# UNIVERSITY OF SWAZILAND FACULTY OF SOCIAL SCIENCE DEPARTMENT OF ECONOMICS

MAIN EXAMINATION PAPER: DECEMBER 2014

TITLE OF PAPER: PROJECT DEVELOPMENT AND FINANCIAL ANALYSIS

COURSE CODE: ECON 308

TIME ALLOWED: THREE (3) HOURS

# **INSTRUCTIONS:**

- 1. Answer Any Four (4) Questions,
- 2. The Relevant Annuity tables are provided

DO NOT OPEN THIS QUESTION PAPER UNTIL THE NVIGILATOR HAS GRANTED PERMISSION.

#### Question 1

Write explanatory notes on any five of the following concepts

- i) The major differences between the NPV and IRR methods
- ii) Contingent projects and mutually exclusive projects
- iii) Sensitivity Analysis
- iv) Time value of money
- v) Numeric and non-numeric models
- vi) Project and programme

[5 marks each]

#### Question 2

- a) What are the main features of the Critical Path Method (CPM) as a project planning and control technique? [5 marks]
- b) "Projects are a necessary ingredient to planning, and so is planning to projects", explain the logic of this statement. [5 marks]
- c) What is the project life cycle? Discuss the various phases of the project life cycle and explain why the first stage is regarded as an integral part of project planning?

  [15 marks]

## Question 3

a) Justify the case for project analysis and appraisal as part of the wider framework of project planning and management.
 [10 marks]

b) A firm is considering buying a jet aircraft, and may choose between a Mistrale and a Giselle. It expects the benefits of either aircraft to be E300, 000 a year for years 1-3 and E250, 000 a year for 4 & 5.

The costs of each aircraft are:

	<u>Giselle</u>	<u>Mistrale</u>
Purchase price	E250, 000	E150, 000
Annual running costs	E200, 000	E220, 000
Major overhaul - year 3	E100, 000	-
-years 2 & 4 Disposal proceeds (year 5)	E75, 000	E50, 000 50, 000

The firm estimates it costs of capital at 10%. Using the NPV method,

Which aircraft should be purchased? (Your answer should be supported by appropriate calculations) [15 marks]

c) A firm is reviewing an investment opportunity using the NPV criterion. It expects that it will have to invest E2 million at the start of the project. There will also be clearance costs at the end of the project (year 6) of E500, 000.

Cash flows of the project (in E' 000) are expected to be:

<u>Year</u>	1	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Sales revenue	1,000	1, 250	1, 400	1, 500	1,800
Operating costs	650	600	600	625	750

#### Required

If the firm requires a return of 20% on investment, should the project be undertaken?

[15 marks]

#### Question 4

- a) A company makes a product which sells for E15, while the variable cost per unit is E5, which covers labour and material. The fixed cost total is E75, 000 per annum which covers all the overhead costs. Using Break Even Analysis:
- i) Calculate the break even point and draw diagrams to show all the costs and break even point. [10 marks]
- ii) Assume the company is anticipating to produce 12,000 units, would you advise it to make this investment? Justify your answer by determining either a loss or profit associated with this amount of investment. [5 marks]
- b) What kinds of projects are best suited to break even analysis? What are the shortcomings of this technique? [10 marks]

#### **Question 5**

a) A firm is considering a proposal to manufacture widgets. There are two possible ways of entering the market.

#### Proposal 1

Develop a new factory. This will cost E2,500,000. Other cashflows are:-

Year	1	2	3	4	5
Sales	1000	1500	2000	4000	6000
Other costs	750	1000	1500	1000	1200

### Proposal 2

Buy an established company. This will have a cost of E4,000,000

Year	1	2	3	4	5
Sales	2000	2500	2750	4000	6000
Other costs	1250	1200	1400	1000	1200

The firm estimates its cost of capital at 8%. Which proposal (if either) should be accepted? Use the net present value method. [18 marks]

b) Discuss the disadvantages of the Payback Period Method (PBP), and explain what improvement the discounted PBP brings to the effectiveness of this measure?
[7 marks]

