THE CHARTERED INSURANCE INSTITUTE

CII

AF4

Advanced Diploma in Financial Planning

Unit AF4 – Investment planning

October 2017 examination

SPECIAL NOTICES

All questions in this paper are based on English law and practice applicable in the tax year 2017/2018, unless stated otherwise in the question, and should be answered accordingly.

It should be assumed that all individuals are domiciled and resident in the UK unless otherwise stated.

Instructions

- Three hours are allowed for this paper.
- **Do not begin writing until the invigilator instructs you to.**
- **Read the instructions on page 3 carefully before answering any questions.**
- Provide the information requested on the answer book and form B.
- You are allowed to write on the inside pages of this question paper, but you must **NOT** write your name, candidate number, PIN or any other identification anywhere on this question paper.
- The answer book and this question paper must **both be handed in personally by you** to the invigilator before you leave the examination room. **Failure to comply with this regulation will result in your paper not being marked and you may be prevented from entering this examination in the future.**

Unit AF4 – Investment planning

Instructions to candidates

Read the instructions below before answering any questions

- **Three hours** are allowed for this paper which carries a total of 160 marks as follows:

- Section A: 80 marks
- Section B: 80 marks

- You are advised to spend approximately 90 minutes on Section A and 90 minutes on Section B.

- You are strongly advised to attempt **all** questions to gain maximum possible marks. The number of marks allocated to each question part is given next to the question and you should spend your time in accordance with that allocation.

- Read carefully all questions and information provided before starting to answer. Your answer will be marked strictly in accordance with the question set.

- You may find it helpful in some places to make rough notes in the answer booklet. If you do this, you should cross through these notes before you hand in the booklet.

- It is important to show all steps in a calculation, even if you have used a calculator.

- If you bring a calculator into the examination room, it must be a silent, battery or solar-powered, non-programmable calculator. The use of electronic equipment capable of being programmed to hold alphabetic or numerical data and/or formulae is prohibited. You may use a financial or scientific calculator, provided it meets these requirements.

- Tax tables are provided at the back of this question paper.

- Answer each question on a new page and leave six lines blank after each question part.

Subject to providing sufficient detail you are advised to be as brief and concise as possible, using note format and short sentences on separate lines wherever possible.

SECTION A

This question is compulsory and carries 80 marks

Question 1

Read carefully all information provided in the case study before attempting the questions. Your answers should take into account the clients circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b), (c), (d), (e), and (f) which follow.

Peter is a sophisticated investor who earns a salary of £225,000 and has £300,000 that he wishes to invest now. Outside of his pension, Peter has an investment portfolio of approximately £500,000 invested mainly in equities. Of this £200,000 is in stocks and shares ISAs. He has used his ISA allowance for the current tax year 2017/2018 and will make the maximum pension contributions up to his annual allowance.

Peter is considering investing in a multi-strategy macro hedge fund registered in the Cayman Islands. One of the fund's strategies is based on the manager's prediction that inflation in the UK will increase significantly and the Bank of England will raise interest rates.

There is a minimum investment of £250,000 and no initial charges. An annual management charge of 2% is applied and a performance fee of 20% on the excess return above 5%.

As an alternative, you have recommended he invests in a low-cost investment portfolio using passive exchange traded funds (ETFs) with a global remit. You have chosen the following ETFs basing your decision on a multi-factor model using value, size and momentum factors.

ETF	Allocation %	AMC %	Annualised 5 Year Return %	Benchmark Return %	Annualised Standard Deviation %	Information ratio	Tracking error %
Global Equities	50	0.1	7.3	7.5	16.5	-0.25	0.8
Global Government Bonds	20	0.1	-2.6	-2.5	6.0		0.5
Global Momentum	10	0.3	10.3	7.5	15.6		3.5
Global Value	10	0.3	8.2	7.5	17.0		3.0
Global Size	10	0.2	7.8	7.5	18.0		2.5

Peter subscribed £20,000 at the launch of a Venture Capital Trust (VCT) called BMO Capital 8 years ago when the shares were priced at 100p. BMO Capital specialised in providing funding for management buy-outs. They have just announced that they will be winding the company up and selling their remaining investments over the next year.

