on any particular trends or changes over the period.

(4 marks)

QUESTION 3 **[Total 11 marks]**

Over the period from 2003 to 2007 group sales increased by 43% while equity market capitalisation more than doubled.

Required:

(a) Explain how extra value was created for shareholders, between 2003 and 2007, through financial management of the income statement and the balance sheet.

(6 marks)

(b) To what extent has the equity market's reaction of the company's financial performance and strategic management also contributed to the increase in shareholder value?

(5 marks)

QUESTION 4 **[Total 11 marks]**

In early 2008 the company decided, in principle, to dispose of the Testing business, which represented 27% of the 2007 Group turnover (£175m) and 22% of Group EBITDA (£31m).

The business was eventually sold, debt free, to a global private equity firm for £417m (£380m net of costs) in October 2008 (announced on 28th August). The company planned to return £260m of cash to shareholders following the disposal. Sales and profit levels for Testing were expected to be much the same in 2008 as in 2007.

Consensus sales and pre-tax profit forecasts for the total Group including Testing, based on the 2008 Interim, were as follows;

	2008	2009	2010
Sales	£726m	£700m	£675m
Pre-tax profit	£86.2m	£80.5m	£81.3m
EBITDA	£156m	£145m	-

with net interest around £8m from 2008 onwards.

Over the period 1993 - 2008 sector multiples have varied as follows:

EV/EBITDA	7.6 to 17.5 but now 4.5
EV/Sales	0.78 to 1.50 but now 0.5
PE Ratio in 2008	Started at 16, rose to 20 by April, now 8

Required:

(a) What would be the company's financial rationale (as opposed to strategic logic) for disposing of the business? Review possible reasons, relate them to the company's financial position in mid-2008, and give your arguments as to which of them you think is the most likely.

(6 marks)

(b) How attractive is the price obtained for Testing in relation to turnover, profits, etc and compared with the value of the total Group? Why do you think the price was pitched at this level?

(5 marks)

QUESTION 5 [Total 10 marks]

Assume a successful disposal of the Testing business in 2008 - H2.

Required:

Given your earlier analysis of the company, the business and the sector what do you think would be the five most significant future finance and treasury issues facing the company? Justify your choice.

(10 marks)

QUESTION 6 [Total 12 marks]

TPT local site managers have traditionally exercised considerable pricing discretion with customers in order to manage volume in the context of high operational gearing.

In the same vein, local site managers have negotiated fixed price energy contracts with their local supplier.

Required:

(a) Devise and justify a group-wide policy for energy hedging.

(6 marks)

(b) Write a note for Marketing explaining the economic implications of differential pricing at site level.

(6 marks)

QUESTION 7 **[Total 11 marks]**

At December 2007 net assets exposed to currency translation risk were £536m:

	£m
EUR	294
USD	117
SEK	46
OTHER (where liquid hedging markets exist)	34
	491
OTHER (emerging markets)	45
	536

Currency debt at December 2007 was:

	£m
EUR	95
USD	99
SEK	18
OTHER (hedgeable)	102
	314
OTHER	9
	323

Required:

(a) At year-end 2007 how material was currency translation risk for TPT? Explain your reasoning.

(4 marks)

(b) Determine and justify a policy for managing this risk.

(7 marks)

QUESTION 8 **[Total 20 marks]**

Required:

(a) Determine and justify a treasury organisation profile for TPT in terms of Role, Authority, Attitude to Risk and Organisation structure. Use the pro-forma provided to indicate your reading of the current profile and where you think it should move to in the medium term if you think change is necessary.

(7 marks)

Treasury Organisation Profile

ROLE	Advisory	Agency	In-House Bank
AUTHORITIES	Decentralised	Centralised	Dynamic Balance
RESPONSE TO RISK	Cost Centre	Cost-Saving Centre	Profit Centre
ORGANISATION	Elementary	Intermediate	Advanced

KEY: EXISTING / FUTURE

In the light of your answer to (a) and bearing in mind the lack of treasury resource at Group and across the company:

Required:

(b) Provide an outline specification for the functionality you think appropriate for a Treasury Management System (TMS) for TPT.

