INSTITUTE OF ACTUARIES OF AUSTRALIA

INVESTMENT MANAGEMENT **2004 EXAMINATIONS**
PAPER TWO

Answer all 6 questions.

QUESTION 1 **(20 Marks)**

Use by superannuation funds of so-called 'alternative investments' has been gradually increasing in the past decade in general and the last 3 years in particular.

(a) Explain why alternative investments are becoming more popular and the general factors that need to be considered before an investment of this type is made. (4 marks)

(b) In relation to the alternative investments listed below, explain the potential advantages and disadvantages and the key features of each type that would need to be considered before proceeding with an investment.

(i) Private equity. (4 marks)

(ii) Infrastructure. (4 marks)

(iii) Hedge funds. (4 marks)

(c) List and explain the items that should be considered in determining an appropriate allocation to alternative investments. The items considered should be different to those considered in determining allocations to more traditional investments. How would you determine an appropriate allocation to alternative investments in an overall portfolio? (4 marks)

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QUESTION 2 **(16 Marks)**

You are a securities analyst at a funds management organisation. Your current task is to look at two recently listed Australian companies that both operate in the child care sector. Summary profit and loss statements and balance sheets for each company are set out below.

All numbers are in $A millions unless otherwise stated.

Company A

Year to June	**1999**	**2000**	**2001**	**2002**	**2003**
Revenue	2,000	2,160	2,311	2,450	2,572
Operating expenses	1,300	1,382	1,456	1,519	1,569
EBITDA	**700**	**778**	**855**	**931**	**1,003**
Interest payable	-210	-210	-210	-210	-210
Depreciation	-200	-200	-200	-200	-200
NPBT	**290**	**368**	**445**	**521**	**593**
Tax	-87	-110	-133	-156	-178
NPAT	**203**	**258**	**312**	**365**	**415**
Shares on issue (millions)	1,000	1,000	1,000	1,000	1,000
Earnings per share ($)	**0.20**	**0.26**	**0.31**	**0.36**	**0.42**
Dividends per share ($)	**0.14**	**0.18**	**0.22**	**0.26**	**0.29**
Franking	100%	100%	100%	100%	100%
Assets	6,000	6,077	6,171	6,280	6,405
Senior debt	3,000	3,000	3,000	3,000	3,000
Other liabilities	500	500	500	500	500
Equity	**2,500**	**2,577**	**2,671**	**2,780**	**2,905**

Company B

Year to June	**1999**	**2000**	**2001**	**2002**	**2003**
Revenue	300	345	397	456	525
Operating expenses	285	310	337	365	394
EBITDA	**15**	**35**	**60**	**91**	**131**
Interest payable	-14	-15	-17	-18	-20
Depreciation	-20	-25	-30	-35	-40
NPBT	**-19**	**-5**	**13**	**38**	**71**
Tax	6	1	-4	-11	-21
NPAT	**-13**	**-4**	**9**	**27**	**50**

Shares on issue (millions)	1,000	1,000	1,000	1,000	1,000
Earnings per share ($)	**-0.01**	**0.00**	**0.01**	**0.03**	**0.05**
Dividends per share ($)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Franking	n/a	n/a	n/a	n/a	n/a
Assets	1,300	1,326	1,366	1,425	1,508
Senior debt	200	220	240	260	280
Other liabilities	100	110	121	133	146
Equity	**1,000**	**996**	**1,005**	**1,032**	**1,082**

(a) What sort of investigation/analysis would you carry out to determine whether the child care sector as a whole is suitable/appealing from an investment perspective? What sort of structural characteristics would you be looking for in the industry? (4 marks)

(b) From a financial perspective, what do you see as the key differences between the companies? Provide calculations and observations in this regard. What additional financial information would you seek? (6 marks)

(c) Your economist is of the view that we are about to enter a period of higher domestic inflation and rising interest rates. How would this impact on your view of the child care industry:

(i) as a whole, and (2 marks)

(ii) the relative appeal of the companies? (4 marks)

QUESTION 3 **(20 Marks)**

You are a consultant working in an Australian consulting firm. You are responsible for managing a number of portfolios for some local superannuation funds.

It is now 12th May 2003, a day before the monthly reports are due to be delivered to your clients. A new junior consultant, John, has been working very hard in checking the accuracy of the monthly reports. In doing so, John came across the following table of data:

Index	Monthly Performance for the month of April 2003
MSCI World ex Australia Net Index (in AUD)	5.18%
MSCI World ex Australia Net Index (in local currency terms)	8.35%
MSCI World ex Australia Net Index (Fully Hedged into AUD)	8.38%

John made the following comment:

"There must be something wrong with our system. It has been pulling down the wrong data. Look at the table. While I understand that the difference in performance between the unhedged and the local is probably due to the surge in the Australian dollar, the difference between the local and the hedged is simply too small. It had been around 30 basis points for the past 3 months."

(a) What is the MSCI World ex Australia Net Index? Explain briefly the major differences between the three indices quoted in John's table.