Peter is considering selling his shares immediately and investing the proceeds in a newly launched VCT that is aiming to raise £20 million to provide funding to small technology companies.

	Shares in issue (million)	**Net assets £ million**	**Bid Price**	**Offer Price**
BMO VCT	20.5	19.5	76p	82p

Questions

*To gain maximum marks for calculations you **must** show **all** your workings and express your answer to **two** decimal places.*

(a) Explain why the Bank of England may **not** raise interest rates even if inflation increases significantly and exceeds their target. **(4)**

(b) **(i)** If the hedge fund produces an investment return of 12% in the first year of ownership, calculate **showing all your workings**, how much Peter's fund would be worth (in £) after charges at the end of the year. *Assume Peter invests £250,000, all fees and charges are applied at the end of the year and the performance fee is deducted **before** the annual management charge.* **(7)**

(ii) State **six** possible drawbacks should Peter decide to invest in the hedge fund, ignoring investment performance. **(6)**

(iii) Explain why you have recommended the portfolio of ETFs to Peter rather than the hedge fund. **(5)**

QUESTIONS CONTINUE OVER THE PAGE

(c) **(i)** Calculate, **showing all your workings**, the information ratio for the Global Momentum ETF. **(4)**

(ii) Explain to Peter what the information ratio measures and its limitations if used in isolation. **(6)**

(iii) Explain why the information ratio of the Global Momentum ETF and the Global Equities ETF differ, despite using the same benchmark. **(3)**

(d) Explain briefly the potential causes of an ETF tracking error. **(7)**

(e) **(i)** Calculate, **showing all your workings**, the annualised 5 year return of the ETF portfolio. **(6)**

(ii) Explain briefly the purpose of using a benchmark in the investment process. **(4)**

(iii) Peter is concerned that the global government bond fund has lost money over the past five years.

Explain why you have recommended it is included within the portfolio. **(4)**

(iv) State the main criticisms of the Capital Asset Pricing Model (CAPM) and explain why each of the **three** factors chosen are included in multi-factor models:

- momentum;
- size;
- value. **(7)**

(f) **(i)** Calculate, **showing all your workings**, the discount (%) to net asset value that the BMO Capital shares are trading at, were Peter to sell his shares today. *Ignore dealing costs in your answer*. **(5)**

(ii) Explain to Peter the changes in VCT legislation announced in the 2015 budget that became effective in November 2015 and how these have affected BMO Capital VCT. **(4)**

(iii) Explain to Peter **four a**dvantages and **four** disadvantages of retaining his existing shares in BMO Capital during the winding up period, rather than selling them now and investing in the new VCT launch. **(8)**

Total marks available for this question: **(80)**

Section B questions can be found on pages 8 – 11

SECTION B

Both questions in this section are compulsory and carry an overall total of 80 marks

Question 2

Read carefully all information provided in the case study before attempting the questions. Your answers should take into account the clients circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b) and (c) which follow.

Michael owns shares in a firm of architects, Big Draw plc. He is aware that one of their competitors, Sky High, is expanding rapidly and has recently bought two smaller rivals. Michael is considering whether to sell his shares in Big Draw and invest in Sky High instead.

A friend who is an accountant has commented that he has concerns about the quality of earnings of Sky High.

Whilst the two firms have a similar number of employees and annual revenues, he has pointed out to Michael, that following the two takeovers completed by Sky High in 2015 and 2016, there are several exceptional items in the accounts. He has also highlighted that the goodwill, borrowing and the pension deficit shown in the accounts may be cause for concern.

Big Draw	**2016 £ million**	**2015 £ million**	**2014 £ million**
Revenue	1,230	1,125	1,030
Staff costs	(765)	(701)	(650)
Other costs	(340)	(335)	(310)
Other costs – exceptional items	(0)	(0)	(0)
Operating profit	125	89	70
Interest Payable	0	0	0
Taxation	(25)	(20)	(15)
Profit for the year	100	79	55
Non-current assets			
Property, plant and equipment	129	129	131
Goodwill/intangible assets	3	3	2.5
Current assets			
Trade and other receivables	381	342	297
Cash	137	129	105
Current liabilities			
Trade and other payables	(428)	(380)	(316)
Long term liabilities			
Borrowings	(0)	(0)	(0)
Final Salary Pension liabilities	(0)	(0)	(0)
Number of employees	12,806	12,143	11,320
Share price	410p	356p	310p
Dividend per share	4p	4p	4p
Number of shares in issue	400 million	400 million	400 million

Sky High	2016 £ million	2015 £ million	2014 £ million
Other costs – exceptional items	(250)	(350)	(250)
Goodwill/intangible assets	800	450	250
Long term liabilities			
Borrowings	(1,100)	(900)	(700)
Final Salary Pension liabilities	(1,300)	(1,200)	(950)

Questions

(a) **(i)** Calculate, **showing all your workings**, the operating profit margin for Big Draw in 2016. **(3)**

(ii) Calculate, **showing all your workings**, the revenue per employee for Big Draw in 2016. **(3)**

(iii) Explain briefly why the revenue per employee is important for the analysis of Big Draw. **(4)**

(iv) Comment on the trend for operating profit margin and revenue of Big Draw. **(4)**

(v) State **two** other measures in relation to employees that you would look at to assess quality of management. (*No calculation required*). **(2)**

(b) **(i)** Explain what is meant by quality of earnings. **(4)**

(ii) Comment on each of the **four** areas in the accounts of Sky High identified by the accountant (exceptional items, goodwill, borrowings and pension deficit) and explain why they might persuade Michael **not** to buy shares in Sky High. **(8)**

(c) **(i)** Calculate, **showing all your workings**, the dividend yield for Big Draw in 2016. **(3)**

(ii) Calculate, **showing all your workings**, the earnings per share **in pence** for Big Draw in 2016. **(3)**

(iii) Explain why Big Draw may have chosen to set the annual dividend at the level it has. **(3)**

(iv) State **three** ways a company can return money to investors, other than the annual dividend payment. **(3)**

Total marks available for this question: 40

Question 3

Read carefully all information provided in the case study before attempting the questions. Your answers should take into account the clients circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b), (c) and (d) which follow.

Jim, who is recently retired, has been assessed as having a balanced attitude to risk and wishes to invest over the longer term. He currently relies on a portfolio of fixed interest bonds to supplement his retirement income. He would like to consider investing into another asset class, and has asked you to consider whether commercial property investment might be appropriate for him and also to explain potential drawbacks.

His daughter, Judith, aged 20 is hoping to buy her first home in five or six years' time. She has read that an ISA would be an effective way of saving towards this property purchase. Judith has a relatively adventurous risk profile and has asked you to explain which ISA scheme might be most suitable for her to consider. She can afford to invest £3,000 per year.

Questions

To gain maximum marks for calculations you ***must*** *show* ***all*** *your workings and express your answers to* ***two*** *decimal places.*

(a) Identify **seven** factors in relation to the underlying investments that determine the return on a commercial property fund. **(7)**

(b) Jim has asked you specifically about real estate investment trusts (REITs) and open-ended investment companies (OEICs) as property investment vehicles.

Explain to Jim the risks he should consider **on disposal** of a:

(i) REIT: **(3)**

(ii) OEIC investing in property. **(6)**

(c) Explain to Jim why an investment into property may protect him in a climate of rising inflation in comparison to a portfolio consisting wholly of fixed interest bonds. **(7)**

(d) **(i)** List **five** reasons why a Lifetime ISA may be appropriate for Judith's circumstances and **two** potential drawbacks. **(7)**

(ii) If Judith contributed a single payment of £3,000 to a one year 2% fixed rate Lifetime ISA paying interest monthly on a compounding basis, and made no further contributions, calculate, **showing all your workings**, what it would be worth at the end of the first year. **(6)**

(iii) Calculate, **showing all your workings**, the loss Judith would suffer out of her £3,000 investment if she decided to withdraw the funds from the Lifetime ISA after the first full year in order to purchase a car. **(4)**