# APPENDIX C

	· [4]					1 1				· <u></u>
n	1%	2%	3%	4%	5%	6%	7%	8%	9%	10*
1	990	.980	.971	.962	.952	.943	.935	.926	.917	.90
2	980	.961 .942	.943 .915	.925	.907	.890	.873	.857	.842	.82
4	961	.924	.888	.889 .855	.864 .823	.840 .792	.816 .763	.794 .735	.772 .708	.75 .68
5	951	.906	.863	.822	.784	.747	.713	.681	.650	.63
6	.942	.888	.837	.790	.746	.705	.666	.630	.596	.50
7	933	.871	.813	760	.711	.665	.623	<i>-5</i> 83	.547	3
8	¹.þ23	.853	.789	.731	.677	.627	.582	.540	.502	40
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.4
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.3
11	.896	.804	.722	.650	.585	.527	.475	.429	.388	.3:
12 13	.887 .879	.789 .773	.701 .681	.625 .601	.557 .530	.497 .469	.444	.397 .368	.356	.3
14	.870	.758	.661	.577	.505	.442	.415 .388	.340	.326 .299	.2
15	-861	.743	.642	.555	.481	.417	.362	.315	275	.2
16	.853	.728	.623	.534	.458	.394	.339	.292	.252	.2
17	.844	.714	.605	.513	.436	371	.317	.270	.231	.1
18	.836	.700	.587	.494	.416	.350	.296	.250	.212	.1
19 20	828	.686	.570	.475	.396	.331	.277	.232	.194	.1
	.820	.673	.554	.456	.377	.312	.258	.215	.178	.1-
21 22	.8[1] :8 <b>03</b>	.660 . <del>6</del> 47	.538 .522	.439	.359	.294	.242	.199	.164	.1
23	.795	.634	.507	.422 .406	.342 .326	.278 .262	.226 .211	.184 .170	.150	.1
24	.788	.622	.492	.390	.310	.247	.197	.170	.138 .126	.1
25	780	.610	.478	.375	.295	.233	.184	.146	.116	.0:
30	742	.552	.412	.308	.231	.174	.131	.099	.075	.0.
40	.672	.453	.307	.208	.142	.097	.067	.046	.032	.0:
50	608	.372	.228	.141	.087	.054	.034	.021	.013	.0
n	11%	12%	13%	14%	15%	16%	17%	18%	19%	20
1	.901	.893	.885	.877	.870	.862	.855	.847	.840	.8:
2 3	.812 .731	.797	.783	.769	.756	.743	.731	718	.706	.6
4	.659	.712 .636	.693 .613	.675 .592	.658	.641	.624	.609	.593	.5
5	.593	.567	.543	.519	.572 .497	.552 .476	.534 .456	.516 .437	.499 .419	.4 4.
6	.535	.507	.480	.456	.432		#			
7	482	.452	.425	.400	.432 .376	.410 .354	.390 .333	.370 .314	.352 .296	.3 .2
8	.43#	.404	.376	.351	.327	.305	.285	.266	.249	2
9	.391	.361	.333	.308	.284	.263	.243	.225	.209	.1
10	.352	.322	.295	<i>.</i> 270	.247	227	.208	.191	.176	.10
11 12	317	.287	.261	.237	.215	.195	.178	.162	.148	.1
13	-286 -258	.257 .229	.231	.208	.187	.168	.152	.137	.124	.1
14	.232	.205	.204 .181	182 .160	.163 .141	.145 .125	.130	.116	.104	0.
15	.209	.183	.160	.140	.123	.108	.111 .095	,099 .084	.088 .074	0. 0.
16	.188	.163	.141	.123	.107	.093	.081	.071	.062	.0
17	.170 .153	.146	.125	.108	.093	.080	.069	.060	.052	.0.
18	.153	.130	.111	.095	.081	.069	.059	.051	.044	.0.
19	.138	.116	.098	.083	.070	.060	.051	.043	.037	.0.
20	.124	.104	.087	.073	.061	.051	.043	.037	.031	.0.
21 22	.112 .101	.093 .083	.077 .068	.064	.053	.041	.037	.031	.026	.0.
23	.091	074	.060	.056 .049	.046 .040	.038	.032	.026	.022	.0
24	.082	.066	.053	.043	.040	.033 .028	.027 .023	.022 .019	.018	0. 0.
25	.074	.059	.047	.038	.030	.024	.020	.016	.015 .013	.0
30	.044	.033	.026	-020	.015	,012	.009	.007	.005	.0.
10	.015	.011	.008	.005	.004	.003	.002	.001	.001	.0.
10	7									
50	.005	.003	.002	.001	.001	.001	.000	.000	.000	.00

