



**AF4**

**THE CHARTERED INSURANCE INSTITUTE**

**WEDNESDAY 21 APRIL 2010**

**ADVANCED DIPLOMA IN FINANCIAL PLANNING  
AF4 – INVESTMENT PLANNING**

**SPECIAL NOTICES**

- **All questions in this paper are based on English law and practice applicable in the tax year 2009/2010, unless stated otherwise and should be answered accordingly.**
- **Assume all individuals are domiciled, resident and ordinarily resident in the UK unless stated otherwise.**
- **Candidates should answer based on the legislative position immediately BEFORE the 2010 Budget.**

**INSTRUCTIONS**

- **Three hours are allowed for this paper.**
- **Read the instructions overleaf carefully before answering any questions.**
- Fill in the information requested on the answer book and form B.
- 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 and you must enter the serial number, model and make on the 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.**

THE CHARTERED INSURANCE INSTITUTE  
© The Examinations Department, CII, 20 Aldermanbury, London EC2V 7HY

**THE CHARTERED INSURANCE INSTITUTE**

**AF4— Investment planning**

**CANDIDATE INSTRUCTIONS**

**READ THE INSTRUCTIONS BELOW BEFORE ANSWERING ANY QUESTIONS**

Three hours are allowed for this paper. You should answer **all** questions in Sections A and B.

The paper 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** the required 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.

Any rough notes made in your answer book must be crossed through before you hand it in.

**Tax tables are provided at the back of this paper.**

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

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

**Please ensure that you understand the Special Notices printed in the box on the front page.**

***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

Bill Hicking, aged 49, is married with two adult children. He is a consultant at a London hospital and a higher-rate taxpayer. Following disappointing performance in his portfolio, Bill has decided to contact you for investment advice.

Bill has an existing portfolio of direct investments. Whilst performing positively in the last year, he is concerned about the reduction in his portfolio's value over previous years. The variance of Bill's portfolio over the past 12 months was 87, Beta 0.95 and tracking error 4%. Bill's portfolio received net dividends of £8,347.24 and net interest of £5,623.80 during the tax year 2009/2010.

A summary of his existing portfolio is shown in Table 1 below.

**Table 1 – Current Portfolio (Over past 12 months)**

Asset class	Portfolio weighting %	Portfolio performance %	APCIMS balanced benchmark %	Benchmark performance %
UK Equities	45.00	19.70	42.50	16.40
International Equities	20.00	21.85	22.50	17.30
Bonds	15.00	2.05	20.00	3.65
Cash	10.00	1.10	5.00	1.15
Commercial Property	5.00	-5.60	2.50	-4.20
Hedge Funds	5.00	7.55	7.50	6.80
<b>Total</b>	<b>100</b>	<b>13.75</b>	<b>100</b>	

Two shares from competitors in the UK retail sector that are included in Bill's portfolio, Plataman plc and Ripmark plc, have recently demonstrated high volatility, which has concerned him and he has asked for your analysis.

**Table 2 – Shares (12 month Trading History)**

Equities	Stock Turnover	Net profit margin	Earnings per share (pence)	Dividend per share (pence)	Gearing Ratio	Interest Cover
<b>Plataman plc</b>	3	15	305	275	95	1.1
<b>Ripmark plc</b>	5	9	285	106	35	3.2

## Questions

*To gain maximum marks you MUST show ALL your workings and express your answers to two decimal places.*