(8 marks)

(c) Set out the pros and cons for introducing a TMS at TPT.

(5 marks)

MCT Case Study Exam: Solutions

QUESTION 1 **[12 marks, 22 mins]**

Broad indication of required content of answers.

1a) <u>Competitive Advantages</u> **(8 marks, 14 mins)**

[Marking : I have 21 points so ½ mark for each good point]

<u>For background only</u>

- Relevant information from the case study.
- Largest global player in a very fragmented market
- Only one covering both Europe and North America
- Competition is customers' in-house departments or small local family firms
- Outsourcing market – either provide cheaper or technically better services
- But need efficient logistics to compete
- Technology-based process, including new technologies
- Customers using new materials requiring more sophisticated treatment eg for turbine blades, fuel injection
- High-tech extreme customer applications eg aerospace, power generation, oil and gas, high-end automotive applications

Porters' Five Forces

1. Nature of competition. In a strong competitive position globally – size [1] and geography.

2. Supplier power. Labour costs are the biggest single item (45% of sales) readily available, low bargaining power. Energy probably next but way behind – basic commodity and big suppliers, probably greater bargaining power than smaller competitors [2] – some competitive advantage. Depreciation only 8% of sales – not particularly capital intensive, not hugely dependent on capital equipment manufacturers.

3. Customer power. Top ten customers only 14% of turnover [3] – fragmented, good. Big customers, global businesses – negative for TPT. But tech-based, highly specialised [4] service, close links [5] (and locations) with customers, high switching costs. Value to customers greater than relative costs (high value, critical service). TPT strong.

4. New entrants. Low barriers to entry generally but not at TPT's global and technical level. New, similar size competitors only by acquisitions/consolidations in industry. TPT strong and defends by acquisition itself. [6]

5. Substitute products. Unlikely! Specially-treated metal components have successfully withstood the challenge of new and versatile plastics. New metal-treatment technologies are a potential threat (and a potential defensive strength). [7] TPT OK.

Product/Market Life Cycle

A mature market therefore cost control [8] , product rationalisation [9] and closeness to customer [10] needs are all critical. Build market share for economies of scale and scope. [11]

Not a fast-growing new market globally, but some regional markets are – build market share on technical and delivery capability, and by acquisitions. [12]

Not a declining market dominated by cost-price competition.

Environments Matrix

Frag. *	Spec x
Stalemate	x Vol

Inherently “Fragmented” but trying to move selectively towards either "Volume" or "Specialised".

Competitive Advantage?

Technological/quality [13] superiority and continuing development. Cost competitive – plant utilisation, [14] economies of scale (market share and plant size [15]), logistics, [16] flexibility of production facilities. [17]

Global delivery and efficiency – plant location, [18] transportation logistics – economies of scope. [19]

Acquisitions and strategic partnerships [20] – reduce costs, increase global reach, increase switching costs and entry barriers. [21]

1b) How Cyclical, Survival Steps? (4 marks, 7 mins)

[Marking : I have 10 points so ½ mark for each good point]

- Operating profit fell from £72m to [1] £22m in 2002, now £79m so badly hit by last down-turn.
- Plus large exceptional costs (re-structuring?) [2] in 2003.
- Beta 1.18 to 1.30, [3] well above average.
- Serving core [4] manufacturing industries which will also be above average on cyclicality.
- Company would argue that it has reduced sensitivity to a downturn by itself outsourcing, sub-contracting and developing strategic partnership.[5]
- Survival
  - reduce firms' overheads, particularly labour (local), in line with any reduction in (local) sales volumes [6]
  - reduce operational gearing [7]
  - focus on plant utilisation [8]
  - control cash flow more than ever [9] – working capital, capex
  - avoid high financial gearing [10]

QUESTION 2 [13 marks, 23 mins]

2a) Cash Flow Performance (9 marks, 18 mins)

[Marking : I have 15 points so $\frac{2}{3}$ mark for each good point].

