



Department of Finance and Investment Management

Intermediate Finance B

ADFM007/S3PFMQ5

LAST ASSESSMENT OPPORTUNITY 21 November 2016

Time: 180 minutes writing time

Marks: 100

Assessors: Mr W Smith

Moderators: Mrs M McGill

External moderator: Mrs M Boshoff

INSTRUCTIONS:

- This question paper consists of **17 pages**. Please ensure that you have all pages.
- You are allowed 180 minutes to answer this question paper.
- ALL answers must be written in the answer books provided. Answers or notes written on the question paper will **not** be submitted for marking.
- Silent, non-programmable calculators may be used, unless otherwise instructed.
- **START EACH QUESTION ON A NEW PAGE**
- **HAND IN YOUR QUESTION PAPER**
- **HAND IN ALL ANSWER BOOKS.**
- The answer books will **NOT** be marked if the question paper was not handed in.
- **NO CANDIDATE IS PERMITTED TO LEAVE THE EXAMINATION HALL IN THE LAST FIFTEEN MINUTES OF THE ASSESSMENT OPPORTUNITY PERIOD.**

Section	Marks	Time
A	20	36 minutes
B	30	54 minutes
C	50	90 minutes
	100	180 minutes

SECTION A

[20 marks]

QUESTION 1

REQUIRED:

Select the correct option and colour the block of the corresponding letter of the answer on the answer sheet provided.

Question 1.1

A company has a total value of R2 million and its debt is valued at R600, 000. The before tax cost of debt is 12% and the cost of equity is calculated to be 15%. Assuming a tax rate of 28%, what is the weighted average cost of capital?

- A.** 14.1%
- B.** 15%
- C.** 13.1%
- D.** 14.3%

(2)

Question 1.2

According to CAPM, companies with larger beta will have

- A.** High required returns.
- B.** Low expected returns
- C.** High weighted average cost of capital
- D.** None of the above.

(2)

Question 1.3

What is the weighted average cost of capital of a South African company with the following information:

D/E ratio	3
Ke	14%
Kd	8%

- A.** 1.4%
- B.** 10.5%
- C.** 11.94%
- D.** 12.5%

(2)

Question 1.4

For purposes of the calculation of WACC, when calculating the cost of convertible cumulative redeemable preference shares which are convertible at the option of the directors the following applies:

- A.** Assume that they will be converted to ordinary shares since ordinary shares are cheaper than preference shares.
- B.** First you must determine if the preference shares will be converted to ordinary shares by calculating the market value at the date of conversion.
- C.** Determine if they are traded on the exchange or not, as this will determine if they can be converted to ordinary shares.
- D.** None of the above.

(1)

Question 1.5

Scribs Ltd is trying to decide whether to lease or buy some new equipment. The equipment costs R59 000 and has a 3-year life. The equipment will be worthless after the 3 years and will have to be replaced. The company has a tax rate of 28%, the cost of borrowed funds is 10% and equipment is depreciated on a straight line basis. Depreciation is equal to wear and tear. The equipment can be leased for R22 000 a year. What is the total incremental cash flow in year 1?

- A.** (R6 160)
- B.** (R15 840)
- C.** (R21 347)
- D.** (R22 000)

(2)

Question 1.6

Cargo Ltd is trying to decide whether to lease or buy some new equipment. The equipment costs R100 000. The equipment will be worthless after 4 years and will have to be replaced. The equipment can be leased for 4 years, if the incremental cash flows for leasing amount to negative R34 000 and the first cash flows occurs in year 1:

The after tax interest rate that will result in the net advantage to leasing (NAL) being zero can be calculated as:

- A.** 13.54%
- B.** 14.78%
- C.** 25%
- D.** Cannot be calculated

(2)

Question 1.7

The incremental cash flows of leasing consider which of the following?