Total marks available for this question: 40

The tax tables can be found on pages 13 – 21

INCOME TAX

RATES OF TAX	2016/2017	2017/2018
Starting rate for savings*	0%	0%
Basic rate	20%	20%
Higher rate	40%	40%
Additional rate	45%	45%
Starting-rate limit	£5,000*	£5,000*
Threshold of taxable income above which higher rate applies	£32,000	£33,500
Threshold of taxable income above which additional rate applies	£150,000	£150,000
Child benefit charge from 7 January 2013:		
1% of benefit for every £100 of income over	£50,000	£50,000

**not applicable if taxable non-savings income exceeds the starting rate band.*

Dividend Allowance		£5,000
Dividend tax rates		
Basic rate		7.5%
Higher rate		32.5%
Additional rate		38.1%
Trusts		
Standard rate band		£1,000
Rate applicable to trusts		
- dividends		38.1%
- other income		45%

MAIN PERSONAL ALLOWANCES AND RELIEFS		
Income limit for Personal Allowance §	£100,000	£100,000
Personal Allowance (basic)	£11,000	£11,500
Married/civil partners (minimum) at 10% †	£3,220	£3,260
Married/civil partners at 10% †	£8,355	£8,445
Transferable tax allowance for married couples/civil partners	£1,100	£1,150
Income limit for age-related allowances†	£27,700	£28,000
Rent a Room relief	£4,250	£7,500
Blind Person's Allowance	£2,290	£2,320
Enterprise Investment Scheme relief limit on £1,000,000 max	30%	30%
Seed Enterprise Investment relief limit on £100,000 max	50%	50%
Venture Capital Trust relief limit on £200,000 max	30%	30%

§ the Personal Allowance reduces by £1 for every £2 of income above the income limit irrespective of age (under the income threshold).
† where at least one spouse/civil partner was born before 6 April 1935.

Child Tax Credit (CTC)		
- Child element per child (maximum)	£2,780	£2,780
- family element	£545	£545
Threshold for tapered withdrawal of CTC	£16,105	£16,105

NATIONAL INSURANCE CONTRIBUTIONS

Class 1 Employee	**Weekly**
Lower Earnings Limit (LEL)	£113
Primary threshold	£157
Upper Earnings Limit (UEL)	£866

Total earnings £ per week	**CLASS 1 EMPLOYEE CONTRIBUTIONS**
Up to 157.00*****	Nil
157.01 – 866.00	12%
Above 866.00	2%

**This is the primary threshold below which no NI contributions are payable. However, the lower earnings limit is £113 per week. This £113 to £157 band is a zero-rate band introduced in order to protect lower earners' rights to contributory State benefits e.g. the new State Pension.*

Total earnings £ per week	**CLASS 1 EMPLOYER CONTRIBUTIONS**
Below 157.00**	Nil
157.01 – 866.00	13.8%
Excess over 866.00	13.8%

*** Secondary earnings threshold.*

Class 2 (self-employed)	Flat rate per week £2.85 where profits exceed £6,025 per annum.
Class 3 (voluntary)	Flat rate per week £14.25.
Class 4 (self-employed)	9% on profits between £8,164 - £45,000. 2% on profits above £45,000.

PENSIONS

TAX YEAR	LIFETIME ALLOWANCE
2006/2007	£1,500,000
2007/2008	£1,600,000
2008/2009	£1,650,000
2009/2010	£1,750,000
2010/2011	£1,800,000
2011/2012	£1,800,000
2012/2013	£1,500,000
2013/2014	£1,500,000
2014/2015	£1,250,000
2015/2016	£1,250,000
2016/2017	£1,000,000
2017/2018	£1,000,000

LIFETIME ALLOWANCE CHARGE

55% of excess over lifetime allowance if taken as a lump sum.
25% of excess over lifetime allowance if taken in the form of income, which is subsequently taxed under PAYE.

ANNUAL ALLOWANCE

TAX YEAR	ANNUAL ALLOWANCE
2011/2012	£50,000
2012/2013	£50,000
2013/2014	£50,000
2014/2015	£40,000
2015/2016	£40,000~
2016/2017	£40,000*
2017/2018	£40,000*

~ increased to £80,000 for pension input between April - 8 July 2015. If not used, can be carried forward to pension input period of 9 July 2015 - 6 April 2016, subject to a maximum of £40,000.

**tapered at a rate of £1 for every £2 of adjusted income in excess of £150,000 where threshold income exceeds £110,000.*

MONEY PURCHASE ANNUAL ALLOWANCE	2016/2017	2017/2018
	£10,000	£10,000

ANNUAL ALLOWANCE CHARGE

20% - 45% determined by the member’s taxable income and the amount of total pension input in excess of the annual allowance or money purchase annual allowance.

CAPITAL GAINS TAX

EXEMPTIONS	2016/2017	2017/2018
Individuals, estates etc	£11,100	£11,300
Trusts generally	£5,550	£5,650
Chattels proceeds (restricted to five thirds of proceeds exceeding limit)	£6,000	£6,000

TAX RATES		
Individuals:		
Up to basic rate limit	10%	10%
Above basic rate limit	20%	20%
Surcharge for residential property and carried interest	8%	8%
Trustees and Personal Representatives	20%	20%
Entrepreneurs' Relief* – Gains taxed at:	10%	10%
Lifetime limit	£10,000,000	£10,000,000

**For trading businesses and companies (minimum 5% employee or director shareholding) held for at least one year.*

INHERITANCE TAX

RATES OF TAX ON TRANSFERS	2016/2017	2017/2018
Transfers made on death after 5 April 2015		
- Up to £325,000	Nil	Nil
- Excess over £325,000	40%	40%
Transfers made after 5 April 2015		
- Lifetime transfers to and from certain trusts	20%	20%

A lower rate of 36% applies where at least 10% of deceased's net estate is left to a registered charity.

MAIN EXEMPTIONS		
Transfers to		
- UK-domiciled spouse/civil partner	No limit	No limit
- non-UK-domiciled spouse/civil partner (from UK-domiciled spouse)	£325,000	£325,000
- main residence nil rate band*	£100,000	£100,000
- UK-registered charities	No limit	No limit

**Available for estates up to £2,000,000 and then tapered at the rate of £1 for every £2 in excess until fully extinguished*

Lifetime transfers		
- Annual exemption per donor	£3,000	£3,000
- Small gifts exemption	£250	£250
Wedding/civil partnership gifts by		
- parent	£5,000	£5,000
- grandparent/bride and/or groom	£2,500	£2,500
- other person	£1,000	£1,000

100% relief: businesses, unlisted/AIM companies, certain farmland/building
50% relief: certain other business assets

Reduced tax charge on gifts within 7 years of death:					
- Years before death	0-3	3-4	4-5	5-6	6-7
- Inheritance Tax payable	100%	80%	60%	40%	20%

Quick succession relief:					
- Years since IHT paid	0-1	1-2	2-3	3-4	4-5
- Inheritance Tax relief	100%	80%	60%	40%	20%

CAR BENEFIT FOR EMPLOYEES

The charge for company car benefits is based on the carbon dioxide (CO_2) emissions. There is no reduction for high business mileage users.

For 2017/2018:

- The percentage charge is 9% of the car's list price for CO_2 emissions of 50g/km or less.
- For cars with CO_2 emissions of 51g/km to 75g/km the percentage is 13%.
- For cars with CO_2 emissions of 76g/km to 94g/km the percentage is 17%.
- Cars with CO_2 emissions of 95g/km have a percentage charge of 18% and thereafter the charge increases by 1% for every complete 5g/km to a maximum of 37% (emissions of 200g/km and above).

There is an additional 3% supplement for diesel cars not meeting Euro IV emission standards. However, the maximum charge remains 37% of the car's list price.

Car fuel The benefit is calculated as the CO_2 emissions % relevant to the car and that % applied to a set figure (£22,600 for 2017/2018) e.g. car emission 100g/km = 17% on car benefit scale. 17% of £22,600 = £3,842.