n .	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
1	.826	.820	.813	.806	.800	.794	.787	.781	.775	.769
2	683	.672	.661	.650	.640	.630	.620	.610	.601	.592
3	564	.551	.537	.524	.512	.500	.488	.477	.466	.455
4	467	.451	.437	.423	.410	.397	.384	.373	.361	.350
5	386	.370	.355	.341	.328	.315	.303	.291	.280	.269
6	319	.303	.289	.275	.262	.250	.238	.227	.217	.207
7	263	.249	.235	.222	.210	.198	.188	.178	.168	.159
8	218	.204	.191	.179	.168	.157	.148	.139	.130	.123
9	180	.167	.155	.144	.134	125	.116	.108	.101	.094
10	149	.137	.126	.116	.107	.099	.092	.085	.078	.073
11	123	.112	.103	.094	.086	.079	.072	.066	.061	
12	102	.092	.083	.076	.069	.062	.057	.052	.047	.056 .043
13	084	.075	.068	.061	.055	.050	.045	.040	.037	.033
14	069	.062	.055	.049	.044	.039	.035	.032	.028	.025
15	.057	.051	.045	.040	.035	.031	.028	.025	.022	.020
	1 1									
16	.D47	.042	.036	.032	.028	.025	.022	.019	.017	.015
17	.039	.034	.030	.026	.023	.020	.017	.015	.013	.012
18	.032	.028	.024	.021	.018	.016	.014	.012	.010	.009
19	.027	.023	.020	.017	.014	.012	.011	.009	.008	.007
20	.022	.019	.016	.014	.012	.010	.008	.007	.006	.005
21	.018	.015	.013	.011	.009	.008	.007	.006	.005	.004
22	.015	.013	.011	.009	.007	.006	.005	.004	.004	.003
23	012	.010	.009	.007	.006	.005	.004	.003	.003	.002
24	.010	.008	.007	.006	.005	.004	.003	.003	.002	.002 -
25	.009	.007	.006	.005	.004	.003	.003	.002	.002	100.
30	003	.003	.002	.002	.001	.001	.001	.001	.000	.000
40	.000	.000	.000	.000	.000	.000	.000			.000
	1-1					1		.000	.000	
50	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	App.									
n	31%	32%	33%	34%	35%	36%	37%	38%	39%	40%
1	763	.758	.752	744	.741	735	720			71.4
2	.583	.574	.732 .565	.746 .557	-741 ية 349	.735	.730 .533	.725 .525	.719	.714 .510
3	.445	.435	.425	.416	.406	.398	.389		.518	.364
4	.340	.329	.320	.310	.301	.292	.284	.381 .276	.372	.260
5	259									
	` <u>I</u> .		740	731	つつて				.268	
6 7		.250	.240	.231	.223	.215	.207	.200	.193	.186
	.198	.189	.181	.173	.165	.215 .158	.207 .151	.200 .145	.193 .139	.186 .133
	151	.189 .143	.181 .136	.173 .129	.165 .122	.215 .158 .116	.207 .151 .110	.200 .145 .105	.193 .139 .100	.186 .133 .095
8	.151 .115	.189 .143 .108	.181 .136 .102	.173 .129 .096	.165 .122 .091	.215 .158 .116 .085	.207 .151 .110 .081	.200 .145 .105 .076	.193 .139 .100 .072	.186 .133 .095 .068
8 9	.151 .115 .088	.189 .143 .108 .082	.181 .136 .102 .077	.173 .129 .096 .072	.165 .122 .091 .067	.215 .158 .116 .085 .063	.207 .151 .110 .081 .059	.200 .145 .105 .076 .055	.193 .139 .100 .072 .052	.186 .133 .095 .068 .048
8 9 10	.151 .115 .088 .067	.189 .143 .108 .082 .062	.181 .136 .102 .077 .058	.173 .129 .096 .072 .054	.165 .122 .091	.215 .158 .116 .085	.207 .151 .110 .081	.200 .145 .105 .076	.193 .139 .100 .072	.186 .133 .095 .068
8 9 10 11	.151 .115 .088 .067	.189 .143 .108 .082 .062	.181 .136 .102 .077 .058	.173 .129 .096 .072 .054	.165 .122 .091 .067 .050	.215 .158 .116 .085 .063	.207 .151 .110 .081 .059	.200 .145 .105 .076 .055	.193 .139 .100 .072 .052	.186 .133 .095 .068 .048
8 9 10 11 12	.151 .088 .067 .051	.189 .143 .108 .082 .062 .047	.181 .136 .102 .077 .058 .043	.173 .129 .096 .072 .054 .040	.165 .122 .091 .067 .050 .037	.158 .116 .085 .063 .046	.207 .151 .110 .081 .059 .043	.200 .145 .105 .076 .055 .040	.193 .139 .100 .072 .052 .037	.186 .133 .095 .068 .048
8 9 10 11 12 13	.067 .051 .051 .050	.189 .143 .108 .082 .062 .047 .036	.181 .136 .102 .077 .058 .043 .033	.173 .129 .096 .072 .054 .040 .030	.165 .122 .091 .067 .050 .037 .027	.215 .158 .116 .085 .063 .046	.207 .151 .110 .081 .059 .043	.200 .145 .105 .076 .055 .040	.193 .139 .100 .072 .052 .037	.186 .133 .095 .068 .048 .035 .025 .018