- I.** The cost of the asset
 - II.** The lease payment amount
 - III.** The applicable tax rate
 - IV.** The annual depreciation expense
-
- A.** I and III
 - B.** I, II and III
 - C.** I, II, and IV
 - D.** I, II, III, and IV
- (1)**

Question 1.8

Scandal Ltd has 10 million R1.00 ordinary shares in issue that have a current market value of R2.00 per share. The company also has non-redeemable loan capital in issue with a nominal value of R20 million that is quoted at R150 per R100 nominal value. The cost of ordinary shares is estimated at 15% and the rate of interest on the loan capital is 12%. The rate of corporation tax is 25%.

What is the weighted average cost of capital for the company?

- A** 13.0%
 - B** 11.4%
 - C** 11.0%
 - D** 13.2%.
- (2)**

Question 1.9

Which ONE of the following methods of investment appraisal is consistent with the objective of shareholder wealth maximisation?

- A** Net present value
 - B** Internal rate of return
 - C** Accounting rate of return
 - D** Payback period
- (2)**

Question 1.10

Which of the following companies will be the best placed to adopt more debt into its capital structure, all other factors being equal?

- A.** A recently formed company that generates low cash-flows
 - B.** An established retailer that generates most of its sales on credit
 - C.** An established retailer that generates most of its sales for cash
 - D.** An established retailer that has a history of volatile earnings
- (1)**

Question 1.11

In the spot market, \$1 is currently equal to Aus\$ 1.42. The expected inflation rate is 3% in Australia and 2% in the USA. What is the expected exchange rate one year from now if relative purchasing power parity exists?

- A.** Aus\$ 1.4058
- B.** Aus\$ 1.4062
- C.** Aus\$ 1.4286
- D.** Aus\$ 1.4342

(2)

Question 1.12

The forward exchange rate _____.

- A.** is the rate today for exchanging one currency for another for immediate delivery
- B.** is the rate today for exchanging one currency for another at a specific future date
- C.** is the rate today for exchanging one currency for another at a specific location on a specific future date
- D.** is the rate today for exchanging one currency for another at a specific location for immediate delivery

(1)

Question 1.13

The spot exchange rate _____.

- A.** is the rate today for exchanging one currency for another for immediate delivery
- B.** is the rate today for exchanging one currency for another at a specific future date
- C.** is the rate today for exchanging one currency for another at a specific location on a specific future date
- D.** is the rate today for exchanging one currency for another at a specific location for immediate delivery

(1)

End of Section A

SECTION B

[30 marks]

QUESTION 2

(15 marks)

Browne Ltd., a luxury brands company based in Johannesburg, maintains a debt-equity ratio of 0.25 and follows a constant dividend/earnings policy with a 30% dividend pay-out rate.

The company has before tax profits of R2 685 000 for the year and requires R1 700 000 for new investments. The CFO of Browne Ltd. has informed you via email that a pool of funds will always be used to finance new investments, and that retained earnings is preferred above new share issues. The company tax rate is 28%

REQUIRED:

- 2.1 In your own words, briefly describe the main decision that dividend policies are concerned with. **(2)**
- 2.2 Calculate the total amount that Browne Ltd. will pay out in dividends this year. **(3)**
- 2.3 Calculate the retained earnings available for the investment after dividends have been paid. **(5)**
- 2.4 Assume the retained earnings after dividend pay-out is equal to R1 300 000. Briefly discuss the dilemma that arises due to the 30% dividend pay-out rate and identify three potential courses of action for Browne Ltd **(4)**

QUESTION 3

(10 marks)

The methods for calculating the Present Value and Future Value of money were established as far back as the 13th century, when Italian mathematician Leonardo Fibonacci published his influential work, the Liber Abaci. This gave rise to the Net Present Value method, which is a very important and widely used method in corporate finance today

REQUIRED:

- 3.1 Identify the four main assumptions of the NPV method, and briefly discuss whether each of them are valid in the real world. **(8)**
- 3.2 Briefly explain the main reason why the NPV method is considered superior to the IRR method. **(2)**

QUESTION 4

(5 marks)

Orange Limited has R10 million that it keeps in cash in order to replace assets that are due for replacement in 6 months from today. This cash will not be needed until then, and currently earns 4% per annum in a bank account. A 6 month forward contract can be obtained at the bank for R10.20 per US Dollar (\$). Uncle Sam Bank, in the USA, offers an interest rate of 2% per annum.