Cash Flow summary 2003 - 2007

			Notes
"Cash profit" after tax	292.6		
Increase in net working assets	(23.9)		
Cash from operations (pre-depreciation)	268.7	1	
- Capex + depreciation	(12.4)		Capex/depn = 1.06 x [3]
Cash available for interest	256.3	2	Int. Cover 5.1 x [4]
Interest	(50.3)		
Cash available for dividends	206.0		Divi. Cover 2.2 x [5]
Dividends	(94.3)		
Internal cash flow	111.7		81% of acquisitions [6]
Share capital	57.3		41% of acquisitions [7]
Total "equity funds"	169.0		
Acquisitions	(138.6)		
Surplus after acquisitions/net debt reduction	30.4		

Capex/depreciation averages 1.06 times - probably should be nearer 1.25 [8] (extra cost of £42.5m over the period, but still affordable). [9]

Internal cash flow is still 38% of "cash profit". [10]

Conclusions - very strong cash flow generation to more than meet operational and investment requirements - (capex actually a bit low but could afford more). [11]

Excellent cash cover for interest and dividends. [12] 81% internal funding of quite big acquisitions. [13] Equity issue more than funded the balance, [14] adding 51% to internal cash flow, and contributing to a small net reduction in debt. [15]

2b) Trends **(4 marks, 5 mins)**

[Marking : I have 8 points so ½ mark for each good point].

Study profit growth. [1] Working capital investment and capex increasing steadily, [2] much reduced relative dividend payout [3] acquisitions increased last 3 years. [4]

Conclusions
- tight cash control [5] and rights issue [6] to achieve de-gearing [7] in early years
- increased investment in later years. [8]

QUESTION 3 **[11 marks, 20 mins]**

The answer has been re-written to correct mathematical errors and hopefully to clarify the issues for future examination candidates. In particular adjustments for exceptional items has been significantly expanded because they often seem to be ignored by candidates.

3a) Value created via P&L and B/S **(6 marks, 11 mins)**

[Marking : I have 18 detailed points but ½ mark for each good main point but this level of detail not expected in exam conditions].

General Note:
The first general point to note is that, although this question is divided into the effects of financial performance (3a) and the equity market (3b) the two are inter-related in that continuing improved performance will tend to result in higher market multiples and therefore have a "double-hit" effect.

i) Market Cap has increased by £422m [1] (110%) over the period while sales only increased by 43% [2]. Growth of market cap in line with sales, would have added only £164m [3], so an extra £259m has been created.

ii) Gross margins increased by 5.0% thereby adding an additional £32m [4] of gross profit to the £57m from sales growth alone (total increase £89.4m). Using the 2007 ratio of market cap/gross profit (3.62), for illustration, this additional gross profit of £32m would add £116m to market cap. [5]

iii) Total overheads including amortisation, but before all exceptional items, increased by £45.2m (45.0%), only slightly higher than the percentage increase in sales, [6] so likely impact on value was limited. [7]

iv) Total exceptional costs, both operational and non-operational, went from £34.0m to £0.5m. [8] As a result EBIT increased by £77.7m. Again, for illustration, applying the 2007 market cap/EBIT multiple of 10.54 would indicate a possible increase in value of £819m from this factor alone.
However this is largely offset by the fact that the 2003 reported earnings were adjusted upwards, for eps purposes, by £42.2m to £24.8m (eps 9.7p x 256.116 million shares). [9]

Given the 2007 P/E of 15.2 this indicates a value adjustment of about £641m, (largely related to exceptionals and associated tax impact?)

v) Interest has reduced by £1.9m, likely impact on value - £28.9m but see comments on asset cost savings below.

Tax paid went from £6.2m on normal operating profits of £32.6m (19.0%) to £14.7m on £76.8m (19.1%) so likely no big impact [10]

vi) Asset turnover up from 0.58 to 0.64 so £104m [11] less assets were employed to achieve £640.5m in turnover. At 5% interest x 0.8 for tax x 15.2 P/E = £63m value created. [12]

vii) Net working assets to sales, however, has increased, [13] consuming an extra £23m. But fixed assets to sales has fallen [14] from 107% to 79% thereby using £179m less assets (the main b/s contribution) [15]

Summary - the indicated additions to shareholder value are approximate and not strictly attributable to the individual items identified because of the synergies between different items and their impact on the P/E ratio, also because there is some double counting. However, the summary below gives a fair indication of their relative contributions.

