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Shard

Background

In recent years many large international manufacturing companies have been building up their own recycling divisions. Shard is a major European company, listed on a European stock exchange. Shard has two main business areas, manufacturing glass and newspaper publishing and printing, which are both profitable. The company manufactures glass for a significant proportion of the new cars manufactured in Europe and it also manufactures over six billion glass jars and bottles annually. Shard also owns eight European newspaper titles, which it acquired in a move to diversify over nine years ago. All titles are operating profitably, but margins are becoming tighter.

Shard operates three divisions, which are glass, newspapers and recycled materials. The glass division is the largest and in the year ended February 2005 generated over 82% of Shard's operating profit. The newspaper division generated almost 16% and the balance of Shard's operating profit was generated by sales of recycled products.

Shard has achieved significant growth in turnover, profitability and EPS in the last 10 years through internal growth, geographic growth and external growth through acquisitions. The company has a stated aim of achieving productivity gains of over 4% per year and of continually improving its EPS. The company's share price has fluctuated due to global economic factors, but is currently near its high for the last 12 months at €13.95 per share.

Shard is also at present negotiating for a major new contract, which could result in an increase in glass production from its current level of 81% of capacity, up to 89%. However, there are several other manufacturers bidding for the contract and Shard may, or may not, be successful in being awarded it. The outcome will not be known until the end of 2005.

Shard and recycling

Shard plans to achieve cost savings by continually upgrading its industrial efficiency and also by acquiring some of its key raw material suppliers, thereby controlling supply and price of these crucial inputs into its glass manufacturing and newspaper printing process. Furthermore, like many industries, the glass and newspaper industries are under increasing pressure to meet recycling targets. Shard currently uses recycled glass for about 38% of its raw materials in the glass division and around 16% of its total paper supply for newspaper printing is recycled paper.

In a benchmarking exercise, Shard's Finance Director identified that some competitors use higher levels of recycled materials. Shard's Finance Director has reported that he considers that Shard should aim to significantly increase the levels of recycled materials used by the glass and newspapers divisions within the next three years. He considers that Shard should have targets of 60% for recycled glass and 75% for recycled paper.

Shard currently operates a small number of recycling plants in several countries that supply glass and paper to the main businesses, but these have failed to grow significantly over recent years. Shard has believed for a long time in the importance of recycling glass and the cost benefits of obtaining recycled glass for its raw materials. The higher the proportion of recycled glass, the better the gross margin is on that batch of glass output, due to lower raw material costs and also lower energy costs in production. The glass industry globally is under pressure to reduce costs to remain competitive. In addition, the European glass industry is being put under pressure to increase the level of recycled glass by the EU authorities. Furthermore, the newspaper industry is also trying to reduce costs without affecting quality.

Shard has been obtaining higher levels of recycled glass and paper over the last five years by establishing links with over twenty recycling companies, of which two are ReuseR and NOW. ReuseR has supplied and worked closely with Shard for many years. ReuseR's Chairman and Chief Executive, Kurt Finehart, is also a non-executive director of Shard, having been invited to join its Board three years ago.

Proposed expansion of Shard's recycling division

The Shard Board of Directors has long been considering expanding its recycling division and feel that the time is right to embrace the challenges of corporate social responsibility. Not only do they feel that it is right for society, it also makes good commercial sense as each euro saved on raw materials improves Shard's profitability. Its own recycling division currently acquires waste materials, including glass and paper as well as other materials from a range of sources, mainly from contracts to collect waste from other manufacturing companies. Shard's recycling division sells unwanted recycled materials to other companies, but retains all recycled glass and paper for Shard's two businesses.

The Shard Board met on 23 May 2005 and Franc de Loore, Shard's Business Development Director, was requested to investigate the possible acquisition of a recycling company. It was considered that this would enable Shard to have access to a much higher level of recycled materials much more quickly than it could if it continued to build up its own recycling division, which has not grown as expected. The Business Development Director had already eliminated a number of recycling companies from the shortlist of possible companies to acquire, as they handle a wider range of recycled goods than Shard is interested in. The two alternative recycling companies that Shard is considering acquiring are *ReuseR* or *NOW*.

The Shard Board is not united in its decision to progress the acquisition of a recycling company and the comments made by Directors at the Shard Board meeting on 23 May 2005 are shown in an extract from the minutes of the meeting in **Appendix 5**.