Current spot rates are:
1USD = R9.90

REQUIRED:

- 4.1 Calculate the arbitrage profit that Orange Limited can realize by using the R10 million for 6 months. **(5)**

End of Section B

SECTION C

[50 marks]

QUESTION 5

(25 marks)

Outdoor World Limited is an outdoor and camping retailer. The company operates through a chain of outlets across South Africa. It listed on the JSE Limited in 2006 and has since maintained a healthy, steady dividend payout.

The last two years' financial information is as follows:

Outdoor World Limited

YEAR	2011	2010
Statement of Comprehensive Income (000's)	ZAR	ZAR
Turnover	2 869 031	2 201 721
Gross profit	1 391 823	1 058 107
Interest & Finance Charges	55 911	25 292
Taxation	208 920	172 888
Profit after Interest & Tax	493 991	355 580
Statement of Financial Position (000's)	ZAR	ZAR
Shareholders Interest (Equity)	1 560 472	1 066 481
Long Term Liabilities	538 308	268 379
Current Liabilities:	401 223	360 730
Accounts payable	177 287	326 163
SARS	23 480	34 567
Bank overdraft	200 456	-
Fixed Assets	1 209 804	531 042
Intangible Assets	532 781	441 872
Current Assets:	757 418	836 742
Bank & cash	-	534 775
Accounts receivable	556 429	180 980
Inventory	200 989	120 987

Additional information:

- During the year the company opened several new stores. Most of these were opened during the second half of the year. Turnover in all of these were in line with budgets, but the sales targets budgeted for the new stores were quite low, as management were mindful of the fact that the new stores will need time to find their feet and are only expected to run at full capacity in 12 to 18 months from opening.
- All the expansions were funded from retained earnings. This caused some cash flow challenges which management overcame by accessing the company's overdraft facility. The major investments during the expansions were in shop fitting and interiors, storage equipment and inventory.

- As a result of the cash flow pressures, the directors are considering not declaring a dividend and to rather appeal to the shareholders to accept that the expansion required a lot of cash and to rather look forward to larger dividends in the future.
- Suppliers allow 90 days credit to Outdoor World.
- Generally Outdoor World only sells for cash only, but in order to boost sales at the new outlets, customers are allowed to buy on 60 days credit terms for a limited period only. At some of the new outlets the implementation of the credit policy was careless, which resulted in some customers being extended credit without a thorough credit check being done.

REQUIRED:

Prepare a report to the directors of Outdoor World Limited in which you calculate effectiveness/efficiency ratios and include practical suggestions on how to improve the effectiveness/efficiency. Your analysis should focus specifically on:

- Inventory
- Debtors
- Assets and
- Creditors.

(25)

QUESTION 6

(25 marks)

Skydeck (Pty) Ltd is a fuel retailing company which buys petrol and diesel from oil companies and sells them to the public through various service stations located across Johannesburg. Skydeck (Pty) Ltd recently completed the construction of a new service station which straddles the N3 highway. The service station includes a convenience store and café and serves both north and south bound traffic on the highway. Motorists are able to access the service station through on and off ramps from the highway.

The board of directors of Skydeck (Pty) Ltd recently received a letter of intent from a leading oil company, PB Ltd, at the beginning of 2014. In the letter PB Ltd expresses its intention to purchase the new service station as a separate business entity from Skydeck (Pty) Ltd. The directors of Skydeck (Pty) Ltd are currently attempting to estimate how much such an operation could be sold for and have asked for your assistance.

