Fundamentals Level – Skills Module

Financial Management

Friday 5 June 2015

Time allowed

Reading and planning: 15 minutes
Writing: 3 hours

This paper is divided into two sections:

Section A – ALL 20 questions are compulsory and MUST be attempted

Section B – ALL FIVE questions are compulsory and MUST be attempted

Formulae Sheet, Present Value and Annuity Tables are on pages 10, 11 and 12.

Do NOT open this paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

Do NOT record any of your answers on the exam paper.

This question paper must not be removed from the examination hall.

The Association of Chartered Certified Accountants

Paper F9

ACCA

Section A – ALL 20 questions are compulsory and MUST be attempted

Please use the grid provided on page two of the Candidate Answer Booklet to record your answers to each multiple choice question. Do not write out the answers to the MCQs on the lined pages of the answer booklet.
Each question is worth 2 marks.

1 Which of the following statements is/are correct?

(1) Monetary policy seeks to influence aggregate demand by increasing or decreasing the money raised through taxation
(2) When governments adopt a floating exchange rate system, the exchange rate is an equilibrium between demand and supply in the foreign exchange market
(3) Fiscal policy seeks to influence the economy and economic growth by increasing or decreasing interest rates

A 2 only
B 1 and 2 only
C 1 and 3 only
D 1, 2 and 3

2 Which of the following statements are correct?

(1) The general level of interest rates is affected by investors' desire for a real return
(2) Market segmentation theory can explain kinks (discontinuities) in the yield curve
(3) When interest rates are expected to fall, the yield curve could be sloping downwards

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

3 The following information relates to a company:

Year	0	1	2	3
Earnings per share (cents)	30·0	31·8	33·9	35·7
Dividends per share (cents)	13·0	13·2	13·3	15·0
Share price at start of year ($)	1·95	1·98	2·01	2·25

Which of the following statements is correct?

A The dividend payout ratio is greater than 40% in every year in the period
B Mean growth in dividends per share over the period is 4%
C Total shareholder return for the third year is 26%
D Mean growth in earnings per share over the period is 6% per year

4 Which of the following statements is correct?

A One of the problems with maximising accounting profit as a financial objective is that accounting profit can be manipulated
B A target for a minimum level of dividend cover is a target for a minimum dividend payout ratio
C The welfare of employees is a financial objective
D One reason shareholders are interested in earnings per share is that accounting profit takes account of risk

5 Which of the following statements is NOT correct?

A Return on capital employed can be defined as profit before interest and tax divided by the sum of shareholders' funds and prior charge capital
B Return on capital employed is the product of net profit margin and net asset turnover
C Dividend yield can be defined as dividend per share divided by the ex dividend share price
D Return on equity can be defined as profit before interest and tax divided by shareholders' funds

6 Which of the following statements are correct?

(1) The sensitivity of a project variable can be calculated by dividing the project net present value by the present value of the cash flows relating to that project variable
(2) The expected net present value is the value expected to occur if an investment project with several possible outcomes is undertaken once
(3) The discounted payback period is the time taken for the cumulative net present value to change from negative to positive

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

7 Which of the following statements is/are correct?

(1) The asset beta reflects both business risk and financial risk
(2) Total risk is the sum of systematic risk and unsystematic risk
(3) Assuming that the beta of debt is zero will understate financial risk when ungearing an equity beta

A 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

8 Which of the following statements are correct?

(1) Share option schemes always reward good performance by managers
(2) Performance-related pay can encourage dysfunctional behaviour
(3) Value for money as an objective in not-for-profit organisations requires the pursuit of economy, efficiency and effectiveness

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

9 Which of the following are financial intermediaries?

(1) Venture capital organisation
(2) Pension fund
(3) Merchant bank

A 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

10 A company has in issue loan notes with a nominal value of $100 each. Interest on the loan notes is 6% per year, payable annually. The loan notes will be redeemed in eight years' time at a 5% premium to nominal value. The before-tax cost of debt of the company is 7% per year.

What is the ex interest market value of each loan note?

A $94·03
B $96·94
C $102·91
D $103·10

11 Which of the following statements are correct?

(1) Capital market securities are assets for the seller but liabilities for the buyer
(2) Financial markets can be classified into exchange and over-the-counter markets
(3) A secondary market is where securities are bought and sold by investors

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

12 Which of the following statements are correct?

(1) A certificate of deposit is an example of a money market instrument
(2) Money market deposits are short-term loans between organisations such as banks
(3) Treasury bills are bought and sold on a discount basis

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

13 A company is evaluating an investment project with the following forecast cash flows:

Year	0	1	2	3	4
Cash flow ($m)	(6·5)	2·4	3·1	2·1	1·8

Using discount rates of 15% and 20%, what is the internal rate of return of the investment project?