Actual market cap increase = £422m.

Growth in sales	£164m	
Gross margin	£116m	
Exceptional items	£819m	net £178
Earnings adjustment	(£641m)	
Interest	£29m	overlap
Assets	£63m	
Total	£550m	

Conclusion - the main contributors to added value; 1) overheads[16]**,** 2) sales growth [17] and 3) gross margins.[18]

3b) Equity Market Contribution **(5 marks, 9 mins)**

[Marking : I have 13 points but with some repetition, so ½ mark for each good point].

i) eps up 71% [1] (dividends up only 31% because divis paid in 2003 even though loss making) [2]
But P/E down by 1.3% [3]
Numbers of shares up 24% [4] to fund acquisitions (costing £150m)
So market cap. up 110% (+ £422m) [5] [1.71 x 0.99 x 1.24 = 2.10] [6]
But EV only up 70% (+ £416m) because over the period debt and minorities down by £6m. [7]

ii) EV/Sales, EV/Total Assets and EV/Staff Costs all increased, reflecting the improved profit generation from these basic value drivers. [8]

iii) 2003 EV/EBITA and EV/EBITDA multiples are all distorted by the exceptional losses in that year, so not very useable without adjustments. [9]
EV/EBIT before exceptional items in 2005 was 593 / 32.6 = 18.2
In 2003 was 1009 / 76.8 = 13.1 [10]

iv) Summary (again approximate)

Starting from 2003 market cap of £382m	£382m
Growth in e.p.s. of 71% adds	£271m
P/E reduction by 0.2 on 15.4 subtracts	£8m
Extra Shares (61.819 x 253p) add	£156m
	£435m

Actual increase in market cap = £422m.

Conclusion - the main contributors to added value 1) eps [11] 2) shares issued for acquisitions [12]

NB NOT market confidence expressed via increased multiples [13]

For information

Summary Financials

	2003	2007	Period Increase	2007 Mkt. Cap Multiple
Sales	448.4	640.5	192.1	1.256
Gross profit	133.0	222.4	89.4	3.617
Operating profit	32.6	76.8	44.2	10.47
EBIT	(1.4)	76.3	77.7	10.54
Earnings	(17.4)	52.8	70.2	15.23
Earnings adjustment (eps)	42.2	-	(42.2)	
Adjusted earnings	24.8	52.8	28.0	15.23
Market capitalisation	381.6	804.4	-	-

QUESTION 4 **[11 marks, 20 mins]**

4a) Financial Rationale for Disposal **(6 marks, 11 mins)**

[Marking : I have 17 points so ½ mark for each good point].

i) Trading/liquidity/gearing crisis

- Net debt [1] £41m higher at Interim than 2007 year end, largely because of acquisitions [2] on top of almost neutral internal cash flow (strong trading profit but increased working capital, capex, interest paid). [3]

- But book leverage only 32%, market leverage 28% [4] - good.
  Debt/EBITDA 1.5, Debt/Retained Profit 4.7 years - good. [5]
  EBIT Interest cover 7.3, still very strong. [6]

- Consensus forecasts down but not to levels to cause problems. [7]

	2007	**2008**	**2009**	**2010**
EBIT (not EBITDA)	76.3	94.2	88.5	89.3
Net interest	7.8	8.0	8.0	8.0
Profit before tax	68.5	86.2	80.5	81.3
Interest cover	9.78	11.78	11.06	11.16[8]

- Interest cover excellent.

- Average pre-tax forecast for next three years = £82.7m versus £68.5m [9] (2007) so no obvious need to adjust downwards.
  So not a distress-driven sale. [10]

ii) Requirement for even greater liquidity to make the most of even better acquisition opportunities [11] in the impending down-turn. Likely but impossible to [12] quantify. Recent acquisitions have cost £30m to £40m each so net disposal proceeds of £417m give plenty of head-room. [13]

iii) Price higher than management's assessment of current value [14] of the business - either on a DCF NPV basis or multiples basis.

