

**THE OPEN UNIVERSITY OF SRI LANKA
COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC
ADMINISTRATION
FINAL EXAMINATION – DECEMBER 2013
MCP 2610 – CORPORATE FINANCE
DURATION : THREE (03) HOURS**



Date : 12.12.2013

Time : 9.30 a.m. – 12.30 p.m.

Key instructions

- This paper consists of seven (07) questions
- Answer five (05) questions only
- Use of non Programmable Calculators are allowed.
- Show your workings clearly
- Start answering a new question on a separate page
- Any assumptions made should be indicated

Question No.1

- a. “The objective of financial management is not to maximize profit but the shareholder’s wealth”. Discuss. (4 marks)
- b. What are the key financial management decisions? Explain. (8 marks)
- c. Discuss what is meant by “Agency Theory” in the context of corporate setting. Your answer should address the relating concepts of agency theory such as *agency conflicts, agency cost, goal congruence etc.* (8 marks)

(Total 20 Marks)

Question No.2

- a. What is *time value of money*? What are its determinants? Explain (4 marks)
- b. Assume that you deposited Rs. 250,000 in a bank account today. The bank pays a rate of interest of 12% per annum and you expect to keep the deposit for five (5) years.
 - i. What is the value of your deposit at the end of the fifth (5th) year if the bank compounds interest annually?
 - ii. If the bank compounds interest monthly what is the value of your deposit after five years?
 - iii. With respect to part ii above, what is the effective rate of interest that you would receive from the bank? (6 marks)
- c. Assume you are the financial controller of Alpha PLC. On behalf of your organization you are required to negotiate a bank loan of Rs.5 000,000 from ABC Bank. As per the negotiation with bank’s credit officer the agreed terms of the loan are given below.
 - Loan is to be paid in five (5) equal annual installments.
 - Interest rate 20% (fixed)

- i. What factors that ABC Bank would consider when granting the loan to your firm?
- ii. What is the value of the annual loan installment?
- iii. Prepare the loan repayment schedule for the five years.

(10 Marks)

(Total 20 Marks)**Question No.3**

- a. You are the financial controller of Shanghi Express Engineers PLC (an overseas company). Your company has bid for a highway construction project in Sri Lanka. As per the terms of the project, after completion of the construction, your company can manage the highway for 10 years enjoying its income. After ten years of management the ownership will be transferred to the government of Sri Lanka. In this regards Sri Lankan government will have to pay Rs.15000mn (Rs.15bn) to your company. Other relevant information is given below.

- Construction will take three (3) years to complete and during the construction period expected cash outflows are given below.

Year 0	Rs.1000 mn
Year 1	Rs.2500 mn
Year 2	Rs.2500 mn
Year 3	Rs.2000 mn

- Highway will be opened and for operation and public are allowed to use from the forth (4th) year onwards.
- Estimated annual income is Rs.2200 mn
- Annual maintenance expense of the highway has been estimated to Rs.200mn.
- It is assumed that both operating income and expenses will remain constant during the first ten years of operation.
- Cost of capital of the project of Shanghi Express is 20%.

Required

1. Estimate the net cash flow of the project (show your figure in million)
2. Based on Net Present Value (NPV), give your recommendation for the project .
3. What are the other non financial factors that you would consider before making final decision about the project? (12 marks)

- b. Government of Sri Lanka Expects to construct an inland Harbor in the southern province. Initial investment of the project has been estimated to Rs.25000mn. it is expected that the project will generate an annual operating cash inflow of Rs.3300mn. The annual operating expenses of the project (excluding depreciation) have been estimated to be Rs.800 mn. It is expected these operating cash inflows and outflows will remain constant for an indefinite period in the future. Government bond rate is 12.5%.

Required

1. What is the project payback period?
2. Based on net present value (NPV) method, comment on the financial viability of the harbor. (08 marks)

(Total 20 Marks)

Question No.4

- a. List four (04) alternative sources of capital available for company to finance its long term assets. Rank them by considering their relative cost. (2 marks)
- b. Discuss the merits and demerits of using debt capital over equity. (4 marks)
- c. Cost of Equity of Alpha PLC is 20%. The company can borrow any amount of money at an interest rate of 16%. Corporate tax rate is 40%. Compute the Weighted Average Cost of Capitals (WACC) of Alpha, if debt financing represents 40% of the total capital. (2 marks)
- d. Capital structure of Gamma PLC consists of debt and equity capital only. Debt represents 30% of the capital structure and company has raised debt capital by issuing irredeemable debentures that are entitled to receive annual interest at a rate of 18%. Corporate tax rate is 40%. Government Treasury bill rate is 8% and market return is 18%. The assets beta factor applicable of Gamma PLC is 1.8.

You are required to calculate;

The weighted average cost of capital (WACC) of Gamma PLC. (You should show your workings for computation of cost of debt capital and equity capital separately) (6 marks)

- e. Mega PLC has a target capital structure of 60% equity and balance from debt capital. Company has recently paid a dividend per share of Rs. 2.50 for its equity shares. It is expected this dividend will grow at a constant rate of 6% in the future. Equity shares of the firm are currently traded in the market at Rs. 30/=. All debt capital has been financed at fixed annual interest of 15%. Corporate tax rate is 40%.
 - i. When it comes to consider the cost of debt capital for WACC estimation purpose why it is always adjusted for tax? (2 marks)
 - ii. Estimate the WACC of Mega PLC (4 marks)
- (Total 20 Marks)**

Question No.5

- a. What is meant by capital structure? Explain with a suitable example. (4 marks)
 - b. Discuss the following capital structure theories
 - i. Net income approach
 - ii. Net operating income approach
 - iii. Traditional theory
 - iv. Modigliani and Miller (M&M) theory (4x4=16 marks)
- (Total 20 Marks)**

Question No.6

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- a. Combank PLC has issued Rs.1000 debentures redeemable in 10 years at its face value. These debentures are entitled to receive an annual coupon interest at 15%. The remaining time to maturity of debentures is 5 years.
- If the investors required rate of return is 14%, what is the value of the debenture?
 - If the economy's average interest rate expects to come down further, how it will affect the market price debenture? (5 marks)
- b. As the financial controller of Mega PLC you purchased 100,000 shares of Buddy PLC at Rs.80/= per share as a short term investment. You received an interim dividend of R.4 and soon after the receipt of dividend you disposed all the shares at Rs.100 each. What is the total return you earned by investing in Buddy PLC? Show the working for dividend yield and capital gain separately. (5 marks)
- c. EPS of Gamma PLC has been Rs.20/= for the prior period of which the company has paid out 80% as dividend. Return on investment of Gamma PLC is 30%. As the financial controller you are in the process of valuing the share price of Gamma PLC. Your company's required rate of return is 26%.
- What is the dividend growth rate of Gamma PLC.
 - Estimate the value of a share of Gamma PLC. (5 marks)
- d. You are the financial controller of Lanka Venture PLC. You have been advised by the board of directors to make a valuation on Beta PLC for an acquisition purpose. You have been provided following information.
- Beta has reported an EPS of Rs.15 for the prior period.
 - Beta PLC has been adopted to make 100% dividend payout.
 - Number of ordinary shares of Beta PLC listed in the market 1,000,000.
 - Lanka Ventures required rate of return is 20%.
- Estimate the value of a share of Beta PLC.
 - What is the value you would recommend your top management to offer in acquiring the Beta PLC? (5 marks)

(Total 20 Marks)

Question No.7

- Explain with suitable real life examples what is meant by "ordinary annuity" and "annuity due" (5 marks)
- What is meant by dividend yield and capital yield that an investor may expect by investing in shares? (5 marks)
- Discuss the advantages of investing funds in the stock market as opposed to investing in real estate such as land and buildings. (5 marks)
- You are the financial controller of Mega PLC. You have been requested by the board to analyze the available investment opportunities in the market to invest the firm's surplus funds in the short run. What are the factors you consider when analyzing the alternative investment opportunities? (5 marks)

(Total 20 Marks)

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Formula Sheet

Debt to Equity	=	$\frac{\text{Fixed Interest Bearing Debt Capital}}{\text{Total Equity Capital}}$
Earnings Per Share	=	$\frac{\text{Profit after Tax} - \text{Preferred Dividend}}{\text{No. of Ordinary Shares issued}}$
Dividend Per Share	=	$\frac{\text{Ordinary Dividend Paid}}{\text{No. of Ordinary Shares issued}}$
Price Earning Ratio	=	$\frac{\text{Market Price Per Share}}{\text{Earnings Per Share}}$
Present value of a single cash flow	=	$FV \times 1 / (1 + r)^n$
Future value	=	$PV \times (1 + r)^n$
Present value of a perpetuity/ Zero growth model discount)	=	P/r (p - perpetual cash flow, r - rate of
PV of a growing perpetuity/ Gordon' model	=	$D_0 (1+g) / (r-g)$
Growth rate	=	Retention rate x Return on investment
Future value if the interest is compounded several times per year	=	$PV \times (1 + r/m)^{n \times m}$
Effective interest rate	=	$(1+r/m)^m - 1$
Present Value of an Annuity	=	$A \left[\frac{1 - 1/(1+r)^n}{r} \right]$
Future Value of an Annuity	=	$A \left[\frac{(1+r)^n - 1}{r} \right]$
r = interest rate, n = number of years, m = no. of interest compounding times per year		
Cost of equity (CAPM) K_e	=	$R_f + (R_m - R_f) \times b$
R_f = risk free rate, R_m = market return, b = beta factor (assets specific risk)		
Cost of equity (growth modal) K_e	=	$[D_0 (1+g) / MP] + 1$ (MP represents current market price)

Future value interest factor of \$1 per period at i% for n periods, FVIF(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.110	1.120	1.130	1.140	1.150	1.160	1.170
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210	1.232	1.254	1.277	1.300	1.323	1.346	1.369
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.368	1.405	1.443	1.482	1.521	1.561	1.602
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.518	1.574	1.630	1.689	1.749	1.811	1.874
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.685	1.762	1.842	1.925	2.011	2.100	2.192
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.870	1.974	2.082	2.195	2.313	2.436	2.565
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.076	2.211	2.353	2.502	2.660	2.826	3.001
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.305	2.476	2.658	2.853	3.059	3.278	3.511
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.558	2.773	3.004	3.252	3.518	3.803	4.108
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	2.839	3.106	3.395	3.707	4.046	4.411	4.807
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.152	3.479	3.836	4.226	4.652	5.117	5.624
12	1.127	1.268	1.426	1.601	1.796	2.012	2.252	2.518	2.813	3.138	3.498	3.896	4.335	4.818	5.350	5.936	6.580
13	1.138	1.294	1.469	1.665	1.886	2.133	2.410	2.720	3.066	3.452	3.883	4.363	4.898	5.492	6.153	6.886	7.699
14	1.149	1.319	1.513	1.732	1.980	2.261	2.579	2.937	3.342	3.797	4.310	4.887	5.535	6.261	7.076	7.988	9.007
15	1.161	1.346	1.558	1.801	2.079	2.397	2.759	3.172	3.642	4.177	4.785	5.474	6.254	7.138	8.137	9.266	10.539
16	1.173	1.373	1.605	1.873	2.183	2.540	2.952	3.426	3.970	4.595	5.311	6.130	7.067	8.137	9.358	10.748	12.330
17	1.184	1.400	1.653	1.948	2.292	2.693	3.159	3.700	4.328	5.054	5.895	6.866	7.986	9.276	10.761	12.468	14.426
18	1.196	1.428	1.702	2.026	2.407	2.854	3.380	3.996	4.717	5.560	6.544	7.690	9.024	10.575	12.375	14.463	16.879
19	1.208	1.457	1.754	2.107	2.527	3.026	3.617	4.316	5.142	6.116	7.263	8.613	10.197	12.056	14.232	16.777	19.748
20	1.220	1.486	1.806	2.191	2.653	3.207	3.870	4.661	5.604	6.727	8.062	9.646	11.523	13.743	16.367	19.461	23.106

Present value interest factor of \$1 per period at i% for n periods, PVIF(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038	0.030	0.024	0.020	0.016
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020	0.015	0.012	0.009	0.007
35	0.706	0.500	0.355	0.253	0.181	0.130	0.094	0.068	0.049	0.036	0.026	0.019	0.014	0.010	0.008	0.006	0.004	0.003
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005	0.004	0.003	0.002	0.001
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009	0.005	0.003	0.002	0.001	0.001	0.001	0.000	0.000

