INVESTMENT MANAGEMENT **1997 EXAMINATIONS**
SPECIALIST LEVEL

Answer all 9 Questions

QUESTION 1 **13 MARKS**

Discuss how an investor's risk tolerance and liquidity needs could be expected to influence (a) and (b) below. Illustrate your answer by contrasting the needs of a defined contribution capital stable fund and a listed investment company with an aggressive reputation.

a) Benchmark asset allocation.

(4 marks)

b) Asset allocation ranges.

(3 marks)

c) If the capital stable fund were particularly concerned about downside risk, what extra restrictions may it place on

(i) domestic equities
(ii) fixed interest
(iii) international equity portfolios

(6 marks)

QUESTION 2 **9 MARKS**

An investment manager offers a product which she calls a "capital certain" fund. She explains that the fund will offer similar, but slightly lower returns compared with her capital stable fund, (which has a benchmark asset allocation of 20% Australian Equities, 55% Australian Fixed Interest and 25% Cash), but with an almost certain guarantee that the return over a full financial year will never be negative.

(a) Describe two ways in which the manager may attempt to provide this guarantee. Give, with reasons, your preferred approach.

(3 marks)

(b) Under what circumstances may the guarantee not be met?

(3 marks)

(c) What are the problems with performing an attribution analysis for this fund? How would you cope with them?

(3 marks)

QUESTION 3 **10 MARKS**

HUGE superannuation fund, which you advise, has just appointed GLOBAL Funds Management to manage a portfolio of Offshore Equities. HUGE superannuation fund has requested that the portfolio be managed against the MSCI World ex-Australia Index in Local Currency terms. GLOBAL has asked why they have to manage relative to be benchmark, as their objective should be to get the highest return they can and a benchmark will only hinder them.

a) HUGE has asked for your comments. Outline the advantages and disadvantages of requiring GLOBAL to manage relative to be benchmark. Recommend, with reasons, your preferred approach.

(5 marks)

b) The benchmark selected was the MSCI World ex-Australia Index in Local Currency terms. GLOBAL suggested that if they were to manage against a benchmark they would prefer the MSCI World ex-Australia Index Hedged into Australian dollars.

What is the difference between these indices?

(1 mark)

c) Would you expect the Hedged index to have a higher or lower return than the local currency index in future? Give reasons.

(3 marks)

d) Why might GLOBAL prefer this index?

(1 mark)

QUESTION 4 **7 MARKS**

You are working for an investment management company considering offering a tactical asset allocation overlay product.The tactical asset allocation process which has been used in the past has been purely based on fundamental analysis of the various investment markets.The results have been satisfactory, but not spectacular, so the company is considering ways of improving the performance.

Write a report discussing the merits of using technical analysis as part of the tactical asset allocation process. Include whether or not you believe technical analysis will improve the returns.

QUESTION 5 **10 MARKS**

Estimate the effective tax rate you would expect to be paid over the long term on the investment earnings of an Australian superannuation fund 100% invested in Australian equities. Clearly identify all assumptions you have made.

QUESTION 6 **10 MARKS**

You are the investment actuary responsible for giving advice on the benchmark asset allocations for an Australian life insurance company. The product manager has approached your company's board directly and suggested that infrastructure investments and/or emerging markets could be introduced into the benchmarks to provide additional diversification and lower the overall risk of the investment. She has provided the Board with some historical figures which show that the standard deviation of the portfolio would have been reduced with no lowering of returns.

The Chairman of the board is not convinced that these changes will lower risk and has come to you with some questions.

a) He has heard standard deviation criticised as being a poor measure of risk. Briefly explain why you agree or disagree with this view.

(4 marks)

b) In what circumstances would you believe that the product manager's suggestion has merit? Give reasons.

(6 marks)

QUESTION 7 **7 MARKS**

In a recent edition of the Australian Financial Review you noticed the following tombstones produced by the same bank:

Huge Domestic Bank

Issuer : Ring Road 4 Ltd
Debt Issue : $300m non-amortising 20 year debt

Yield : 50 basis points over Commonwealth debt

Huge Domestic Bank

Issuer : Westway High Class Ltd
Debt Issue : $30m 5 year amortising debt

Yield : 125 basis points over 5 year swap rate

Westway was targeting a raising of $40m to make an acquisition of a complementary retailer, whereas Ring Road was refinancing an existing bank debt.

Question 7 continued on next page

Question 7 continued

You are in possession of the following information about the issuers.

($m)	Ring Road 4 Ltd	Westway High Class Ltd
Description:	Owns and operates a ring road in Melbourne	Runs a chain of middle to upper price female fashion speciality stores.
Shareholders Equity	1,000	100
Net Tangible Assets	950	70
Debt (before latest issue)	600	70
Working capital	5	30
Sales Revenue	270	200
Earnings before Depr, Interest and Tax	250	20
Depreciation	50	5
EBIT	200	15
Interest	48	5
Tax	50	3.6
NPAT	102	6.4
Operating leases	0	16
Maintenance Capital Expenditure	15	5

Give reasons for the difference in the pricing of the capital raisings.

QUESTION 8 **14 MARKS**

As part of its capital management program, Great Australian Bank (GAB) has decided to distribute excess franking credits and capital to shareholders. To maintain its rating with P & S Ratings Agency, the bank will replace some of its capital with a converting preference share issue.

The bank will, therefore, pay a 50c fully franked (at 36c) dividend. An additional 50 cents will be paid out of the capital account and thus carry no franking credit.

The preference issue will be on a 1 for 20 basis at a price of $10. Terms of the issue are as follows:

Rating with P & S:	AA Rates
Exercise Price:	$12.00
Coupon Rate:	5% fully franked, at 36c, payable semi-annually
Exercise Date:	30/6/2002
Exercise Details:	No. of shares to which the preference shareholder is entitled on exercise equals 12/(W*0.9) where W is the weighted average share price of GAB on 30/6/2002. The minimum number of shares to be issued will be one.

The shares will go ex-dividend to the capital repayment, dividend and rights issue on 1/7/1997.

Question 8 continued on next page

Question 8 continued

a) Value the preference share at the ex-date given the following:

GAB call options - exercise 30/6/2002	
Strike Price ($)	Call Value ($)
10.80	1.00
12.00	0.60
13.33	0.30

Yields to Maturity at 1/7/1997			
	Maturity (yrs)		
Issuer	3	5	7
Federal Government Bonds	6.5%	6.8%	7.0%
Westpac Bank bonds AA rated	6.2%	7.1%	7.35%
Coles Myer bonds BBB rates	6.5%	7.5%	7.8%
Coles Myer Preference shares gross yield (dividend grossed up for franking credits)	7.4%	8.4%	n/a

(7 marks)

b) Why do preference shares trade at a higher yield than bonds?

(4 marks)

c) Given GAB is trading at $9.00 immediately before it goes ex-dividend, at what price would you expect it to trade when it goes ex-dividend.

(3 marks)

QUESTION 9 **20 MARKS**

a) Why may stochastic asset modelling be of benefit compared with alternative asset modelling techniques.

(4 marks)

b) Include the following variables in a "cascade structure", or flow chart, for a possible stochastic asset model. Show any relationships you might expect, indicating where leading or lagging effects are likely to be found. Briefly comment on the reasons for the relationships you have indicated.

World GDP growth
Australian industrial production
Cash rates
10 year bond yields
Inflation
All Ordinaries equity returns
A$/US$ exchange rate
Property returns

(12 marks)

c) Modelling the variables in this manner is often called the judgemental approach. Give the advantages and disadvantages of this approach to stochastic asset modelling.

(4 marks)

END OF PAPER