You obtained the following information:

- The estimated sales volumes for the first year of operation is 41 000 000 litres of petrol and 10 000 000 litres of diesel.
 - The current gross profit margin on petrol is 99c per litre, while the gross profit on diesel is 60c per litre.
- Cash flows are expected to grow at the following *real*/growth rates:
 - 2015: 9%;
 - 2016: 14%;
 - 2017: 18%;
 - 2018: 11%
- Lottery machines will be installed and operated on behalf of the National lottery who will pay Skydeck (Pty) Ltd a fixed rental of R1 000 000 per annum. Lottery rental is not considered a core part of the service station's operations. The rental yield on lottery machines is 14%.
- The Express shop and café sales amount to R1 per litre of *petrol* sold. Income from the express shop and café is considered a core part of the business.
- 30 000 labour hours will be required to operate the service station in the first year and the labourers will be paid a wage of R300 per hour.
- Four supervisors and two managers will be required at R10 000 per month and R30 000 per month, respectively.
- Other expenses including electricity, telephone, royalties etc. are estimated at a total of R38 000 000 per year.
- Skydeck (Pty) Ltd is entitled to a wear and tear allowance of R20 000 000 per annum.
- Capital maintenance expenditure will amount to R15 million in 2014 and is expected to increase with inflation.

- The service station is not expected to hold an investment in working capital as all sales and purchases of fuel are for cash. The oil company supplying the fuel will deliver on a just-in-time basis.
- Skydeck (Pty) Ltd's weighted average cost of capital is 25%. Assume a tax rate of 28% and inflation of 6% per annum for the foreseeable future.
- Skydeck (Pty) Ltd incurred specific borrowing for the construction of the new service station. The current market value of the long term loan is R10 000 000.

REQUIRED:

Assist the board of directors of Skydeck (Pty) Ltd by calculating the value of the new service station straddling the N3 highway using the free-cash flow technique. Assume that the valuation is performed at the beginning of 2014. **(25)**