In 6 months of 2008 market cap. of group has fluctuated between £784m and £464m, average £624m. So price received equals 90% to 53% of Group market cap. [15] (average 67%).

Bid looked good value even at peak share prices in April/May, [16] for about a quarter of the group's business. This looks the most likely reason. [17]

4b) <u>How Attractive</u> (5 marks, 8 mins)

[Marking: I have 14 points so ½ mark for each good point].

Quick check

	Testing	Group EV Multiples At Interim 08	Latest Sector EV Multiples	Estimated Value of Testing
Sales	175	1.14[1]	0.5	£200m/88m [3]
EBITDA	31	5.4 [2]	4.5	£167m/140m [4]
		average		£184m/£114m [5]

Price paid, at £417m is 227%/366% of our estimated[6] value. “An offer they could not refuse.” [7]

Price gives following multiples for Testing;

	Testing	
EV/Sales	2.38	(417/175) [8]
EV/EBITDA	13.45	(417/31) [9]

Well above the multiples for TPT and for the sector currently.

Value of Residual Heat Treatment Business

EV = 698 - 417 = 281 [10] - look far too low.

Confirms the “over-valuation” of the Testing business. [11]

Valuation of Group 2008

Max price 246p (May)	x 318.607m	= 784m,	EV = 1,023m,	25% = £256, £358 + 40% premium
Min price 111p (Oct)	x 318.607m	= 354m,	EV = 593m,	25% = £148, £207
Average price Oct 144p	x 318.607m	= 459m,	EV = 698m,	25% [12] = 175, £245 [13]

Bid look as if based on maximum share around May [14] , and not revised down.

QUESTION 5 Treasury/Finance Issues **[10 marks : 18 mins]**

Five most significant treasury/finance issues? **(10 marks : 18 mins)**

•	**Capital Structure**	Proceeds of the testing business, the strategy of growth in significant part by acquisition and the onset of the recession create the need for decisions about the medium term capital structure profile.
•	**Cash & Liquidity Management**	The company has high operational gearing, with a consequent need to manage costs carefully as the recession bites. The company is also relatively decentralised, underlining the need for treasury to centralise cash management
•	**Refinance**	A significant proportion of facilities come up for refinance in 2010, just when lenders will be assuming the yoke of much stricter regulatory pressures.
•	**Fuel Hedging**	Fuel is 11% of sales in heat treatment and oil prices have been unpredictable.
•	**Currency Risk**	There is little intra-group cross border trading. However over 50% of operations is overseas, giving rise to fx translation risk.

The issues most noted by students were:

- Cash, liquidity, working capital management
- Refinance in 2010
- Capital structure
- Fuel cost

Currency risk, interest risk and investment appraisal (capex and acquisitions / disposals) were also frequently mentioned.

QUESTION 6 Energy Cost Hedging **[12 marks : 22 mins]**

Comment

The issues addressed in (a) and (b) arise from the way the business has expanded (in large part by acquisition), the absence of intra-group trading and the relative self-sufficiency of each opco. The result is a culture of decentralisation in the business. As the business gets bigger, decentralisation can frustrate the achievement of scale economies by treasury and also prejudice Group's ability to understand and control what is happening at opco level. The resolution of treasury related issues which require the business to submit to increased levels of centralisation (eg central hedging, cash pooling) is not just a matter of technical change; it requires significant cultural and organisational behaviour shifts to be successful . . . . . even if there are obvious financial benefits.

(a) Group-wide policy **(6 marks : 11 mins)**

- Energy prices have demonstrated extreme levels of volatility in recent years and there is no reason to expect significantly less volatility in the medium term future.

- Energy costs are significant for TPT especially for the heat treatment of metals.

- TPT customers will not be as sensitive to price changes as low cost airline passengers and will understand the need for price adjustments if energy costs are high for protracted periods. However they will not welcome having the full impact of price changes passed on direct as they occur.

- So the goal of a policy for hedging energy costs should be to smooth the volatility of price changes rather than trying to lock in a competitive price advantage by second guessing energy market price movements.

- As TPT gets bigger, it is in a stronger position to bargain at regional/national level and achieve scale economies which would be impossible at opco level.

- Furthermore, energy price fixes entered into by opcos at local level may lead to step changes in price when fixes terminate.

- So if the policy is to hedge by direct negotiation with suppliers (physical hedging)

  - hedge as high up the supply hierarchy as possible to get the best scale economies
  - negotiate a rolling fix, say on a 12 month basis.

- However, to achieve full control of energy costs, bigger firms prefer financial hedging on a country-wide basis using derivatives.

- This involves removing the participation of opcos in the hedging process and having them operate to a budget (a change likely to be resisted).

- This makes hedging on a rolling basis much simpler.

- Advantages are:
  - long-term cost and price stability
  - stable competitiveness and margins
  - strategic process with long-term focus
  - high level decision process.

(b) Implications of differential pricing at site level (6 marks : 11 mins)

- Much of TPT's client base is made up of global and national players.
- The business model is to match clients' global footprint and be a "specialist" provider in a traditionally "fragmented" market.
- Competition in a "specialist market" is on technical excellence and quality of service rather than price.
- If some opcos adopt marginal pricing, the larger customers using several TPT opcos will try to "average down" prices.
- So while one opco may lose out by holding the line on price, the group should benefit.
- Policy should be a consistent face to the client base.
- This facilitates central planning and budgeting which is frustrated by discounting at opco level.
- In practice, clients may have weak bargaining power because switching supplier (other than in-house) may be difficult due to transport costs, lack of alternatives and the need for prior quality approval for specialist technical services.

QUESTION 7 FX Translation Risk [11 marks : 20 mins]

(a) Materiality (4 marks : 7 mins)

- TPT has £536m assets exposed to translation risk.
- This is part hedged by £323m of currency debt.
- So the net exposure is £213m.
- Assuming ± 10% uni-directional shift the impact would be ± £21m on net worth.

- At end 2007 net worth was: £497m book
  £804m market

  So net worth impact is 21/497 = 4.2% book
  21/804 = 2.6% market

  A uni-directional fx shift across all currencies is assumed above. This is unlikely, so for a 10% shift in each currency the aggregate shift will be less. Of course, in volatile conditions individual currencies can shift a lot more than 10%.

- Currency debt is £323m and sterling debt £3m, total £326m. Gearing impact:

	£	Currency	Total	Net Worth	Gearing
	3	323	326	497	65.6%
+10%	3	355	358	518	+ 3.6%
- 10%	3	291	294	476	- 2.9%

- Interest cover, earnings and cash flow are also impacted by translation risk.

(b) Policy **(7 marks : 13 mins)**

"TPT has operations in 35 countries and is therefore exposed to foreign exchange translation risk when the profits and net assets of these entities are consolidated into the Group accounts. Assets are hedged, where appropriate, by matching the currency of borrowings to the net assets. The Group principally borrows in the US Dollar, Euro, Swedish Krona and Canadian Dollar, consistent with the location of the Group's non-sterling assets. The Group also creates further currency financial liabilities and assets using cross currency swaps in order to match currency assets with currency liabilities better. The Group recognises foreign exchange movements in equity for the translation of these net investment hedging instruments and balances. At y/e 2007, as well as currency debt TPT had £74.4m of foreign exchange and cross currency swap liabilities in currencies other than sterling and net cash of £33.3m and cross currency swap assets of £70m were in sterling.

It is Group policy not to hedge exposure for the translation of reported profits."

Question 8 : Organisation Profile & TMS **[20 marks : 36 mins]**

(a) Treasury organisation profile
(7 marks : 13 mins)

The matrix below, supported by some narrative, provides a framework for discussing the treasury organisation structure. The scores for "existing" (top left hand of box) and "future" (bottom right hand of box) represent student responses.