A 15·8%
B 17·2%
C 17·8%
D 19·4%

14 Which of the following statements are correct?

(1) Interest rate options allow the buyer to take advantage of favourable interest rate movements
(2) A forward rate agreement does not allow a borrower to benefit from a decrease in interest rates
(3) Borrowers hedging against an interest rate increase will buy interest rate futures now and sell them at a future date

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

15 A company needs $150,000 each year for regular payments. Converting the company's short-term investments into cash to meet these regular payments incurs a fixed cost of $400 per transaction. These short-term investments pay interest of 5% per year, while the company earns interest of only 1% per year on cash deposits.

According to the Baumol Model, what is the optimum amount of short-term investments to convert into cash in each transaction?

A $38,730
B $48,990
C $54,772
D $63,246

16 Which of the following statements is/are correct?

(1) Factoring with recourse provides insurance against bad debts
(2) The expertise of a factor can increase the efficiency of trade receivables management for a company

A 2 only
B 1 only
C Neither 1 nor 2
D 1 and 2

17 An investor plans to exchange $1,000 into euros now, invest the resulting euros for 12 months, and then exchange the euros back into dollars at the end of the 12-month period. The spot exchange rate is €1·415 per $1 and the euro interest rate is 2% per year. The dollar interest rate is 1·8% per year.

Compared to making a dollar investment for 12 months, at what 12-month forward exchange rate will the investor make neither a loss nor a gain?

A €1·223 per $1
B €1·412 per $1
C €1·418 per $1
D €1·439 per $1

18 Which of the following statements are correct?

(1) If a capital market is weak form efficient, an investor cannot make abnormal returns by using technical analysis
(2) Operational efficiency means that efficient capital markets direct funds to their most productive use
(3) Tests for semi-strong form efficiency focus on the speed and accuracy of share price responses to the arrival of new information

A 1 and 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

19 On a market value basis, GFV Co is financed 70% by equity and 30% by debt. The company has an after-tax cost of debt of 6% and an equity beta of 1·2. The risk-free rate of return is 4% and the equity risk premium is 5%.

What is the after-tax weighted average cost of capital of GFV Co?

A 5·4%
B 7·2%
C 8·3%
D 8·8%

20 The following financial information relates to QK Co, whose ordinary shares have a nominal value of $0·50 per share:

	$m	$m
Non-current assets		120
Current assets		
Inventory	8	
Trade receivables	12	20
Total assets		140
Equity		
Ordinary shares	25	
Reserves	80	105
Non-current liabilities		20
Current liabilities		15
Total equity and liabilities		140

On an historic basis, what is the net asset value per share of QK Co?

A $2·10 per share
B $2·50 per share
C $2·80 per share
D $4·20 per share

(40 marks)

Section B – ALL FIVE questions are compulsory and MUST be attempted.

Please write your answers to all parts of these questions on the lined pages within the Candidate Answer Booklet.

1 Rose Co expects to receive €750,000 from a credit customer in the European Union in six months' time. The spot exchange rate is €2·349 per $1 and the six-month forward rate is €2·412 per $1. The following commercial interest rates are available to Rose Co:

	Deposit rate	Borrow rate
Euros	4·0% per year	8·0% per year
Dollars	2·0% per year	3·5% per year

Rose Co does not have any surplus cash to use in hedging the future euro receipt.

Required:

(a) Evaluate whether a money market hedge or a forward market hedge would be preferred on financial grounds by Rose Co. (5 marks)

(b) Briefly explain the nature of a forward rate agreement and discuss how a company can use a forward rate agreement to manage interest rate risk. (5 marks)

(10 marks)

2 Chad Co is a stock-market-listed company which has managed to increase earnings over the last year. As a result, the board of directors has increased the dividend payout ratio from 40·0% for the year to March 2014 to 41·4% for the year to March 2015. Chad Co has a cost of equity of 12·5%. The following information is also available:

Year to March	2014	2015
	$000	$000
Earnings	13,200	13,840
Ordinary shares	8,000	8,000

The nominal value of the ordinary shares of Chad Co is $0·50 per share. Listed companies similar to Chad Co have an earnings yield of 8·2%.

Required:

(a) Calculate the equity market value of Chad Co using the dividend growth model. (3 marks)

(b) Calculate the equity market value of Chad Co using the earnings yield method. (2 marks)

(c) Discuss the relative merits of the dividend growth model and the earnings yield method as a way of valuing Chad Co. (5 marks)

(10 marks)

3 The finance director of Widnor Co has been looking to improve the company's working capital management. Widnor Co has revenue from credit sales of $26,750,000 per year and although its terms of trade require all credit customers to settle outstanding invoices within 40 days, on average customers have been taking longer. Approximately 1% of credit sales turn into bad debts which are not recovered.

Trade receivables currently stand at $4,458,000 and Widnor Co has a cost of short-term finance of 5% per year.