Kurt Finehart (a non-executive director of Shard) was present at the Board meeting on 23 May 2005, and he also had access to the Shard Board papers concerning the potential acquisition of ReuseR, where he is Chairman and Chief Executive. His reaction to the possible acquisition of ReuseR is also shown in **Appendix 5**.

At the meeting, Franc de Loore was requested to prepare a report for the next Shard Board meeting in June, concerning whether either company was suitable for acquisition.

Shard's key financial data

Summary key financial data for Shard is shown below:

	<i>Year ended February 2005</i>	<i>Year ended February 2004</i>
Shard group revenue € Million	2,040	1,940
Operating and administrative costs € Million	<u>1,692</u>	<u>1,595</u>
Operating profit € Million	348	345
Interest and other finance charges € Million	(68)	(72)
Taxation (30%) € Million	<u>(84)</u>	<u>(82)</u>
Profit for the period € Million	<u>196</u>	<u>191</u>
No of shares fully paid up	214 million	214 million
Earnings per share (EPS)	€ 0.92	0.89
Dividends per share (DPS)	€ 0.37	0.35
P/E ratio	15	15
Market capitalisation (at end February each year) € Million	2,941	2,870
Net debt € Million	802	895
Capital expenditure during year € Million	87	82
Share price – range in year	€ 13.24–14.01	12.68–13.45

Due to Shard's current long-term debt repayment schedule and continued expansion, the company has decided that it is not able to acquire either recycling company for cash.

Shard's post tax cost of capital is 9%. Shard's share price at 20 May 2005 is €13.95 per share.

Shard does not yet have access to detailed management accounts from either ReuseR or NOW, which would give a breakdown of profitability by sector. The only accounting data that Shard currently has access to is the statutory accounts for both companies (of which extracts are included in **Appendices 2 and 3** to the pre-seen material.) From the statutory accounts, Shard also has details of operating cash flows generated, which are shown below.

Forecast effect on Shard's cash flows if a recycling company is acquired

It is forecast that Shard could achieve operating efficiencies and cost savings through the use of higher levels of recycled glass and recycled paper, assuming that the majority of production of recycled glass and paper that is currently sold by ReuseR or NOW is supplied to Shard and contracts with existing customers are not renewed.

The after-tax effect on the Shard group's cash flows is forecast to be as follows:

<i>After-tax effect on Shard's group cash flows</i>	<i>If ReuseR is acquired € million</i>	<i>If NOW is acquired € million</i>
Glass manufacture:		
Savings to Shard due to price differential between recycled glass and "new" raw materials	3.6	0.8
Energy savings (through the use of greater amounts of recycled glass)	3.5	0.7
Increased transportation cost to Shard factories	(1.6)	(0.3)
Newspaper printing:		
Savings to Shard due to price differential between recycled paper pulp and new paper	4.0	2.8

It is forecast that if Shard chose to acquire ReuseR, it would sell some areas of the ReuseR business and the effect would be a one-off net benefit to Shard of €5 million (post-tax). This benefit to Shard is not included in the cash flow figures in the table above. The management of Shard does not forecast any substantial changes if NOW were to be acquired.

The two companies being considered for acquisition have generated the following post-tax operating cash flows in the year ended during 2004:

	<i>ReuseR € million</i>	<i>NOW € million</i>
Post tax operating cash flows for year ended during 2004 (as extracted from latest statutory accounts)	33.6	17.8

Franc de Loore has forecast that if ReuseR was acquired, its post-tax operating cash flows could grow by around 10% per year. He has also forecast that if NOW was acquired post-tax operating cash flows could grow by around 20% per year.

Shard's acquisition policy states that it evaluates potential acquisitions over a 6 year period.

Investigations on ReuseR and NOW

Franc de Loore has investigated ReuseR and NOW as part of his research prior to the possible acquisition of either of these two companies. He has been able to obtain the following information about the companies:

ReuseR

ReuseR's audit

ReuseR's audit identified a number of problems:

- criticisms of how a recent acquisition had been accounted for, including an overstatement of the valuation of stocks and other assets.
- a number of minor frauds had occurred during 2004, one involving substantial cash movements, which had already been identified by ReuseR management and the employee involved has left the company.
- Weaknesses in the ReuseR's finance team, particularly in certain countries.

Safety issues at ReuseR recycling plants

During April 2005 there were two separate accidents at different ReuseR recycling plants and in one of these accidents there were two deaths. One worker had got trapped in a machine. A fellow worker tried to help and both were fatally injured. Safety instructions had not been followed.

The Health and Safety (H & S) authorities had investigated the latest accident and their preliminary report found that there was widespread ignorance of safety issues and that at some ReuseR plants they had visited, there were inadequate safety instructions and a shortage of safety equipment (including safety goggles and safety hats). The report gave ReuseR management 28 days before a further inspection during June 2005. There is a possibility of the H & S authorities imposing fines or the possibility of one, or more, of the recycling plants being closed down until safety measures have been improved.

ReuseR share price

ReuseR's share price has fluctuated between €1.91 and €2.61 during 2004. Following news of the accidents at ReuseR recycling plants in April 2005 and subsequently the H & S report, ReuseR's share price had slipped to around €2.20 by early May 2005. On Friday 20 May 2005, ReuseR's share price had been boosted to €2.31 as it had just announced the successful acquisition of RED in an Eastern European country.

NOW

1. NOW's staff problems

Franc de Loore has identified that NOW is experiencing staff recruitment and staff retention problems. The terms and conditions of employment in NOW are poor in relation to industry practice. Although NOW employees receive regular training, they work long hours and many NOW employees are less skilled than those in other recycling companies. Many NOW employees feel under pressure from working long hours and they have a demanding waste collection schedule to achieve. Many of NOW's staff feel that they cannot meet the demands of their jobs.

2. NOW's problems with its secure waste paper collection and pulping service

NOW operates a fleet of specialised waste paper recycling vehicles that deal solely with pulping confidential waste paper materials on customers' premises. Franc de Loore has investigated NOW and has identified that it is experiencing problems with its secure collection and pulping service. The information has come from reliable sources.

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In early May 2005, NOW had one of its contracts terminated by one of its largest customers, LW, which has also filed a legal charge against the company. LW has claimed that NOW did not securely dispose of all of its confidential waste paper, which should have been collected and pulped on LW's premises. LW has discovered that large quantities of commercially sensitive papers were instead disposed of in a standard waste disposal site. LW's management is very concerned at this major lapse of NOW's secure collection and pulping service of LW's confidential papers. NOW is investigating how this lapse in its confidential waste paper disposal service has occurred, when the papers should have been pulped at LW's premises. NOW is tightening procedures, and trying to rebuild confidence in its waste paper pulping service before other customers learn of this problem.

Franc de Loore has been advised that the lapse with LW's confidential waste paper is not the first time such an incident has occurred. He is also reliably informed that the NOW Board is aware of the problems with its collection and recycling service for confidential waste paper. He has also been made aware that Val Rines (NOW's Sales and Marketing Director) is very annoyed that she had not been informed of all of the previous problems. Val Rines is understood to have been in favour of temporarily suspending the confidential waste disposal service, but the NOW Board disagreed.

3. *Valuation of NOW*

NOW is not a listed company. The Shard Board has an acquisition policy of valuing non-listed companies using a multiple of six times the level of its latest post tax earnings.

Appendix 5

Extract from the minutes of Shard Board meeting held on Monday 23 May 2005

Item 5 from agenda: Securing long-term supplies of recycled materials		Responsibility
5.1	There was a detailed discussion about how Shard could secure long-term supplies of recycled materials.	—
5.2	The Director of Glass and the Procurement Director both consider that Shard should enter into long-term contracts with its key suppliers, not acquire them. The latter has been very outspoken in his criticism of the proposed strategy to strengthen the recycling division of Shard.	—
5.3	<p>Shard's Chairman and Finance Director of Shard are in favour of Shard's proposed enlargement of its own recycling division. Both directors consider that this would lead to significant cost savings in raw materials and energy costs.</p> <p>Shard's Chairman and Finance Director are both in favour of acquiring a recycling company to enlarge Shard's own recycling division. The Board agreed that a strategic analysis of the benefits and problems of acquiring a recycling company is required.</p> <p>The Chairman also wants the Board to consider recommendations of which, if either, of the two alternative companies (ReuseR or NOW) should be acquired.</p>	—
5.4	<p>The Finance Director stated that there is a need to ensure that the acquisition valuations recognise the need to improve Shard's shareholder value.</p> <p>The Finance Director also reminded the Board that the success of any acquisition is usually determined by the acquiring company's ability to plan and implement a successful post acquisition strategy.</p>	—
5.5	Kurt Finehart, a non-executive director of Shard, (who is also the Chairman and Chief Executive of ReuseR) stated that he personally was not in favour of Shard acquiring ReuseR. He proposed that Shard acquired NOW.	—
5.6	The Business Development Director has been requested to prepare a report for the next Shard Board meeting.	de Loore