<table>
<tr><td>Role</td><td>(86%)
Advisory
-
(29%)</td><td>(14%)
Agency
-
(57%)</td><td>(-)
In-house Bank
-
(14%)</td></tr>
<tr><td>Authority</td><td>(86%)
Decentralised
-
(-)</td><td>(14%)
Centralised
-
(43%)</td><td>(-)
Balanced
-
(57%)</td></tr>
<tr><td>Response to Risk
• Thinking- accounting
- economic
- probabilistic
- portfolio</td><td>(86%)
Cost Centre
-
(14%)</td><td>(14%)
Cost-saving Centre
-
(86%)</td><td>(-)
Profit Centre
-
(-)</td></tr>
<tr><td>Organisation
• Structure - in-house
- out-source
• Culture - debt
- equity</td><td>(86%)
Elementary
-
14%)</td><td>(14%)
Intermediate
-
(86%)</td><td>(-)
Advanced
-
(-)</td></tr>
</table>

The existing profile, given the history of growth by smallish acquisitions and the introduction of a treasury function as recently as 2005, would be expected to be Advisory, Centralised, Cost Centre, Elementary.

Given the priority finance/treasury issues noted at Q5, a profile shift to the right is highly desirable to avoid a crisis developing unnoticed, an event made more likely by the financial crisis and ensuing recession.

Student responses tended in this direction, 'though in terms of "Authority" a majority favoured "Balanced".

(b) TMS Outline Functionality (8 marks : 14 mins)

- interface with external and internal systems
- central overview of:-
  - daily cash transactions
  - daily cash positions
  - daily bank reconciliations
- multi-period cash/currency forecast
- investments:
  - daily transactions
  - daily positions
  - valuation
  - counterparty exposure against limits
- derivatives for fx, interest and fuel risk management:
  - daily transactions
  - daily positions
  - valuation
  - counterparty exposure against limits
  - segregated input/authorisation
  - transaction confirmation
- debt (external and internal):
  - daily movements
  - daily positions with each provider
  - valuation (if appropriate)
  - covenant compliance
  - headroom (individual and aggregate)
- database for market rates.

(c) TMS at TPT: pros and cons (5 marks : 9 mins)

Advantages:

- Small central treasury staff, little expertise at subsidiary level, so TMS reduces need for additional staff and skill levels as treasury function expands
- Satisfies the immediate need for efficient cash management, forecasting and liquidity planning
- Should improve accuracy and timeliness of reporting
- Formalises control and enables a move towards centralisation of cash management
- Provides an audit trail
- Allows treasury staff to focus more on strategic dimension
- Facilitates “what ifs”.

Disadvantages:

- Risk of de-skilling staff, lack of engagement with issues arising
- TPT currently decentralised, so TMS may be frustrated unless there is a parallel organisational shift towards centralisation
- Expertise and size of existing treasury staff and consequent implementation risk
- Cost/benefit: difficult to establish
- Complexity of interfacing with in-house existing systems of accounting and reporting.

MCT Case Study Exam: Examiner's Report

All Questions relate to the TPT plc Case Study.

Question 1

Question 1 asked candidates to address two aspects of the "non-financial" analysis of the business in question.

Question 1a) asked how one might build and maintain competitive advantage in a "thermal processing" business. Question 1b) asked how cyclical the business was and what steps could be taken to ensure survival in an adverse recessionary climate.

All seven candidates passed this question, with an average mark of 70.2%. The distribution of marks, however, was bi-modal with half the candidates using the case information and the tools of analysis very well. The other half did just enough to pass but tended to be uncritical and merely descriptive rather than analytical.

Question 2

This question asked for a full analysis of the company's cash flow performance over a 5-year period, in particular to assess the adequacy of cash flows to meet all operational, investment and acquisition requirements as well as servicing of capital. A sub-question asked for any particular trends.

Overall this question was very well answered, (average mark 59.2%) but with two candidates failing spectacularly. This was a straight-forward question requiring understanding, analysis and summary of the total pattern of cash flows, all the numbers being given.

The two failing students seemed never to have done cash flow analysis before, nor to understand the issues behind the numbers. Quote from one of them: "why raise share capital then repay it a few years later?" Students are expected to know cash flow analysis "inside out" - it is core to so much of corporate finance and funding.

Question 3

This question required analysis of how shareholder value had been created, with market cap. increasing by over 100% while sales only increased by 43%. Question 3a focused on the company's performance while 3b focused on market reaction and its effect on value.