Period	Present value interest factor of an (ordinary) annuity of \$1 per period at i% for n periods, PVIFA(i, n).																
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.585
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.210
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.743
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.589
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.922
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.207
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.451
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.659
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029	4.836
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197	4.988
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342	5.118
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468	5.229
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575	5.324
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265	5.954	5.668	5.405
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373	6.047	5.749	5.475
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467	6.128	5.818	5.534
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550	6.198	5.877	5.584
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623	6.259	5.929	5.628
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077	8.422	7.843	7.330	6.873	6.464	6.097	5.766
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.427	8.694	8.055	7.496	7.003	6.566	6.177	5.829
35	29.409	24.999	21.487	18.665	16.374	14.488	12.948	11.655	10.567	9.644	8.855	8.176	7.586	7.070	6.617	6.215	5.858
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.779	8.951	8.244	7.634	7.105	6.642	6.233	5.871
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.915	9.042	8.304	7.675	7.133	6.661	6.246	5.880

**Future value interest factor of an ordinary annuity of \$1 per period at i% for n periods,
FVIFA(i,n).**

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.010	2.020	2.030	2.040	2.050	2.060	2.070	2.080	2.090	2.100	2.110	2.120	2.130	2.140	2.150	2.160	2.170	2.180
3	3.030	3.060	3.091	3.122	3.153	3.184	3.215	3.246	3.278	3.310	3.342	3.374	3.407	3.440	3.473	3.506	3.539	3.572
4	4.060	4.122	4.184	4.246	4.310	4.375	4.440	4.506	4.573	4.641	4.710	4.779	4.850	4.921	4.993	5.066	5.141	5.215
5	5.101	5.204	5.309	5.416	5.526	5.637	5.751	5.867	5.985	6.105	6.228	6.353	6.480	6.610	6.742	6.877	7.014	7.154
6	6.152	6.308	6.468	6.633	6.802	6.975	7.153	7.336	7.523	7.716	7.913	8.115	8.323	8.536	8.754	8.977	9.207	9.442
7	7.214	7.434	7.662	7.898	8.142	8.394	8.654	8.923	9.200	9.487	9.783	10.089	10.405	10.730	11.067	11.414	11.772	12.142
8	8.286	8.583	8.892	9.214	9.549	9.897	10.260	10.637	11.028	11.436	11.859	12.300	12.757	13.233	13.727	14.240	14.773	15.327
9	9.369	9.755	10.159	10.583	11.027	11.491	11.978	12.488	13.021	13.579	14.164	14.776	15.416	16.085	16.786	17.519	18.285	19.086
10	10.462	10.950	11.464	12.006	12.578	13.181	13.816	14.487	15.193	15.937	16.722	17.549	18.420	19.337	20.304	21.321	22.393	23.521
11	11.567	12.169	12.808	13.486	14.207	14.972	15.784	16.645	17.560	18.531	19.561	20.655	21.814	23.045	24.349	25.733	27.200	28.755
12	12.683	13.412	14.192	15.026	15.917	16.870	17.888	18.977	20.141	21.384	22.713	24.133	25.650	27.271	29.002	30.850	32.824	34.931
13	13.809	14.680	15.618	16.627	17.713	18.882	20.141	21.495	22.953	24.523	26.212	28.029	29.985	32.089	34.352	36.786	39.404	42.219
14	14.947	15.974	17.086	18.292	19.599	21.015	22.550	24.215	26.019	27.975	30.095	32.393	34.883	37.581	40.505	43.672	47.103	50.818
15	16.097	17.293	18.599	20.024	21.579	23.276	25.129	27.152	29.361	31.772	34.405	37.280	40.417	43.842	47.580	51.660	56.110	60.965
16	17.258	18.639	20.157	21.825	23.657	25.673	27.888	30.324	33.003	35.950	39.190	42.753	46.672	50.980	55.717	60.925	66.649	72.939
17	18.430	20.012	21.762	23.698	25.840	28.213	30.840	33.750	36.974	40.545	44.501	48.884	53.739	59.118	65.075	71.673	78.979	87.068
18	19.615	21.412	23.414	25.645	28.132	30.906	33.999	37.450	41.301	45.599	50.396	55.750	61.725	68.394	75.836	84.141	93.406	103.74
19	20.811	22.841	25.117	27.671	30.539	33.760	37.379	41.446	46.018	51.159	56.939	63.440	70.749	78.969	88.212	98.603	110.28	123.41
20	22.019	24.297	26.870	29.778	33.066	36.786	40.995	45.762	51.160	57.275	64.203	72.052	80.947	91.025	102.44	115.38	130.03	146.63