
CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATIONS

A2.1: STRATEGIC CORPORATE FINANCE

DATE: WEDNESDAY, 30 MARCH 2022

INSTRUCTIONS:

1. **Time Allowed: 3 hours 45 minutes** (15 minutes reading and 3 hours 30 Minutes writing).
2. This examination has two sections: A & B.
3. Section A has one Compulsory Question while section B has three optional questions to choose any **two**.
4. In summary attempt three questions.
5. Marks allocated to each question are shown at the end of the question.
6. Show all your workings where necessary.
7. The question paper should not be taken out of the examination room.

SECTION A

QUESTION ONE

Mulindi Investment Rwanda Limited (MIR Ltd) is a large conglomerate operating in Rwanda which deals in manufacturing of cement and other building materials. The company has several branches within and outside the country. The company's strategy is to ensure that it maximizes the value of shareholders. This can be achieved through the expansion strategy that has been one of the main strategies of the company. In the recent board meeting of the company, the board members approved two expansion strategies. These include expanding through mergers and acquisitions or through organic growth.

Expansion through mergers and acquisitions

Mulindi Investment Rwanda Limited has identified two potential mergers which are considered to be in line with the growth strategy of the company. These include:

Musanze Steel Rolling Mills Limited (MSRM Ltd)

MSRM Ltd deals in the manufacture of iron bars and iron sheets with a very high potential for growth since construction is one of the priorities of the government. The current capital structure of **MSRM Ltd** is composed of 60% debt and 40% equity. The pre-tax cost of debt is 8% whereas the equity beta is 1.7. The risk-free rate is 10% and the market return is 15%. MIR Limited will finance the merger by issuing both debt and equity. The expected value of the merger is FRW 500,000,000. This will be composed of FRW 350,000,000 bank loan at an annual interest rate of 12% and ordinary share capital of FRW 150,000,000. The issue costs on the debt instrument are 5% of the gross amount required and will be. Due to the importance of strengthening the construction sector, 40% of the required loan will be acquired at a subsidized interest rate of 8%. Both loans are payable in a period of five years. The expected free cash flows of Musanze Steel Rolling Mills Limited for the next five years are demonstrated in table 1:

Table 1: MSRM Ltd cash flow in FRW “000”

Period	Free cash flows FRW (‘000’)
1	80,000
2	120,000
3	180,000
4	160,000
5	195,000

The corporate income tax rate is 30% and paid in the same tax period.

Bereshe General Hardware Limited (BGH Ltd)

BGH Limited is located in Musanze town with branches all over the country. The company is a leading distributor of construction materials in the country MIR Limited is evaluating a merger with **BGH Limited**. MIR Limited will issue shares to the shareholders of Bereshe General Hardware Limited. Below is detailed information of the two companies:

	Mulindi Investment Rwanda Limited FRW (000)	Bereshe General Hardware Limited FRW (000)
Earnings after tax	345,000	240,000
Number of shares	8,000	5,000
Price Earning (P/E)	20	15

It is expected that after the merger, the P/E of the group will be 19.

Expansion through Organic growth

The board members MIR Limited have approved investing in a new product line which is related to the company's growth strategy. The project teams have identified one project which they think fits in the company's main activities of building materials, which equally supports investing in steel rolling mills. Investing in the new project will require the company to purchase a new machine at a cost of FRW 2,000,000,000. The machine is expected to have a useful life of five years with a residual value of FRW 300, 000,000 at the end of year five. It is expected that the machine will be installed in an old building that was constructed 10 years ago at a cost of FRW 60,000,000. The project will require an investment in working capital at the start of the project of FRW 30,000,000 and will remain at this level throughout the entire project but expected to be recouped at the end of the project. The machine will attract a tax allowable depreciation of 25% on reducing balance method. The marketing department has made the following forecasts of the sales demand for the next five years.

Period	2022	2023	2024	2025	2026
Sales Demand in units	300,000	450,000	500,000	650,000	720,000

The selling price per unit is expected to be FRW 2,000 whereas the variable costs are expected to be FRW 800 per unit. Due to the expected inflation in the economy, the selling price is expected to increase by 5% per year whereas the variable costs will increase by 4% per year. The incremental fixed production costs are expected to be FWR 20,000,000 per year and are expected to increase by 3% due to inflation in the economy. The general inflation rate in the economy is 7% and the real cost of capital is 14%. The corporate income tax rate is 30% paid in the same period.