This was the question that really tested candidates, with only three passes and an average mark of 40.9%. Question 3a) was, surprisingly, disappointing for a straight-forward question, with an average mark of 48% and only three passes. But 3b) floored all except one candidate and the average mark was 33%.

In 3a) some candidates got lost in EVA/MVA theory, WACC and ROCE calculation etc. and never got to grips with how value had actually been added eg improved gross margins, control of overheads, reduced interest and tax burden, better asset utilisation. Too much theory, not enough application!

The point of Question 3b) was lost on most candidates ie that share price is a function of both company performance (eg improved e.p.s.) and market reaction (eg an enhanced P/E ratio.) Some speculation as to why the P/E had improved was expected but seldom delivered eg confidence in management's ability to deliver growth, based on the strong recent track record etc.

NB. This is a key question for students to revise if they are weak on the equity market dimension.

Question 4

Question 4a) asked for the financial rationale for TPT's disposal of one of its businesses.

4b asked how attractive the price was and why.

Overall the question was well answered, with an average mark of 53.2% and five passes out of seven. Question 4a) proved to be more demanding of candidates than 4b), maybe by asking a simple but thought-provoking question whose answers required supporting analysis and argument.

The worst reason given for the disposal was that the business had "lower margins". TPT are now much lower geared than during the last down-turn and look very strong financially, even on forecasts, so no pressing need for liquidity, de-gearing, re-financing, heavy capex etc. Possibly a war chest for strategic acquisitions during the recession? But with very low sector multiples it simply was an offer they could hardly refuse.

Question 4b) confirmed the extremely generous valuation behind the agreed price which was pitched before the markets collapsed. The multiples-based valuation calculations were very well done, despite pretty messy data.

Questions 1-4 Overall

Good, confident skills of financial analysis in the main but poor understanding of the principles of corporate finance and funding and extremely weak quantitative application of these concepts. Also rather thin on discussion of the numbers and on arguments to support answers.

Question 5

This question required students to identify the five most significant finance and treasury issues facing TPT, given their analysis in the preceding questions.

Given the opportunity to read the case in advance, a high standard of answer might be expected and happily expectations were fulfilled, with the great majority of students scoring very well.

The most mentioned issues were refinance, cash and liquidity management, capital structure and fuel cost.

Question 6

This question was about two issues relating to the level of decentralised decision making: (a) the need for a group-wide policy for energy hedging; (b) the implications of making pricing decisions at opco level to maximise facility utilisation.

Responses to this question were about average, with students scoring well on part (a) and less well on part (b).

Part (a) is about grasping the benefits of smoothing volatility and of scale economies by financial hedging at regional/global level. The question did not ask about implementation but there were extra points available for those who could spot that opcos would be reluctant to lose control over fixing the level of such a significant input cost.

Part (b) is about the significance of global and national customers in TPT's total sales and the need to demonstrate pricing consistency and avoid customers "averaging down" prices. However, the issue is not quite as clear cut as for energy since, given transport costs and the specialist nature of the service provided, customers cannot easily switch either to another opco within the Group or to a direct competitor.

Question 7

TPT has 80% of its opcos overseas so there is the potential for considerable fx translation risk.

Part (a) of the question required students to assess the materiality of this risk for TPT and part (b) to determine and justify a policy for managing the risk.

Surprisingly, this question seemed to baffle quite a few students and the pass rate was relatively low on both parts.

Issues are impact on

- gearing
- net worth
- cash flow
- earnings
- currencies correlated ?

Question 8

Part (a) of this question required students to map TPT's treasury organisation profile as it is in the case and as it might become in the medium term. This is an evergreen question and all students scored well.

The context for parts (b) and (c) was the previously decentralised nature of TPT's treasury, probably aggravated by the company's growth by acquisition, the very small numbers in the central treasury and the relative absence of treasury skills at opco level.

Part (b) asked for an outline functionality specification for a TMS (treasury management system) for TPT and part (c) for a statement of pros and cons for adopting such a tool.

These parts of the question were remarkably well treated and overall every student scored a pass on this question.