1. **Accessories** are, in most cases, included in the list price on which the benefit is calculated.
2. **List price** is reduced for capital contributions made by the employee up to £5,000.
3. **Car benefit** is reduced by the amount of employee's contributions towards running costs.
4. **Fuel scale** is reduced only if the employee makes good **all** the fuel used for private journeys.
5. **All car and fuel benefits** are subject to employers National Insurance contribution's (Class 1A) of 13.8%.

PRIVATE VEHICLES USED FOR WORK

	2016/2017 Rates	2017/2018 Rates
Cars		
On the first 10,000 business miles in tax year	45p per mile	45p per mile
Each business mile above 10,000 business miles	25p per mile	25p per mile
Motor Cycles	24p per mile	24p per mile
Bicycles	20p per mile	20p per mile

MAIN CAPITAL AND OTHER ALLOWANCES

	2016/2017	2017/2018
Plant & machinery (excluding cars) 100% annual investment allowance (first year)	£200,000	£200,000
Plant & machinery (reducing balance) per annum	18%	18%
Patent rights & know-how (reducing balance) per annum	25%	25%
Certain long-life assets, integral features of buildings (reducing balance) per annum	8%	8%
Energy & water-efficient equipment	100%	100%
Zero emission goods vehicles (new)	100%	100%
Qualifying flat conversions, business premises & renovations	100%	100%

Motor cars: Expenditure on or after 01 April 2016 (Corporation Tax) or 06 April 2016 (Income Tax)

CO_2 emissions of g/km:	75 or less*	76-130	131 or more
Capital allowance:	100% first year	18% reducing balance	8% reducing balance

**If new*

MAIN SOCIAL SECURITY BENEFITS

		2016/2017	2017/2018
		£	£
Child Benefit	First child	20.70	20.70
	Subsequent children	13.70	13.70
	Guardian's allowance	16.55	16.70
Employment and Support Allowance	Assessment Phase		
	Age 16 – 24	Up to 57.90	Up to 57.90
	Aged 25 or over	Up to 73.10	Up to 73.10
	Main Phase		
	Work Related Activity Group	Up to 102.15	Up to 102.15
	Support Group	Up to 109.30	Up to 109.65
Attendance Allowance	Lower rate	55.10	55.65
	Higher rate	82.30	83.10
basic State Pension	Single	119.30	122.30
	Married	190.80	195.60
new State Pension	Single	155.65	159.55
Pension Credit	Single person standard minimum guarantee	155.60	159.35
	Married couple standard minimum guarantee	237.55	243.25
	Maximum savings ignored in calculating income	10,000.00	10,000.00
Bereavement Payment Support Payment*		2,000.00	2,000.00
Higher rate - lump sum		N/A	3,500.00
Higher rate - monthly payment		N/A	350.00
Standard rate – lump sum		N/A	2,500.00
Standard rate – monthly payment		N/A	100.00
Jobseekers Allowance	Age 18 - 24	57.90	57.90
	Age 25 or over	73.10	73.10
Statutory Maternity, Paternity and Adoption Pay		139.58	140.98

*Only applicable where spouse or civil partner died on or after 6 April 2007**

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CORPORATION TAX

	2016/2017	2017/2018
Standard rate	20%	19%

VALUE ADDED TAX

	2016/2017	2017/2018
Standard rate	20%	20%
Annual registration threshold	£83,000	£85,000
Deregistration threshold	£81,000	£83,000

STAMP DUTY LAND TAX

	Residential
Value up to £125,000	0%
£125,001 - £250,000	2%
£250,001 and £925,000	5%
£925,001 and £1,500,000	10%
£1,500,001 and over	12%

Stamp Duty Land Tax (SDLT) is payable in England, Wales and Northern Ireland only. Land and Buildings Transaction Tax (LBTT) is payable in Scotland at different rates to the above.

Additional SDLT of 3% may apply to the purchase of additional residential properties purchased for £40,000 or greater.

SDLT is charged at 15% on interests in residential dwellings costing more than £500,000 purchased by certain corporate bodies or non-natural persons.

	Non residential
Value up to £150,000	0%
£150,001 and £250,000	2%
£250,001 and over	5%

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