Best Bite Rwanda Limited (BBR Ltd)

Best Bite Rwanda Limited is a subsidiary of Best Bite International PLC which owns several restaurants in different countries. **BBR** Limited was opened in 2015 and it enjoyed a rapid growth in the first three years due to its renowned brand product known as "Chicken Rice". Within a period of three years BBR Limited opened different branches in the various parts of the country. However, due to the COVID-19 pandemic which affected many of the hospitality businesses, in 2020 the company incurred a huge loss that has affected the capital base of the company. In the board meeting that sat on 31/12/2020, the Finance Director expressed concerns regarding high levels of gearing and high operating costs. In the report, the Finance Director highlighted that branch in Rwamagana, Nyagatare and Nyanza are currently loss making. Although the Musanze and Rubavu branch are making profit, they have a lot of assets that are idle. After analysis of the concerns of

the Financial Director, coupled with evidence from the financial statements, the board members concurred that they need to restructure some of the company's activities if they are to remain in business.

Required:

- (a) Using adjusted present value (APV) advise the management of Mulindi Investment Rwanda Limited on whether they should go on with the acquisition of Musanze Steel Rolling Mills Limited. (17 Marks)
- (b) i. Compute the purchase cost of Bereshe General Hardware Limited (3 Marks)
ii. Evaluate whether Mulindi Investment Rwanda Limited should acquire Bereshe General Hardware Limited (2 Marks)
iii. Advise the shareholders of Bereshe General Hardware Limited as to whether they should accept a merger (2 Marks)
- (c) Evaluate the organic growth strategy using the internal rate of return (IRR) (17 Marks)
- (d) Explain to the shareholders of Best Bite Rwanda Limited on the best approaches to restructure their business activities. (9 Marks)
- (Total: 50 Marks)**

SECTION B

QUESTION TWO

(a) The Managing Director (MD) of Muvandi Investment Rwanda Limited (MIR Ltd) attended the Institute of Certified Public Accountants Rwanda (ICPAR) workshop on effective management of the financial resources if the company is to maximize the wealth of its shareholders. The presenter emphasized diversification as one way to minimize risks and maximizing shareholders' wealth. The MD was very much interested in what was presented on one hand but was perturbed with some of the terms that were used by the presenter such as systematic risks, portfolio, diversification, and market return. After the workshop, the MD called for a senior management meeting where he tasked the Finance Director to identify a portfolio that maximizes the company's value. Two projects have been identified which the management think that if the company invests in those projects, it will be able to maximize the wealth of the shareholders. The detailed information relating to return and their respective probability of the two projects are as below:

Probability	Return project A	Probability	Returns project B
0.1	10%	0.2	-10%
0.4	-8%	0.15	15%
0.3	20%	0.4	20%
0.2	15%	0.25	8%

It is expected that the company will invest 60% into project A and 40% in project B. The systematic risks for project A and B are 1.8 and 1.6 respectively whereas the risk-free rate is 8%. The expected market return is 10.25%

Required:

- i. Using the Capital Asset Pricing Model (CAPM), advise the management of Muvandi Investment Limited on the return of the portfolio** (8 Marks)
- ii. Discuss any three applications of CAPM in the finance theory** (3 Marks)

(b) Muvandi Investment Rwanda Limited (MIR Ltd) imports and exports various home use items with major customers and suppliers in Kenya. On 1 January 2022 the company imported various items from Kenya worth 20,000,000 Kenyan shillings (KES) on credit payable in six months that is 30 June 2022. On the same date, the company exported goods worth 9,500,000 KES on credit and the goods will be paid on 30 June 2022 During the recent board meeting, the Finance Director expressed concerns on the deterioration of the Rwandan Franc against the Kenyan shilling and advised the board members to hedge against foreign currency risks if they are to avoid losses associated with the foreign currency movements. Below are the relevant exchange rates of FRW against KES.