End of unseen material

Maths tables and formulae are on pages 27 to 30

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MATHS TABLES AND FORMULAE

Present value table

Present value of 1.00 unit of currency, that is $(1 + r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of 1.00 unit of currency per annum, Receivable or Payable at the end of each year for n years $\left[\frac{1-(1+r)^{-n}}{r} \right]$

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

FORMULAE

Valuation models

- (i) Irredeemable preference share, paying a constant annual dividend, d , in perpetuity, where P_0 is the ex-div value:

$$P_0 = \frac{d}{k_{\text{pref}}}$$

- (ii) Ordinary (equity) share, paying a constant annual dividend, d , in perpetuity, where P_0 is the ex-div value:

$$P_0 = \frac{d}{k_e}$$

- (iii) Ordinary (equity) share, paying an annual dividend, d , growing in perpetuity at a constant rate, g , where P_0 is the ex-div value:

$$P_0 = \frac{d_1}{k_e - g} \quad \text{or} \quad P_0 = \frac{d_0 [1 + g]}{k_e - g}$$

- (iv) Irredeemable (undated) debt, paying annual after-tax interest, $i [1 - t]$, in perpetuity, where P_0 is the ex-interest value:

$$P_0 = \frac{i[1 - t]}{k_{\text{dnet}}}$$

or, without tax:

$$P_0 = \frac{i}{k_d}$$

- (v) Future value of S , of a sum X , invested for n periods, compounded at $r\%$ interest:

$$S = X[1 + r]^n$$

- (vii) Present value of 1.00 payable or receivable in n years, discounted at $r\%$ per annum:

$$PV = \frac{1}{[1 + r]^n}$$

- (viii) Present value of an annuity of 1.00 per annum, receivable or payable for n years, commencing in one year, discounted at $r\%$ per annum:

$$PV = \frac{1}{r} \left[1 - \frac{1}{[1 + r]^n} \right]$$

- (ix) Present value of 1.00 per annum, payable or receivable in perpetuity, commencing in one year, discounted at $r\%$ per annum:

$$PV = \frac{1}{r}$$

Formulae continue on page 30

Cost of capital

- (i) Cost of irredeemable preference capital, paying an annual dividend, d , in perpetuity, and having a current ex-div price P_0 :

$$k_{\text{pref}} = \frac{d}{P_0}$$

- (ii) Cost of irredeemable debt capital, paying annual net interest, $i[1 - t]$, and having a current ex-interest price P_0 :

$$k_{d \text{ net}} = \frac{i[1 - t]}{P_0}$$

- (iii) Cost of ordinary (equity) share capital, paying an annual dividend, d , in perpetuity, and having a current ex-div price P_0 :

$$k_e = \frac{d}{P_0}$$

- (iv) Cost of ordinary (equity) share capital, having a current ex-div price, P_0 , having just paid a dividend, d_0 , with the dividend growing in perpetuity by a constant $g\%$ per annum:

$$k_e = \frac{d_1}{P_0} + g \quad \text{or} \quad k_e = \frac{d_0[1 + g]}{P_0} + g$$

- (v) Cost of ordinary (equity) share capital, using the CAPM:

$$k_e = R_f + [R_m - R_f]\beta$$

- (vi) Cost of ordinary (equity) share capital in a geared firm (no tax):

$$k_{eg} = k_0 + [k_0 - k_d] \frac{V_D}{V_E}$$

- (vi) Weighted average cost of capital, k_0 :

$$k_0 = k_{eg} \left[\frac{V_E}{V_E + V_D} \right] + k_d \left[\frac{V_D}{V_E + V_D} \right]$$

*P10 - Test of Professional
Competence in Management
Accounting*

May 2005

Thursday Afternoon Session