End of Section C

End of Question Paper



**Department of Finance and Investment Management/
*Departement Finansies en Beleggingsbestuur***

Intermediate Finance B

Formulae and Appendices / *Formules en Bylae*

2016

TIME VALUE OF MONEY

$$FV_n = PV_0 \times (1+i)^n$$

$$PV_0 = \frac{FV_n}{(1+i)^n} \quad PV_0 = FV_n \times (1+i)^{-n}$$

$$FVA = PMT \times \left[\frac{(1+i)^n - 1}{i} \right]$$

$$PVA = PMT \times \left[\frac{1 - (1+i)^{-n}}{i} \right]$$

$$PV_{\text{Perp}} = \frac{PMT}{i}$$

$$EAR = \left(1 + \frac{i}{m} \right)^m - 1$$

$$FV = PV_0 \times \left(1 + \frac{i}{m} \right)^{m \times n}$$

Table	1:	Future	value	of	R1	at	the	end	of	<i>n</i>	periods					
Tabel 1: Toekomstige waarde van R1 aan die einde van <i>n</i> periodes																
<i>n</i>	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	1.0000	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200	1.1300	1.1400	1.1500
2	1.0000	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100	1.2321	1.2544	1.2769	1.2996	1.3225
3	1.0000	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310	1.3676	1.4049	1.4429	1.4815	1.5209
4	1.0000	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	1.3108	1.3605	1.4116	1.4641	1.5181	1.5735	1.6305	1.6890	1.7490
5	1.0000	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	1.4026	1.4693	1.5386	1.6105	1.6851	1.7623	1.8424	1.9254	2.0114
6	1.0000	1.0615	1.1262	1.1941	1.2653	1.3401	1.4185	1.5007	1.5869	1.6771	1.7716	1.8704	1.9738	2.0820	2.1950	2.3131
7	1.0000	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487	2.0762	2.2107	2.3526	2.5023	2.6600
8	1.0000	1.0829	1.1717	1.2668	1.3686	1.4775	1.5938	1.7182	1.8509	1.9926	2.1436	2.3045	2.4760	2.6584	2.8526	3.0590
9	1.0000	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	1.8385	1.9990	2.1719	2.3579	2.5580	2.7731	3.0040	3.2519	3.5179
10	1.0000	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	1.9672	2.1589	2.3674	2.5937	2.8394	3.1058	3.3946	3.7072	4.0456
11	1.0000	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	2.1049	2.3316	2.5804	2.8531	3.1518	3.4785	3.8359	4.2262	4.6524
12	1.0000	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	2.2522	2.5182	2.8127	3.1384	3.4985	3.8960	4.3345	4.8179	5.3503
13	1.0000	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	2.4098	2.7196	3.0658	3.4523	3.8833	4.3635	4.8980	5.4924	6.1528
14	1.0000	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	2.5785	2.9372	3.3417	3.7975	4.3104	4.8871	5.5348	6.2613	7.0757
15	1.0000	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	2.7590	3.1722	3.6425	4.1772	4.7846	5.4736	6.2543	7.1379	8.1371
16	1.0000	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	2.9522	3.4259	3.9703	4.5950	5.3109	6.1304	7.0673	8.1372	9.3576
17	1.0000	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	3.1588	3.7000	4.3276	5.0545	5.8951	6.8660	7.9861	9.2765	10.7613
18	1.0000	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599	6.5436	7.6900	9.0243	10.5752	12.3755
19	1.0000	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	3.6165	4.3157	5.1417	6.1159	7.2633	8.6128	10.1974	12.0557	14.2318
20	1.0000	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	3.8697	4.6610	5.6044	6.7275	8.0623	9.6463	11.5231	13.7435	16.3665
21	1.0000	1.2324	1.5157	1.8603	2.2788	2.7860	3.3996	4.1406	5.0338	6.1088	7.4002	8.9492	10.8038	13.0211	15.6676	18.8215
22	1.0000	1.2447	1.5460	1.9161	2.3699	2.9253	3.6035	4.4304	5.4365	6.6586	8.1403	9.9336	12.1003	14.7138	17.8610	21.6447
23	1.0000	1.2572	1.5769	1.9736	2.4647	3.0715	3.8197	4.7405	5.8715	7.2579	8.9543	11.0263	13.5523	16.6266	20.3616	24.8915
24	1.0000	1.2697	1.6084	2.0328	2.5633	3.2251	4.0489	5.0724	6.3412	7.9111	9.8497	12.2392	15.1786	18.7881	23.2122	28.6252
25	1.0000	1.2824	1.6406	2.0938	2.6658	3.3864	4.2919	5.4274	6.8485	8.6231	10.8347	13.5855	17.0001	21.2305	26.4619	32.9190
26	1.0000	1.2953	1.6734	2.1566	2.7725	3.5557	4.5494	5.8074	7.3964	9.3992	11.9182	15.0799	19.0401	23.9905	30.1666	37.8568
27	1.0000	1.3082	1.7069	2.2213	2.8834	3.7335	4.8223	6.2139	7.9881	10.2451	13.1100	16.7386	21.3249	27.1093	34.3899	43.5353
28	1.0000	1.3213	1.7410	2.2879	2.9987	3.9201	5.1117	6.6488	8.6271	11.1671	14.4210	18.5799	23.8839	30.6335	39.2045	50.0656
29	1.0000	1.3345	1.7758	2.3566	3.1187	4.1161	5.4184	7.1143	9.3173	12.1722	15.8631	20.6237	26.7499	34.6158	44.6931	57.5755
30	1.0000	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	7.6123	10.0627	13.2677	17.4494	22.8923	29.9599	39.1159	50.9502	66.2118