The finance director is considering a proposal from a factoring company, Nokfe Co, which was invited to tender to manage the sales ledger of Widnor Co on a with-recourse basis. Nokfe Co believes that it can use its expertise to reduce average trade receivables days to 35 days, while cutting bad debts by 70% and reducing administration costs by $50,000 per year. A condition of the factoring agreement is that the company would also advance Widnor Co 80% of the value of invoices raised at an interest rate of 7% per year. Nokfe Co would charge an annual fee of 0·75% of credit sales.

Assume that there are 360 days in each year.

Required:

(a) Advise whether the factor's offer is financially acceptable to Widnor Co. (7 marks)

(b) Briefly discuss how the creditworthiness of potential customers can be assessed. (3 marks)

(10 marks)

4 Grenarp Co is planning to raise $11,200,000 through a rights issue. The new shares will be offered at a 20% discount to the current share price of Grenarp Co, which is $3·50 per share. The rights issue will be on a 1 for 5 basis and issue costs of $280,000 will be paid out of the cash raised. The capital structure of Grenarp Co is as follows:

	$m	$m
Equity		
Ordinary shares ($0·50 nominal)	10	
Reserves	75	
		85
Non-current liabilities		
8% Loan notes		30
		115

The net cash raised by the rights issue will be used to redeem part of the loan note issue. Each loan note has a nominal value of $100 and an ex interest market value of $104. A clause in the bond issue contract allows Grenarp Co to redeem the loan notes at a 5% premium to market price at any time prior to their redemption date. The price/earnings ratio of Grenarp Co is not expected to be affected by the redemption of the loan notes.

The earnings per share of Grenarp Co is currently $0·42 per share and total earnings are $8,400,000 per year. The company pays corporation tax of 30% per year.

Required:

(a) Evaluate the effect on the wealth of the shareholders of Grenarp Co of using the net rights issue funds to redeem the loan notes. (8 marks)

(b) Discuss whether Grenarp Co might achieve its optimal capital structure following the rights issue. (7 marks)

(15 marks)

5 Hraxin Co is appraising an investment project which has an expected life of four years and which will not be repeated. The initial investment, payable at the start of the first year of operation, is $5 million. Scrap value of $500,000 is expected to arise at the end of four years.

There is some uncertainty about what price can be charged for the units produced by the investment project, as this is expected to depend on the future state of the economy. The following forecast of selling prices and their probabilities has been prepared:

Future economic state	Weak	Medium	Strong
Probability of future economic state	35%	50%	15%
Selling price in current price terms	$25 per unit	$30 per unit	$35 per unit

These selling prices are expected to be subject to annual inflation of 4% per year, regardless of which economic state prevails in the future.

Forecast sales and production volumes, and total nominal variable costs, have already been forecast, as follows:

Year	1	2	3	4
Sales and production (units)	150,000	250,000	400,000	300,000
Nominal variable cost ($000)	2,385	4,200	7,080	5,730

Incremental overheads of $400,000 per year in current price terms will arise as a result of undertaking the investment project. A large proportion of these overheads relate to energy costs which are expected to increase sharply in the future because of energy supply shortages, so overhead inflation of 10% per year is expected.

The initial investment will attract tax-allowable depreciation on a straight-line basis over the four-year project life. The rate of corporation tax is 30% and tax liabilities are paid in the year in which they arise. Hraxin Co has traditionally used a nominal after-tax discount rate of 11% per year for investment appraisal.

Required:

(a) Calculate the expected net present value of the investment project and comment on its financial acceptability. (9 marks)

(b) Critically discuss if sensitivity analysis will assist Hraxin Co in assessing the risk of the investment project. (6 marks)

(15 marks)

Formulae Sheet

Economic order quantity

$$= \sqrt{\frac{2C_0D}{C_h}}$$

Miller–Orr Model

$$\text{Return point} = \text{Lower limit} + \left(\frac{1}{3} \times \text{spread}\right)$$

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}}\right]^{\frac{1}{3}}$$

The Capital Asset Pricing Model

$$E\left(r_i\right) = R_f + \beta_i\left(E\left(r_m\right) - R_f\right)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{\left(V_e + V_d\left(1-T\right)\right)}\beta_e\right] + \left[\frac{V_d\left(1-T\right)}{\left(V_e + V_d\left(1-T\right)\right)}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_0\left(1+g\right)}{\left(r_e - g\right)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d\left(1-T\right)$$

The Fisher formula

$$\left(1+i\right) = \left(1+r\right)\left(1+h\right)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 \times \frac{\left(1+h_c\right)}{\left(1+h_b\right)} \qquad F_0 = S_0 \times \frac{\left(1+i_c\right)}{\left(1+i_b\right)}$$

Present Value Table

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

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

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

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper