

UNIVERSITY OF SWAZILAND
DEPARTMENT OF ACCOUNTING
MAIN EXAMINATION PAPER 2006

DEGREE/DIPLOMA AND YEAR OF STUDY: B. COMM IV
TITLE OF PAPER : BUSINESS FINANCE I
TIME ALLOWED : THREE (3) HOURS

- INSTRUCTIONS**
1. TOTAL NUMBER OF QUESTIONS ON THIS PAPER: FOUR (4).
 2. ANSWER ALL QUESTIONS
 3. THE MARKS AWARDED FOR A QUESTION/PART ARE INDICATED AT THE END OF EACH QUESTION/PART OF QUESTION.
 4. ALL CALCULATIONS ARE TO BE MADE TO THE NEAREST LILANGENI
 5. WHERE APPLICABLE, SUBMIT ALL WORKING CALCULATIONS

NOTE: YOU ARE REMINDED THAT IN ASSESSING YOUR WORK, ACCOUNT WILL BE TAKEN OF ACCURACY OF THE LANGUAGE AND THE GENERAL QUALITY OF EXPRESSION, TOGETHER WITH THE LAYOUT AND PRESENTATION OF YOUR FINAL ANSWER.

SPECIAL REQUIREMENTS: P.V. TABLES

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

QUESTION 1

An unqualified colleague has recently been moved to another office whilst part way through a job. His working notes on a capital investment project have been given to you.

Liviyo Project (working draft)
E000

Year	0	1	2	3	4
Sales			4,500	5,300	6,000
Outflows					
Materials		200	850	1,200	1,320
Wages		180	960	1,200	1,360
Salaries		50	110	130	150
Head office overhead		85	90	95	100
Other fixed costs		20	400	420	440
Market research	110				
Warehouse rent		40	40	40	40
Opportunity costs:					
Labour		80	80		
Warehouse space		60	60	60	60
Exports		110	110	110	110
Interest		70	286	286	286
Tax allowable depreciation		135	391	293	220
		-----	-----	-----	-----
Profit before tax	(110)	(1,030)	1,123	1,466	1,914
Tax	(36)	(340)	371	484	632
Other outflows					
Land	300				
Building	240	510			
Machinery		650			(80)
Total working capital		400	440	460	480
		-----	-----	-----	-----
Net flows	(614)	(2,250)	312	522	882

Working Notes:

- (i) The investment will be financed by a 12% fixed rate term loan, E540,000 to be drawn down immediately, E1,560,000 to be drawn at the end of year one.

- (ii) Working capital of E480,000 is expected to be returned in full in year five.
- (iii) Highly skilled labour would need to be taken from other jobs losing E80,000 per year post-tax contributions for two years. These workers could not be replaced in the other jobs.
- (iv) The warehouse space could be rented to another company for E60,000 per year if not used for this investment.
- (v) The project will result in reduction in existing exports of another product, causing pre-tax contributions to fall by E110,000 per year.
- (vi) One manager, at an initial year one salary of E25,000 per year (increasing by 5% per year) will be transferred from another division. If he had not been transferred he would have been made redundant at an immediate after tax cost to the company of E40,000. This manager is additional to the salaries shown in the working draft.
- (vii) Data includes the estimated effects of inflation on costs and prices wherever relevant.
- (viii) Head of office cash flows for overhead will increase by E40,000 as a result of the project in year one, rising by E5,000 per year after year one.
- (ix) Tax is at a rate of 33% per year payable one year in arrears. The company has other profitable projects.
- (x) Tax allowable depreciation is 2.5% per year straight line on buildings and 25% per year reducing balance on machinery.
- (xi) Land and buildings are expected to increase in value by 5% per year.
- (xii) The company's cost of capital is 16%.
- (xiii) Company equity beta is 1.3
Company asset beta is 1.1
Average equity beta of companies in the same industry as the new Liviyo project is 1.5
Average asset beta of companies in the same industry as the new Liviyo project is 1.2
The market return is 15% per year and the risk free rate 6% per year

- (xiv) Company gearing:
Book value 60% equity, 40% debt
Market value 76% equity, 24% debt,
- (xv) The market research survey was undertaken last month.
- (xvi) The company has a time horizon of three years of sales for evaluating this investment

Required:

- (a) Using the working draft and any other relevant information, complete the appraisal of the Liviyo project.

There are no arithmetic errors in the working draft, but there might be errors of principle that result in incorrect data.

(Total: 25 Marks)

QUESTION 2

A private investor, Miss Zama owns a portfolio of shares in publicly quoted companies. She is now considering purchasing shares in either X Ltd or Y Ltd with the aim of reducing her portfolio risk. She has asked her stockbroker for advice. Her broker has obtained the following statistics about the two companies.

Correlation coefficient of returns

X Ltd with the market	0.25
X Ltd with Miss Zama existing portfolio	0.18
Y Ltd with the market	0.15
Y Ltd with Miss Zama existing portfolio	0.20

The Research Department at Miss Zama stockbrokers has forecast standard deviations and expected returns for the coming year for two companies. These are:

	Standard deviation	Expected return
for X Ltd	42%	14%
for Y Ltd	38%	10%

Ignore taxation.

You are required:

- to advise Miss Zama in which company she should invest to achieve her stated objective. Include in your advice an explanation of why the expected return of the shares of X Ltd is greater than for Y Ltd. (9 Marks)
- to explain why a number of investors may all be content to invest in the same portfolio of common stocks even though some may be prepared to take bigger risks than others. (6 Marks)
- to discuss the following statement: "In October 1987 there was a sudden and dramatic fall in share prices on most of the world's stock markets, with share price falling by 25% - 30% or more. This collapse in prices implies that the efficient market hypothesis is no longer a credible theory" (10 Marks)

(Total: 25 Marks)

QUESTION 3

Fana is a medium-sized company that manufactures luxury goods for several well-known chain stores. In real terms, the company has experienced only a small growth in turnover in recent years, but it has managed to maintain a constant, if low, level of reported profits by careful control of costs. It has paid a constant nominal (money terms) dividend for several years and its managing director has publicly stated that the primary objective of the company is to increase the wealth of shareholders. Fana is financed as follows:

	Em
Overdraft	1.0
10 year fixed interest bank loan	2.0
Share capital and reserves	<u>4.5</u>
	<u>7.5</u>

Fana has the agreement of its existing shareholders to make a new issue of shares on the stock market but has been informed by its bank that current circumstances are unsuitable. The bank has stated that if new shares were to be issued now they would be significantly under-priced by the stock market, causing Fana to issue many more shares than necessary in order to raise the amount of finance it requires. The bank recommends that the company waits for at least six months before issuing new shares, by which time it expects the stock market to have become strong-form efficient.

The financial press has reported that it expects the Central Bank to make a substantial increase in interest rate in the near future in response to rapidly increasing consumer demand and a sharp rise in inflation. The financial press has also reported that the rapid increase in consumer has been associated with an increase in consumer credit to record levels.

Required:

- (a) Discuss the meaning and significance of the different forms of market efficiency and comment on the recommendation of the bank that Fana waits for six months before issuing new shares on the stock market.

(15 Marks)

- (b) On the assumption that the Central Bank makes a substantial interest rate increase, discuss the possible consequences for Fana in the following areas:
- (i) sales
 - (ii) operating costs, and
 - (iii) earnings (profit after tax)

(10 Marks)

(Total: 25 Marks)

QUESTION 4

Nozipho Ltd is a small manufacturing company.

Summarised accounts for the last two years are presented below:

Balance sheets as at 31 March

		2005		2006
		E000		E000
Fixed assets		820		1,000
Current assets				
Stock	340		420	
Debtors	360		570	
Cash	<u>10</u>		-	
	710		<u> </u>	990
Current Liabilities				
Overdraft	140		250	
Trade creditors	280		510	
Other creditors	60		100	
	<u>480</u>		<u> </u>	860
		<u>1,050</u>		<u>1,130</u>
Ordinary shares (25 cents)		400		400
Profit and loss account		450		530
		<u>850</u>		<u>930</u>
Medium-term bank loan		200		200
		<u>1,050</u>		<u>1,130</u>

Profit and Loss Accounts for the years ending 31 March

	2005 E000	2006 E000
Sales	1,800	2,900
Gross profit	210	260
Profit before tax	120	160
Taxation	30	40
	<hr/>	<hr/>
	90	120
Dividend	<hr/>	<hr/>
	40	40
Retained profit	<hr/>	<hr/>
	50	80

Inflation during the last year was at the rate of 10%.

Required:

- (a) Explain what is meant by overtrading, and discuss how it might be recognised in a company. (7 Marks)
- (b) Evaluate whether Nozipho Ltd is overtrading. (9 Marks)
- (c) One of Nozipho's managers has suggested that the company would be more efficient if it reduced its operating cycle to the minimum possible period of time.
 - (i) Explain what is meant by the operating cycle of a company and how it might be determined. (4 Marks)
 - (ii) Discuss whether a company should always try to reduce the operating cycle to the minimum possible period. (5 Marks)

(Total: 25 Marks)

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

where r = discount rate

n = number of periods until payment

Discount rates (r)

Periods (n)	<i>Discount rates (r)</i>										
	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	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
	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	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

where r = interest rate

n = number of periods

Interest rates (r)

Periods (n)	<i>Interest rates (r)</i>										
	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	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.893	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.37	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.26	10.58	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.13	11.35	10.63	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.00	12.11	11.30	10.56	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.87	12.85	11.94	11.12	10.38	9.712	9.108	8.559	8.061	7.606	15
	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	1
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	2
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	3
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	4
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	5
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	6
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	7
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	8
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	9
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	10
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.586	4.327	11
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439	12
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533	13
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611	14
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675	15