Table	2:	Present value of R1 at the end of n periods														
Tabel 2: Huidige waarde van R1 aan die einde van n periodes																
n	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	1.0000	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696
2	1.0000	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561
3	1.0000	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575
4	1.0000	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718
5	1.0000	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972
6	1.0000	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323
7	1.0000	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759
8	1.0000	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269
9	1.0000	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843
10	1.0000	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472
11	1.0000	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149
12	1.0000	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869
13	1.0000	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625
14	1.0000	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413
15	1.0000	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229
16	1.0000	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069
17	1.0000	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929
18	1.0000	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808
19	1.0000	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703
20	1.0000	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611
21	1.0000	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531
22	1.0000	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462
23	1.0000	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402
24	1.0000	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349
25	1.0000	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304
26	1.0000	0.7720	0.5976	0.4637	0.3607	0.2812	0.2198	0.1722	0.1352	0.1064	0.0839	0.0663	0.0525	0.0417	0.0331	0.0264
27	1.0000	0.7644	0.5859	0.4502	0.3468	0.2678	0.2074	0.1609	0.1252	0.0976	0.0763	0.0597	0.0469	0.0369	0.0291	0.0230
28	1.0000	0.7568	0.5744	0.4371	0.3335	0.2551	0.1956	0.1504	0.1159	0.0895	0.0693	0.0538	0.0419	0.0326	0.0255	0.0200
29	1.0000	0.7493	0.5631	0.4243	0.3207	0.2429	0.1846	0.1406	0.1073	0.0822	0.0630	0.0485	0.0374	0.0289	0.0224	0.0174
30	1.0000	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151

Table	3:	Present	value	of	an	annuity	of	R1	per	period	for	<i>n</i>	periods		
Tabel 3: Huidige waarde van 'n annuïteit van R1 per periode vir n periodes															
<i>n</i>	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883	4.1604
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389	4.4873
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5504	6.1982
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593
21	18.8570	17.0112	15.4150	14.0292	12.8212	11.7641	10.8355	10.0168	9.2922	8.6487	8.0751	7.5620	7.1016	6.6870	6.3125
22	19.6604	17.6580	15.9369	14.4511	13.1630	12.0416	11.0612	10.2007	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587
23	20.4558	18.2922	16.4436	14.8568	13.4886	12.3034	11.2722	10.3711	9.5802	8.8832	8.2664	7.7184	7.2297	6.7921	6.3988
24	21.2434	18.9139	16.9355	15.2470	13.7986	12.5504	11.4693	10.5288	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641
26	22.7952	20.1210	17.8768	15.9828	14.3752	13.0032	11.8258	10.8100	9.9290	9.1609	8.4881	7.8957	7.3717	6.9061	6.4906
27	23.5596	20.7069	18.3270	16.3296	14.6430	13.2105	11.9867	10.9352	10.0266	9.2372	8.5478	7.9426	7.4086	6.9352	6.5135
28	24.3164	21.2813	18.7641	16.6631	14.8981	13.4062	12.1371	11.0511	10.1161	9.3066	8.6016	7.9844	7.4412	6.9607	6.5335
29	25.0658	21.8444	19.1885	16.9837	15.1411	13.5907	12.2777	11.1584	10.1983	9.3696	8.6501	8.0218	7.4701	6.9830	6.5509
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.6938	8.0552	7.4957	7.0027	6.5660

