

ASSET AND LIABILITY MANAGEMENT

ASSIGNMENT PART B MARKING GUIDE

SEMESTER 1 2021



Asset and Liability Management

Assignment Marking Guide Semester 1 2021

Part B Short answer questions marking guide

This assignment represents 20% of the available marks for the Asset and Liability Management subject. Part A is a multiple choice quiz worth 10 marks. Part B is a short answer paper worth 10 marks. You are marking one question from Part B.

Question	Unit	Syllabus Performance Outcome and Learning Objective	Page Reference in Course Notes	Total Marks
1	LO 1.4	Module 2	12, 16	2 marks
2	LO 2.5	Module 4	21, 22	4 marks
3a	LO 3.3.	Module 6	31, 33	2 marks
3b	LO 3.3	Module 6	31 to 48	2 marks
Total				10 marks

1. Long Term Capital Management's hedge fund model failed when their core assumptions proved to be incorrect, including that a sovereign state will not default on bonds or currency and that returns will always follow a Normal distribution. Identify four steps another hedge fund manager might take to test and refine their assumptions before relying on them for trading decisions. (2 marks)

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0.5 per idea max 4 ideas or 2 marks

Students may focus on the LTCM assumptions (sovereign defaults and normal distributions) or discuss more generally, either is fine.

LO 1.4

Subject materials Module 2 pages 12, 16



Asset and Liability Management

Assignment Marking Guide Semester 1 2021

Sample answer is

- **Identify** all **assumptions**, including those implicit in the model rather than input (e.g. that sovereign bonds have a 0% probability of default)
 - **Question**, debate and update all **assumptions** regularly
 - Question and **test** the statistical **assumptions** e.g. normal distribution for returns, correlation between two assumptions
 - **Scenario test** a wide range of future environments
 - **Sensitivity** test every assumption to see which are material
 - **Test** if assumptions would hold if liquidity freeze, negative cash rates, or other **extreme** events occur
 - **Analyse past experience** over the longest time frame available (e.g. at least a full economic cycle) and whether the assumption still holds true
 - **Backtest** the relationship between assumptions and outcomes by running the model using data from prior periods to validate the outcomes
2. A superannuation fund invests \$100 billion in domestic equity and domestic corporate and government bonds (all fixed rate not floating), as a long term patient investor. In 2020, the central bank lowered interest rates from 1.0% to 0.10% in an effort to support the economy through the Covid 19 pandemic.

Discuss the expected impact of very low interest rates on the fund's portfolio (both market value and income) over the following 6 months. There is no need to do any calculations. (4 marks)

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1 mark for each clear sensible point with a plausible explanation. **Not all of those in sample answer are required.**

Expecting to cover market value of bond portfolio, market value of equity portfolio, income from bond portfolio, income from equity portfolio

Can't obtain full marks if only discusses longer term outcomes as Q explicitly asks for next 6 months.

Subject materials Module 4 p21-22, LO 2.5



Asset and Liability Management

Assignment Marking Guide Semester 1 2021

Sample Answer is

The theory is that cutting short term rates stimulates the economy, by encouraging borrowing by companies (and individuals) the proceeds of which are then spent.

The bond portfolio will be revalued at a lower risk free short term yield **(0.5 mark)** 0.1% rather than 1% which will increase the market value **(0.5 mark)** of at least the shorter term bonds in the portfolio. There may potentially be less impact on the longer term bonds **(0.5 mark)** as other factors are important (long term inflation outlook etc.) **(0.5 mark)**. Actual coupons on the bonds is unchanged **(0.5 mark)** so the cashflow income from coupons is unaffected **(0.5 mark)**.

Companies should be able to borrow more cheaply **(0.5 mark)**, improving their profit **(0.5 mark)**. For some companies this may mean a short term improvement in earnings **(0.5 mark)**. For others this might be offset by losses arising due to the difficult economic situation **(0.5 mark)**. For at least some companies, dividends may be higher as a result **(0.5 mark)** and the share prices are likely to rise to reflect that, generating a capital gain.**(0.5 mark)**

However the pandemic itself may have disrupted the business operations of many companies **(0.5 marks)**, making the outcome for dividends and valuations very uncertain **(0.5 marks)**.