Dates	Buying FRW/KES	Selling FRW/KES
1/1/2022	8.5	9.5
28/2/2022	10.1	11.5
30/6/2022	12.5	14.5
Premium	1.2	1.5

The borrowing and deposit rates in both Rwanda and Kenya are as below:

	Rwanda	Kenya
Borrowing rate per year	16%	11%
Deposit rate	10%	8%

Required:

Advise management on the effective method to hedge against foreign currency risks

(10 Marks)

(c) Due to the increase in the credit sales in 2021, the company has had imbalances in the cash flows and therefore applied for a loan of FRW 100,000,000 on 1/1/2022 in one of the commercial banks in the country to be able to finance its working capital. The loan is repayable within six months that is on 30 June 2022 at an annual interest rate of 14%. On 31 March 2022, the Finance Director was concerned with the increase in interest rates and therefore entered into a forward agreement with one of the commercial banks in the country to buy interest at 15%.

Required:

Evaluate the forward rate agreement if the spot rate on 30/6/2022 is:

i. 12%

(2 Marks)

ii. 17%

(2 Marks)

(Total: 25 Marks)

QUESTION THREE

(a) While taking a cup of coffee in one of the hotels in Kigali, three Chief Executive Officers (CEOs) of three big companies in the country discussed on how they can maximize shareholders' wealth through their dividend policy. Below is the summarized financial report of three companies:

	2018	2019	2020	2021
	FRW (000)	FRW (000)	FRW (000)	FRW (000)
Urwagwa Ltd				
Earnings after tax	240,000	400,000	320,000	500,000
Dividends distributed	100,000	100,000	100,000	100,000
Number of shares	2,000	2,000	2,000	2,000
Required investment	100,000	250,000	300,000	120,000
Uronoze Ltd				
Earnings after tax	200,000	120,000	650,000	800,000
Dividends distributed	40,000	24,000	130,000	160,000
Number of shares	2,000	2,000	2,000	2,000
Required investment	50,000	100,000	200,000	350,000
Urusindisha Ltd				
Earnings after tax	250,000	100,000	240,000	500,000
Dividends distributed	0	80,000	50,000	200,000
Number of shares	2,000	2,000	2,000	2,000
Required investment	220,000	0	150,000	250,000

Required:

Using relevant calculations, identify and evaluate the dividend policy adopted by each company (12 Marks)

(b) The summarized statement of financial position below relates to Akange Limited for the financial year ended 31 December 2021.

Items	FRW (000)
Non-current assets	
Property, plant and equipment	720,000
Current assets	280,000
Total assets	1,000,000
Equity and liabilities	
Equity	
Ordinary share capital of FRW 1000 each	500,000
Non-current liabilities	
10% irredeemable debenture with a par value of FRW 1000 each	200,000
Current liabilities	300,000
Total equity and liabilities	1,000,000

Other relevant information

1. The cost of ungeared business is 14% and the current market price of shares is FRW 950 per share for ungeared business.
2. The irredeemable debenture has a market price of FRW 1,100 per debenture. The corporate income tax rate is 30%.
3. The company is proposing to issue an additional debenture of FRW 100,000,000 to finance its proposed investment. The cost of the debt will remain the same.

Required:

- i. Determine the optimal value of the firm under the Modigliani and Miller theory (2 Marks)
- ii. Show the effect of issuing an additional debenture on the value of equity (2 Marks)
- iii. Show the effect of issuing an additional debt on the weighted average cost of capital (9 Marks)

(Total: 25 Marks)

QUESTION FOUR

(a) Ndahiro Rwanda Limited (NR Ltd) deals in general merchandised business with a number of different outlets which are used as distribution channels. Most of the company's sales are on credit with only 10% on cash basis. The total annual sales in 2021 were FRW 400,000,000. The marketing department has been facing challenges in selling the company's product which has been witnessed by the decrease in sales by 20% as compared to 2020 despite the fact that 2020 was a year of lockdowns due to COVID-19 pandemic. The current credit policy is 15 days, but customers pay in 60 days. As a way to revamp the selling strategies, the Marketing Director recommended a change in the credit policy. The Marketing Director recommended that the company should increase the credit period to 90 days and introduces a discount of 4% for early payments. The Director further pointed out that increasing the credit period will lead to an increase in sales by 25% which is in line with the company's budget. The gross profit margin on sales is 28%. It is estimated that, if a discount is

introduced, 20% of the customers will take on the discount and pay within 15 days as per the company's credit policy.