Table 4: Future value of an annuity of R1 per period for n periods															
n	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000	2.1100	2.1200	2.1300	2.1400	2.1500
3	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100	3.3421	3.3744	3.4069	3.4396	3.4725
4	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410	4.7097	4.7793	4.8498	4.9211	4.9934
5	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5.7507	5.8666	5.9847	6.1051	6.2278	6.3528	6.4803	6.6101	6.7424
6	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	7.1533	7.3359	7.5233	7.7156	7.9129	8.1152	8.3227	8.5355	8.7537
7	7.2135	7.4343	7.6625	7.8983	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872	9.7833	10.0890	10.4047	10.7305	11.0668
8	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	10.2598	10.6366	11.0285	11.4359	11.8594	12.2997	12.7573	13.2328	13.7268
9	9.3685	9.7546	10.1591	10.5828	11.0266	11.4913	11.9780	12.4876	13.0210	13.5795	14.1640	14.7757	15.4157	16.0853	16.7858
10	10.4622	10.9497	11.4639	12.0061	12.5779	13.1808	13.8164	14.4866	15.1929	15.9374	16.7220	17.5487	18.4197	19.3373	20.3037
11	11.5668	12.1687	12.8078	13.4864	14.2068	14.9716	15.7836	16.6455	17.5603	18.5312	19.5614	20.6546	21.8143	23.0445	24.3493
12	12.6825	13.4121	14.1920	15.0258	15.9171	16.8699	17.8885	18.9771	20.1407	21.3843	22.7132	24.1331	25.6502	27.2707	29.0017
13	13.8093	14.6803	15.6178	16.6268	17.7130	18.8821	20.1406	21.4953	22.9534	24.5227	26.2116	28.0291	29.9847	32.0887	34.3519
14	14.9474	15.9739	17.0863	18.2919	19.5986	21.0151	22.5505	24.2149	26.0192	27.9750	30.0949	32.3926	34.8827	37.5811	40.5047
15	16.0969	17.2934	18.5989	20.0236	21.5786	23.2760	25.1290	27.1521	29.3609	31.7725	34.4054	37.2797	40.4175	43.8424	47.5804
16	17.2579	18.6393	20.1569	21.8245	23.6575	25.6725	27.8881	30.3243	33.0034	35.9497	39.1899	42.7533	46.6717	50.9804	55.7175
17	18.4304	20.0121	21.7616	23.6975	25.8404	28.2129	30.8402	33.7502	36.9737	40.5447	44.5008	48.8837	53.7391	59.1176	65.0751
18	19.6147	21.4123	23.4144	25.6454	28.1324	30.9057	33.9990	37.4502	41.3013	45.5992	50.3959	55.7497	61.7251	68.3941	75.8364
19	20.8109	22.8406	25.1169	27.6712	30.5390	33.7600	37.3790	41.4463	46.0185	51.1591	56.9395	63.4397	70.7494	78.9692	88.2118
20	22.0190	24.2974	26.8704	29.7781	33.0660	36.7856	40.9955	45.7620	51.1601	57.2750	64.2028	72.0524	80.9468	91.0249	102.4436
21	23.2392	25.7833	28.6765	31.9692	35.7193	39.9927	44.8652	50.4229	56.7645	64.0025	72.2651	81.6987	92.4699	104.7684	118.8101
22	24.4716	27.2990	30.5368	34.2480	38.5052	43.3923	49.0057	55.4568	62.8733	71.4027	81.2143	92.5026	105.4910	120.4360	137.6316
23	25.7163	28.8450	32.4529	36.6179	41.4305	46.9958	53.4361	60.8933	69.5319	79.5430	91.1479	104.6029	120.2048	138.2970	159.2764
24	26.9735	30.4219	34.4265	39.0826	44.5020	50.8156	58.1767	66.7648	76.7898	88.4973	102.1742	118.1552	136.8315	158.6586	184.1678
25	28.2432	32.0303	36.4593	41.6459	47.7271	54.8645	63.2490	73.1059	84.7009	98.3471	114.4133	133.3339	155.6196	181.8708	212.7930
26	29.5256	33.6709	38.5530	44.3117	51.1135	59.1564	68.6765	79.9544	93.3240	109.1818	127.9988	150.3339	176.8501	208.3327	245.7120
27	30.8209	35.3443	40.7096	47.0842	54.6691	63.7058	74.4838	87.3508	102.7231	121.0999	143.0786	169.3740	200.8406	238.4993	283.5688
28	32.1291	37.0512	42.9309	49.9676	58.4026	68.5281	80.6977	95.3388	112.9682	134.2099	159.8173	190.6989	227.9499	272.8892	327.1041
29	33.4504	38.7922	45.2189	52.9663	62.3227	73.6398	87.3465	103.9659	124.1354	148.6309	178.3972	214.5828	258.5834	312.0937	377.1697
30	34.7849	40.5681	47.5754	56.0849	66.4388	79.0582	94.4608	113.2832	136.3075	164.4940	199.0209	241.3327	293.1992	356.7868	434.7451