- (a) (i) Calculate, **showing all your workings**, the percentage performance of the APCIMS Balanced Index benchmark. (7)
- (ii) Calculate, **showing all your workings**, the percentage performance of Bill's portfolio based upon the asset allocation of the portfolio if it had performed in line with the benchmark. (7)
- (iii) Calculate, **showing all your workings**, the effect of stock selection on Bill's portfolio relative to the APCIMS Balanced Index benchmark portfolio. (7)
- (iv) Identify whether Bill's portfolio outperformed or underperformed the APCIMS Balanced Index benchmark portfolio and state the factors which contributed most to the performance of the portfolio against the benchmark. (5)
- (b) Bill is concerned about the level of risk within his portfolio and would like you to conduct some detailed analysis. Assume the risk-free rate of return is 2% and the average annual market return is 14%.
- (i) Calculate, **showing all your workings**, the annual volatility of Bill's portfolio. (2)
- (ii) Calculate, **showing all your workings**, the Sharpe Ratio for Bill's portfolio. (3)
- (iii) Calculate, **showing all your workings**, the Information Ratio for Bill's portfolio. (3)
- (iv) Calculate, **showing all your workings**, the alpha of Bill's portfolio. (5)
- (v) Comment briefly on the results of (b)(ii), (iii) and (iv) above with relevance to risk and return of Bill's portfolio compared to its benchmark. (3)
- (c) In order to provide an analysis of Plataman plc and Ripmark plc for Bill:
- (i) calculate, **showing all your workings**, the Return on Capital Employed (ROCE) for Plataman plc and Ripmark plc. (4)
- (ii) Comment on your findings with regard to your analysis of Plataman plc and Ripmark plc from (c)(i) above and the information contained in Table 2. (5)

- (d) Using information contained in Table 2:
- (i) comment briefly on the most likely effect of a significant increase in interest rates on the **relative** profitability of Plataman plc and Ripmark plc. (2)
  - (ii) Explain briefly the most likely effect on Plataman plc and Ripmark plc's interest cover of an increase in interest rates and the consequences. (6)
- (e)
- (i) Calculate, **showing all your workings**, the payout ratio for each of Plataman plc and Ripmark plc. (4)
  - (ii) Comment briefly on the most likely consequences of the payout ratio for Plataman plc calculated in (e)(i) above. (3)
- (f) State, giving your reasons, which of Plataman plc or Ripmark plc you would recommend selling, based on the information contained in Table 2. (4)
- (g) You are assisting Bill in completing his tax return for the tax year 2009/2010.
- (i) Calculate, **showing all your workings**, the gross income earned by Bill's portfolio during the Tax Year 2009/2010. (5)
  - (ii) Using the answer from (g)(i) above, calculate, **showing all your workings**, the tax credits that need to be included on Bill's tax return. (2)
  - (iii) Using the answers from (g)(i) above, calculate, **showing all your workings**, Bill's additional Income Tax liability on his portfolio. (3)

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

**Question 2 can be found on page 8**

## SECTION B

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

### Question 2

Celia, aged 50, is single and has recently lost her job due to the failure of her employer, a national travel agent. She is doubtful about her prospects of finding suitable employment in the medium term.

Her main asset, apart from her home which she owns outright, is a portfolio of shares. The portfolio of mainly UK blue chip shares was bequeathed by her uncle, and is valued at £400,000. Until now she has taken little interest in the shares, or in investment matters generally, and any dividends have been reinvested.

Her employment situation means that the portfolio is likely to be her main source of income for the foreseeable future. She is seeking your advice as to how she can maximise her income without taking undue additional risk.

She reports that former colleagues have mentioned that gilt edged securities (gilts) can provide a reliable income. One particular gilt stock that Celia is interested in is a Treasury 5.5% 2014, her interest yield requirement is 5.25%. However, she has become concerned about the Government's ability to ensure investors are protected and would like you to explain the safeguards and how recent changes have impacted on this. Her former colleagues have also warned her against so-called 'structured products' and she wishes you to comment.

## Questions

*To gain maximum marks you MUST show ALL your workings and express your answers to two decimal places.*

- (a) (i) List **three** of the statutory objectives the Financial Services and Markets Act gives to the Financial Services Authority (FSA). (3)
- (ii) Explain how the FSA helps to protect Celia as a consumer of investment products. (6)
- (b) (i) Explain to Celia how overall returns of conventional gilts might be affected by rising inflation. (4)
- (ii) Explain briefly how the movement of the price of conventional dated gilts, that are approaching their redemption date, differ from the price of undated gilts. (2)
- (iii) Calculate, **showing all your workings**, the clean price that Celia is prepared to pay for the 2014 Treasury stock she has expressed interest in to meet her requirements. (4)
- (c) In answer to Celia's concerns regarding structured products as a way of generating income:
- (i) outline **three** potential benefits of using structured products; (3)
- (ii) outline **five** potential drawbacks of using structured products. (5)
- (iii) Explain briefly how derivatives might be used within a typical structured product. (5)
- (d) Celia's portfolio contains substantial share holdings in FTSE 100 companies.
- (i) Explain briefly to Celia how a stockbroker may be able to increase the income from her shares using derivatives. (3)
- (ii) Comment briefly on the potential drawbacks with the strategy explained in (d)(i) above. (5)

**Total marks available for this question: 40**

### Question 3

Martin and Caroline Read are long standing clients of your firm. Martin has been managing their portfolio with you as the financial adviser and their bank as stockbrokers. Caroline has not shown an interest in the management of their investments. They are both retired with very good pensions.

<b>Holdings</b>	<b>£</b>	<b>Managed By</b>
Quoted Shares	400,000	Bank
Unit Trust & OEICS	495,000	Martin
Investment trusts	55,000	Martin

Martin has had a recent health scare and is finding managing the portfolio increasingly difficult. Over recent meetings you have established that Caroline and Martin intend to leave their main portfolio of quoted shares, valued at £400,000, with their bank who are currently managing it on a discretionary basis. The portfolio of shares is now in ISAs.

Over the years Martin has built up holdings in a large number of Unit Trusts, OEICs and Investment Trusts, valued at £550,000, of which £55,000 are held in Investment Trusts. He does not want to manage the collective investments anymore and has asked for your recommendations.

Martin does however want to control a small portfolio of shares to maintain some interest. He has read that companies with elastic demand for their products are most likely to benefit in a recessionary economic climate. He would like you to explain to him the implication of price elasticity of demand.

Martin and Caroline have made provision for their Inheritance Tax (IHT) and have set up and funded trusts for their children and grandchildren with the exception of Lucy, their youngest grandchild. They wish to make a provision of £60,000 for Lucy, for when she attains the age of 18 in ten years' time, to assist her through University. They have a 7% Treasury stock that redeems in ten years' time with a nominal investment value of £25,000 which they have earmarked for this purpose.

You have recommended an investment 'wrap' and a 'core and satellite' approach with 70% of the portfolio primarily in Exchange Traded Funds (ETF) and 30% of selected funds from the existing portfolio. You have a meeting with Martin and Caroline to discuss your recommendations.

## Questions

*To gain maximum marks you MUST show ALL your workings and express your answers to two decimal places.*

- (a) (i) Describe briefly to Martin and Caroline the main features of a wrap platform. (3)
- (ii) Explain briefly the type of fees typically charged within a wrap and by wrap providers. (3)
- (iii) Explain briefly the cost implications of re-registering the existing portfolio onto a wrap account. (3)
- (b) (i) Explain to Martin and Caroline the buying and selling process of Exchange Traded Funds (ETFs) that are created and traded by market makers. (4)
- (ii) Explain how ETFs might improve Martin and Caroline's underperforming portfolio. (3)
- (iii) Identify **one** potential disadvantage of an ETF compared to other passive funds. (2)
- (c) (i) Explain briefly to Martin what price elasticity of demand measures. (2)
- (ii) Explain briefly the implications of elastic demand for the profitability of goods. (4)
- (iii) Describe briefly the characteristics displayed by a good with elastic demand. (5)
- (iv) Draw a perfectly elastic demand curve and label its axis. (3)
- (d) Caroline is concerned that Lucy should receive her £60,000 towards University fees and has asked you to evaluate what other provisions, if any, should be made.
- (i) Calculate, **showing all your workings**, the future value of the Treasury stock, including the coupons re-invested, in ten years time. (3)
- (ii) Identify any shortfall or surplus. (1)
- (iii) Calculate, **showing all your workings**, the present value of the sum required to meet the £60,000 University fees provision, assuming the same 7% per annum return. (4)

**Total marks available for this question: 40**

# TAX TABLES

## INCOME TAX RATES

2009/2010		2008/2009	
Rate	Band	Rate	Band
%	£	%	£
10	1 – 2,440*	10	1 – 2,320*
20	1 – 37,400	20	1 – 34,800
40	Over 37,400	40	Over 34,800

\* A new 10% starting rate is applied for savings income only from 06.04.2008. Only applicable where non-savings income after allowances is under £2,440 for 2009/2010.

## NATIONAL INSURANCE CONTRIBUTIONS

### 2009/2010 Rates

Class 1 Employee	Weekly	Monthly	Yearly
	£	£	£
Lower Earnings Limit (LEL)	95	412	4,940
Upper Earnings Limit (UEL)	844	3,656	43,875
Upper Accruals Point	770	3,337	40,040

### Class 1 Employee contributions 2009/2010

Total earnings £ per week	Contracted-in rate	Contracted-out rate
	%	%
Up to 110.00*	Nil	Nil
110.01 – 770.00	11	9.4
770.01 – 844.00	11	11
Above 844.00	1	1

### Class 1 Employer contributions 2009/2010

Total earnings £ per week	Contracted-in rate	Contracted-out rate	
	%	Final salary	Money purchase
	%	%	£
Below 110.00**	Nil	Nil	Nil
110.01 – 770.00	12.8	9.1	11.4
770.01 – 844.00	12.8	12.8	12.8
Excess over 844.00	12.8	12.8	12.8

\* This is the primary threshold below which no NI contributions are payable. However, the lower earnings limit is £95 per week. This £95 to £110 band is a zero rate band introduced in order to protect lower earners' rights to contributory State benefits e.g. Basic State Pension.

\*\* Secondary earnings threshold.

**Class 2 (self-employed)** Flat rate per week £2.40 where earnings exceed £5,075 per annum.

**Class 3 (voluntary)** Flat rate per week £12.05

**Class 4 (self-employed)** 8% on profits between £5,715 - £43,875 plus 1% on profits above £43,875

## INCOME TAX RELIEFS

	2009/2010	2008/2009
	£	£
Personal (basic)	6,475	6,035
Personal (age 65-74)	9,490	9,030
Personal (aged 75 and over)	9,640	9,180
Married/civil partners (minimum) at 10% †	2,670	2,540
Married/civil partners (age under 75) at 10% †	N/A	6,535
Married/civil partners (age 75 and over) at 10%	6,965	6,625
Age-related relief reduced by 50% of income over	22,900	21,800
Child Tax Credit (CTC)		
family element	545	545
family element baby addition	545	545
CTC usually reduced by 6.67% of joint income over	50,000	50,000
Blind person's allowance	1,890	1,800
Enterprise Investment Scheme relief limit @ 20%	500,000	500,000
Venture Capital Trust relief limit @ 30%	200,000	200,000

† where at least one spouse/civil partner was born before 6 April 1935

## PENSIONS

Lifetime Allowance		Annual Allowance	
2006/2007	£1.5 million	2006/2007	£215,000
2007/2008	£1.6 million	2007/2008	£225,000
2008/2009	£1.65 million	2008/2009	£235,000
2009/2010	£1.75 million	2009/2010	£245,000
2010/2011	£1.8 million	2010/2011	£255,000

### Notional Earnings Cap

£123,600 – (For schemes that require post 1989 benefits to be still subject to a cap)

### Annual allowance charge

40% member's tax charge on the amount of total pension input in excess of the annual allowance.

### 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.

## CAR AND FUEL BENEFITS

The charge for company car benefits is based on the carbon dioxide (CO<sub>2</sub>) emissions. There is no reduction for high business mileage users.

For 2009/2010:

The percentage charge is 15% of the car's list price for CO<sub>2</sub> emissions at or below the qualifying level of 135g/km.

The base percentage charge of 15% increases in 1% steps for every additional full 5g/km over the 135g/km threshold, up to a maximum of 35% of the car's list price.

A lower percentage charge of 10% of the car's list price applies for emissions at or below 120g/km.

If price of car exceeds £80,000 then its price for tax purposes will be fixed at £80,000.

There is an additional 3% supplement for diesel cars not meeting Euro IV emission standards or registered after 31 December 2005. However, the maximum charge remains 35% of the car's list price.

**Car fuel** The benefit is calculated as the CO<sub>2</sub> emissions % relevant to the car and that % applied to a set figure (£16,900 for 2009/2010) e.g. car emission 160g/km = 20% on car benefit scale. 20% of £16,900 = £3,380.

### Notes:

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 Contributions (Class 1A) of 12.8%.

---

## PRIVATE VEHICLES USED FOR WORK

### 2009/2010 rates

#### Cars

On the first 10,000 business miles in tax year 40p per mile

Each business mile above 10,000 business miles 25p per mile

**Motor Cycles** 24p per mile

**Bicycles** 20p per mile

## INHERITANCE TAX

	<b>2009/2010</b>	<b>2008/2009</b>
Nil-rate band*	£325,000	£312,000
Rate of tax on excess	40%	40%
Lifetime transfers to and from certain trusts	20%	20%
Overseas domiciled spouse/civil partner exemption	£55,000	£55,000

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

	0-3	3-4	4-5	5-6	6-7
% of death charge	100	80	60	40	20
Annual exempt gifts	£3,000 per donor			£250 per donee	

\* From 8 October 2007 up to 100% of the unused proportion of a deceased spouse's/civil partner's nil-rate band can be claimed on the surviving spouse's/civil partner's death.

## MAIN SOCIAL SECURITY BENEFITS

		<b>From 06.04.09</b>	<b>From 06.04.08</b>
		<b>£</b>	<b>£</b>
Child Benefit	first child	20.00	20.00*
	subsequent children	13.20	13.20*
Incapacity Benefit	short-term lower rate**	67.75	63.75
	short-term higher rate**	80.15	75.40
	long-term rate	89.80	84.50
Attendance Allowance	lower rate	47.10	44.85
	higher rate	70.35	67.00
Retirement Pension	single	95.25	90.70
	married	152.30	145.05
Pension Credit	single person standard		
	minimum guarantee	130.00	124.05
	married couple standard		
	minimum guarantee	198.45	189.35
	maximum savings ignored in calculating income	6,000	
	increased from November 2009	10,000	
Bereavement Benefit (lump sum)		2,000.00	2,000.00
Widowed Parent's allowance		95.25	90.70
Jobseekers Allowance		64.30	60.50

\* From 5 January 2009

\*\* Under State Pension Age

## VALUE ADDED TAX

Standard rate	15%*/17.5%**
Annual registration limit - from 1 May 2009	£68,000
*Effective from 1 December 2008	
** Effective from 1 January 2010	

---

## CORPORATION TAX

Financial Year	2009 to 31/3/10	2008 to 31/3/09
Full rate	28%	28%
Small companies rate	21%	21%
Small companies limit	£300,000	£300,000
Effective marginal rate	29.75%	29.75%
Upper marginal limit	£1,500,000	£1,500,000

---

## CAPITAL ALLOWANCES

Plant & machinery 100% annual investment allowance (first year)	£50,000
Plant & machinery in excess of annual investment allowance (first year)	40%
Plant & machinery, patent rights, know-how (reducing balance) per annum	20%
Certain long-life assets, integral features of buildings (reducing balance) per annum	10%
Industrial & agricultural buildings (straight line)	2%
Energy & water-efficient investments	100%
Qualifying flat conversions & business premises renovations	100%
Motor cars: with emissions in excess of 160g/km	10%
generally	20%*
with CO2 emissions of 110g/km or less	100%
Research & Development: Capital expenditure	100%
Revenue expenditure - small/medium-size firms	175%
- large firms	130%

\* Maximum £3,000

---

## CAPITAL GAINS TAX

Exemptions	2009/2010	2008/2009
Individuals, estates etc	£10,100	£9,600
Trusts generally	£5,050	£4,800
Chattels proceeds (5/3 excess gain is taxable)	£6,000	£6,000
<b>Rates</b>		
Individuals	18%	18%
Trusts and estates	18%	18%

---

## ENTREPRENEURS' RELIEF

### Entrepreneurs' Relief 2009/2010

4/9<sup>ths</sup> of gain tax free. Lifetime limit eligible for relief: £1,000,000

For trading businesses and companies (minimum 5% employee shareholding) held for 1yr+