8 9 10 !1 !2 !3	.051 .051 .051 .050 .050 .050	.189 .143 .108 .082 .062 .047 .036 .027	.181 .136 .102 .077 .058 .043 .033 .025	.173 .129 .096 .072 .054 .040 .030 .022	.165 .122 .091 .067 .050 .037	.215 .158 .116 .085 .063 .046	.207 .151 .110 .081 .059 .043 .031	.200 .145 .105 .076 .055 .040 .029	.193 .139 .100 .072 .052 .037 .027	.186 .133 .095 .068 .048 .035 .025
8 9 10 11 12 13	.067 .051 .051 .050	.189 .143 .108 .082 .062 .047 .036	.181 .136 .102 .077 .058 .043 .033	.173 .129 .096 .072 .054 .040 .030	.165 .122 .091 .067 .050 .037 .027	.215 .158 .116 .085 .063 .046 .034 .025	.207 .151 .110 .081 .059 .043 .031 .023	.200 .145 .105 .076 .055 .040 .029 .021	.193 .139 .100 .072 .052 .037 .027 .019	.186 .133 .095 .068 .048 .035 .025 .018
8 9 10 !1 !2 !3	.151 .088 .067 .051 .039 .030 .023 .017	.189 .143 .108 .082 .062 .047 .036 .027 .021	.181 .136 .102 .077 .058 .043 .033 .025 .018	.173 .129 .096 .072 .054 .040 .030 .022 .017	.165 .122 .091 .067 .050 .037 .027 .020 .015	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009
8 9 10 11 12 13 14 15	.151 .115 .088 .067 .051 .039 .030 .023 .017	.189 .143 .108 .082 .062 .047 .036 .027	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009
8 9 10 11 12 13 14 15 16 17 18	.151 .115 .088 .067 .051 .039 .030 .023 .017	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016	.181 .136 .102 .077 .058 .043 .033 .025 .018	.173 .129 .096 .072 .054 .040 .030 .022 .017	.165 .122 .091 .067 .050 .037 .027 .020 .015	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006
8 9 10 11 12 13 14 15 16 17 18 19	.151 .115 .088 .067 .051 .039 .030 .023 .017 .013 .010 .008	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006
8 9 10 11 12 13 14 15 16 17 18	.151 .115 .088 .067 .051 .059 .030 .023 .017 .013 .010 .008	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006
8 9 10 11 12 13 14 15 16 17 18 19 20	.151 .115 .088 .067 .051 .059 .030 .023 .017 .013 .010 .008	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005	.215 .158 .116 .085 .063 .046 .025 .018 .014 .010 .007 .007 .005 .004 .003	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002	.186 .133 .095 .068 .048 .035 .025 .013 .009 .006 .003
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	.151 .115 .088 .067 .051 .039 .030 .023 .017 .013 .010 .008 .006	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .005 .003 .002 .001
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	.151 .115 .088 .067 .051 .059 .030 .023 .017 .013 .010 .008	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .003	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .005 .003 .002 .001 .001
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	.151 .088 .067 .051 .051 .039 .030 .023 .017 .013 .010 .008 .006 .005	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004 .003 .002	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004 .003	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004 .003	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003 .002	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002 .002	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .002	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001 .001	.186 .133 .095 .068 .048 .035 .025 .013 .009 .006 .005 .003 .002 .001 .001 .001
8 9 10 11 12 13 14 15 16 17 18 19 220 21 222	.151 .115 .088 .067 .51 .539 .030 .023 .017 .010 .008 .006 .005 .003 .003	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004 .003 .002 .002	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004 .003	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004 .003	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003 .002	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002 .002	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .002	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002 .001 .001 .001	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001 .001 .001	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .003 .002 .001 .001 .001