In combination, over 6 months, expect an increase in the market value of the portfolio due to revaluations **(0.5 marks)** and an increase in the share dividend income **(0.5 marks)**. NO change to coupon income **(0.5 marks)**.

In addition to any impacts of the reduced cash rates, there may be volatile market sentiment due to covid in that first six months, for example large price drop(s) followed by market corrections, in both bonds and share markets (at different times). **(1 mark)**



Asset and Liability Management

Assignment Marking Guide Semester 1 2021

3. This is the stated approach of an Australian equities investment manager:
- “At the heart of our investment philosophy is our bottom-up stock selection approach, which is driven by in-depth analysis and estimates, prepared by our experienced team of investment professionals. We use this internal research to help us identify Australian companies that are currently trading at an attractive discount to their true underlying value. These companies may have fallen out of favour with investors in the short-term due to a company-specific announcement, a profit downgrade, a negative growth outlook or a new market trend. We know from our decades of experience that the market, more often than not, overreacts to many of these short-term events. That’s why we always take a long-term view, as it allows us to look through this short-term ‘noise’ and invest in good companies at attractive prices. It’s an investment approach that some describe as contrarian, given we tend to avoid those companies that are seen as ‘market favourites’. ”
- a. Define what this manager means by “true underlying value” and state why it can only be estimated. (2 marks)

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As shown.

1 mark for the definition. Module names as Intrinsic value so expecting this term to be given for 0.5 Require link to future cash flows for 0.5

1 mark for why it can only be estimated –cash flows 0.5 discount rate 0.5

LO 3.3

Subject materials Module 6 pages 31, 33

Sample Answer is

The true underlying value is also known as the intrinsic or real value of the company **(0.5 mark)**. It is the present value of all the future cashflows (dividends) arising from the stock, that is, discounted back to today. **(0.5 mark)**

However, no-one can know or even predict the future cash flows consistently and correctly enough to know the real value at any point in time **(0.5 mark)** No-one can know the appropriate discount rate to apply with certainty **(0.5 mark)** therefore only estimates are possible. **(0.5 mark)**



Asset and Liability Management

Assignment Marking Guide Semester 1 2021

- b. There are 6 valuation models. Select one you believe that this manager could be using to estimate the true market value. Explain your selection. (2 marks)

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Expecting one of dividend discount model, financial ratio analysis, free cash flow. [0.5 for naming one of these three] Definitions as above. [0.5 for appropriate description]

Reason will be that the manager has stated in depth analysis and estimates used; internal research; not following market views. [1]

The available models shown on p33 Note they are **not** going to be using book value or share market price or share market comparatives. No marks for selecting one of these.

LO 3.3

Subject materials Module 6 pages 31-48

Sample Answers:

Of the 6 valuation models, three require a degree of analysis and calculations, consistent with the manager's stated approach. The manager may use all of them together. I believe that they could be using:

EITHER

Dividend Discount Model **(0.5 mark)**: DDR says that if you know the expected dividend and discount rate you can determine the true value as the present value of future dividends. **(0.5 mark)**

The information given indicates the manager believes that the market price reflects a view on the future dividends that is going to be incorrect; so by applying their own analysis to estimate future earnings/payout ratios/retained earnings and using the DDR the manager can estimate what they believe the true value is. **(1 mark)**

OR

Free cash flow **(0.5 mark)**: This is a mathematically straightforward process using accounting information on the company to determine the free cash flow expected in future years and the weighted cost of capital to determine the present value of the free cash flow. It requires an assumption about the growth in cash flows but no qualitative components. **(0.5 mark)**



Asset and Liability Management

Assignment Marking Guide Semester 1 2021

The information given indicates the manager uses a bottom up analysis of individual stocks, with a long term view and pays little attention to the current market price or other external factors. The FCF model would suit this style. It may not be used in isolation.

(1 mark)

OR

Financial Ratio Analysis **(0.5 mark)**: Managers use the outcomes of detailed financial ratio analysis to answer questions about the company's current and expected future financial position. It is both qualitative and quantitatively. It enables comparisons between companies. Earnings per share is a key ratio.

(0.5 mark)

The information given indicates the manager believes that the market price might reflect a short term overreaction leading to an inaccurate view of a company's future financials; so by applying their own assumptions, bottom up analysis of the ratios and comparing to other companies, the manager can estimate what they believe the true value is.

(1 mark)

END OF MARKING GUIDE