It is further estimated that 65% of the customers will pay within 90 days, whereas 15% of the customers will continue paying in 60 days. The current level of bad debts is valued at 2% of credit sales. If a new credit period is extended, the bad debt will increase to 3% of credit sales. Receivables are financed by an overdraft at a rate of 15%.

Required:

Advise management on whether the current credit policy of the company should be changed.

(10 Marks)

(b) Ndahiro Rwanda PLC is a Public Limited Company listed on Rwanda Stock Exchange (RSE). The company's board members are as below:

Board members	Roles	Skills and experience
Mr. Ndahiro Felix	Chief Executive Officer (CEO) and Chairman board of directors	He has a Master of Business Administration (MBA) and is a Certified Public Accountant (CPA) with over 20 years of experience.
Mrs. Ndahiro Jean is a wife to Mr. Ndahiro Felix the CEO and Chairman Board of Directors	Finance director	Has Bachelor of Commerce Accounting B.COM and Certified Public Accountant
Mr Kamwezi Frank	Non-executive director	An entrepreneur with 10 years' experience
Ms. Kayitesi Madina	Non-Executive director	She is in mother's Union club with Mrs. Ndahiro Jean
Mr Ndahiro Junior is a son to Mr and Mrs. Ndahiro	Executive director	He is aged 11 years and currently in primary six but has been helping his father Mr. Ndahiro Felix in the business since he was eight years.
Mr Baguma Fred	Non-Executive director	A banker with over 20 years of experience.
Mrs. Kandange Nadine	Non-executive director	A consultant in real estates with 10 years of experience.

Mrs. Ndahiro Jean heads the Appointment and the Audit Committee whereas Ndahiro Junior heads the Remuneration Committee. In the recent board meeting, one of the board members expressed concerns as to why the company continues to spend money on community work yet the business is experiencing hard times as a result of COVID-19.

Required:

i. Comment on the corporate governance issues in Ndahiro Rwanda PLC. (8 Marks)

ii. Provide an explanation to one of the board members that expressed concerns as to why the company should continue spending money on community work. (4 Marks)

(c) Ndahiro Rwanda PLC is interested in raising more capital to finance its operations. However, the company is unable to obtain the required funds on the local market.

Required:

Explain any three money market instruments that Ndahiro Plc can use to raise the required capital in international money market

(3 Marks)

(Total 25 Marks)

Present value interest factor of Frw1 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%	19%	20%
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	0.840	0.833
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	0.706	0.694
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	0.593	0.579
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	0.499	0.482
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	0.419	0.402
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	0.352	0.335
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	0.296	0.279
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	0.249	0.233
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	0.209	0.194
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	0.176	0.162
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	0.148	0.135
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	0.124	0.112
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	0.104	0.093
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	0.088	0.078
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	0.074	0.065
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	0.062	0.054
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	0.052	0.045
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	0.044	0.038
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	0.037	0.031
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	0.031	0.026
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	0.013	0.010
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	0.005	0.004
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	0.002	0.002
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	0.001	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	0.000	0.000

Present value interest factor of an (ordinary) annuity of Frw1 per period at i% for n periods, PVIFA(i,n).																				
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
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	0.840	0.833
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	1.566	1.547	1.528
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	2.174	2.140	2.106
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	2.690	2.639	2.589
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	3.127	3.058	2.991
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	3.498	3.410	3.326
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	3.812	3.706	3.605
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	4.078	3.954	3.837
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	4.303	4.163	4.031
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	4.494	4.339	4.192
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	4.656	4.486	4.327
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	4.793	4.611	4.439
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	4.910	4.715	4.533
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	5.008	4.802	4.611
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	5.092	4.876	4.675
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	5.162	4.938	4.730
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	5.222	4.990	4.775
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	5.273	5.033	4.812
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	5.316	5.070	4.843
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	5.353	5.101	4.870
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	5.467	5.195	4.948
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	5.517	5.235	4.979
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.644	8.855	8.176	7.586	7.070	6.617	6.215	5.858	5.539	5.251	4.992
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	5.548	5.258	4.997
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	5.554	5.262	4.999