(4 marks)

Index	Monthly Performance for the month of		
	Jan 2003	Feb 2003	Mar 2003
MSCI World ex Australia Net Index (in AUD)	-6.96%	-5.10%	0.01%
MSCI World ex Australia Net Index (in local currency terms)	-3.68%	-1.57%	-0.64%
MSCI World ex Australia Net Index (Fully Hedged into AUD)	-3.34%	-1.29%	-0.37%

Currency	MSCI World ex Australia's Top 6 Currencies Exposure	Forward FX Rate at 31/3/03 (Foreign Currency/AUD)	Spot FX Rate (Foreign Currency/AUD)	
			31/3/03	30/4/03
US Dollar	59%	0.6026	0.6044	0.6264
Euro	15%	0.5528	0.5538	0.5605
UK Pound	12%	0.3819	0.3823	0.3914
Japanese Yen	9%	71.1100	71.6600	74.6900
Swiss Franc	3%	0.8139	0.8167	0.8495
Canadian Dollar	2%	0.8865	0.8890	0.8986

(b) Given the above information, do you agree or disagree with John's assertion that "the difference in performance between the unhedged [index] and the local [index] is probably due to the surge in AUD"? Why, or why not? (6 marks)

(c) The transactions assumed by MSCI in calculating the hedged return of investing in a security are:

An investor enters into a spot transaction to purchase a nominal amount of the foreign currency in which the security is denominated. The proceeds of this transaction are then invested in the security for the period. Simultaneously, a forward currency transaction is entered into, selling the amount of foreign currency purchased back into the investor's home currency. At the end of the reporting period, the investment into the security is redeemed for cash, the proceeds of which are used to settle the forward currency transaction. Any surplus or shortfall to the amount of currency sold forward is met by entering into a spot transaction.

Using the following notations and/or the above information, derive a formula which links the local return of a security (say in USD) with the hedged return of a security in AUD according to MSCI.

RL = Return earned in local currency
RH = Hedged Return earned in AUD
FX(t) = Spot FX rate (foreign currency/AUD) at time t
FF (t) = Forward FX rate (foreign currency/AUD) at time t

(6 marks)

(d) Given the information in **part (c)**, do you agree or disagree with John's assertion that "the difference (in performance) between the local [index] and the hedged [index] is simply too small"? Why, or why not?

(4 marks)

QUESTION 4 **(20 Marks)**

Having heard that 'smaller is better' when it comes to equity investment firms you have decided to follow the recent trend of investment professionals setting up their own equity fund by establishing Big Alpha Boutique Investments (BABI). Having come up with a catchy name, you face many decisions before the funds roll in.

(a) Firstly, you need to consider what type of investment fund you want the BABI fund to be. Assuming you want to be an active, fundamental investor, list your broad options in terms of investment style, including a short explanation of what it means to adopt those styles. (3 marks)

(b) Apart from style, what other parameters/constraints do you need to consider for the fund? (3 marks)

(c) Having decided that your process will involve a very analytical, bottom up approach, you have decided to set out your analytical process for the analysts you plan to hire.

Outline four different ways that you can assess the value of an equity investment and describe two constraints for each of these methods. (8 marks)

(d) Provide a summarised explanation of how you would go from knowing nothing about an equity investment to coming up with a solid investment recommendation for the portfolio, including sources of information. (6 marks)

QUESTION 5 **(15 Marks)**

You are working as a financial planner and one of your clients (a wealthy retiree) has expressed an interest in investing in a market neutral long/short hedge fund. This client is currently invested in a range of pooled balanced type products, as recommended by you. The performance of these funds has been quite volatile over recent years, and hence the idea of a fund that may be able to outperform under a variety of investment market conditions is attractive to him.

(a) What are the advantages and disadvantages of investing in such long/short funds for your client? (5 marks)

(b) If the client was going to invest in such a fund, what are the primary issues and constraints that they should consider before commencing such an investment? (5 marks)

(c) One of the funds that your client is specifically considering investing in is a long /short equities fund with a Socially Responsible Investment (SRI) filter.
The manager of this fund is The Best of Both Worlds Funds Management (TBOBWFM). It has recently been formed to take advantage of the interest in socially responsible investing. In the promotional literature for the fund, the Managing Director outlined the philosophy of their investment process as follows:

> "… what goes around, comes around. Companies that are unethical and do not look after their clients get found out sooner or later, generally in a spectacular fashion. Conversely, well managed, ethical business practices are the only way to sustainable investment. Hence our long/short fund will buy the shares of companies that meet our socially responsible criteria and short sell those companies who we consider to be unethical dinosaurs awaiting extinction."

Discuss the merits of this product in general, and also in the context of your client's portfolio. (5 marks)

QUESTION 6 **(9 Marks)**

You are the asset consultant to an Australian superannuation fund with $1 Billion of funds under management.

This fund's entire exposure to property is via a $100M investment in an unlisted property trust. This trust has been winding down over several years, and there is now only one other investor in this trust. This investor owns 25% of the trust (i.e. your client owns the other 75%).

The manager of the trust is keen to wind it up and has offered your client two options:

1. To accept an equivalent dollar value (less a 3% discount) of shares in NewCo, a property management company about to be set up and listed on the Australian Stock Exchange.

   NewCo will be managed by the manager of the current unlisted trust. The initial assets of this company will consist of the existing assets of the current unlisted vehicle, as well as some assets that the manager has taken from other unlisted trusts it manages. Further, this company will be able to participate in the development of new property projects.

2. To assume 100% ownership of the unlisted trust by purchasing the units held by the other investor, at a price reflecting the most recent independent valuation of the properties in the trust.

Your client has decided that it will accept one of these options, and has come to you asking for advice as to which option to accept. Draft a letter to your client discussing the pros and cons of each alternative. Your letter should also contain your recommendation, support of this recommendation, any assumptions you make and any further due diligence you would conduct before providing your final advice.

END OF PAPER TWO

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