8 9 10 11 12 13 14 15 16 17 18 19 220 221 222 223 224 25	.151 .088 .067 .051 .051 .039 .030 .023 .017 .018 .006 .005 .003 .002 .002 .002	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004 .003 .002 .002 .001	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004 .003 .003 .002 .001	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004 .003 .002 .002	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003 .002 .002 .001	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002 .002 .001 .001 .001	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .002 .001 .001 .001	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002 .001 .001 .001 .000	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001 .001	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .005 .003 .002 .001 .001 .001 .000 .000
8 9 10 11 11 12 13 14 15 16 17 18 19 220 221 222 23 24 25 30	.151 .088 .087 .051 .059 .030 .023 .017 .013 .010 .008 .005 .003 .002 .002 .002	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004 .003 .002 .002	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004 .003	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004 .003	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003 .002	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002 .002	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .002	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002 .001 .001 .001	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001 .001 .001	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .005 .003 .002 .001 .001 .001
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	.151 .088 .067 .051 .051 .039 .030 .023 .017 .018 .006 .005 .003 .002 .002 .002	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004 .003 .002 .001 .001 .000	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004 .003 .003 .002 .001	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004 .003 .002 .002	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003 .002 .001 .001	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002 .002 .001 .001 .001 .001	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .003 .002 .001 .001 .001 .001 .000	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002 .001 .001 .001 .000	.193 .139 .100 .072 .052 .037 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001 .001 .001 .000 .000	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .005 .003 .002 .001 .001 .001 .000 .000
8 9 10 11 12 13 144 15 16 177 18 19 220 221 222 23 24 25 30	.151 .088 .087 .051 .059 .030 .023 .017 .013 .010 .008 .005 .003 .002 .002 .002	.189 .143 .108 .082 .062 .047 .036 .027 .021 .016 .012 .009 .007 .005 .004 .003 .002 .001 .001	.181 .136 .102 .077 .058 .043 .033 .025 .018 .014 .010 .008 .006 .004 .003 .002 .001 .001	.173 .129 .096 .072 .054 .040 .030 .022 .017 .012 .009 .007 .005 .004 .003 .002 .001 .001 .001	.165 .122 .091 .067 .050 .037 .027 .020 .015 .011 .008 .006 .005 .003 .002 .002 .001	.215 .158 .116 .085 .063 .046 .034 .025 .018 .014 .010 .007 .005 .004 .003 .002 .002 .001 .001 .001	.207 .151 .110 .081 .059 .043 .031 .023 .017 .012 .009 .006 .005 .003 .003 .002 .001 .001 .001	.200 .145 .105 .076 .055 .040 .029 .021 .015 .011 .008 .006 .004 .003 .002 .002 .001 .001 .001 .000	.193 .139 .100 .072 .052 .037 .027 .019 .014 .010 .007 .005 .004 .003 .002 .001 .001 .001 .001 .000 .000	.186 .133 .095 .068 .048 .035 .025 .018 .013 .009 .006 .003 .002 .001 .001 .001 .000 .000

850 BASIC FINANCIAL MANAGEMENT

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