

ASSET LIABILITY MANAGEMENT

ASSIGNMENT MARKING GUIDE – SEMESTER 2 2023





Introduction

Thank you for accepting the role of assignment marker for this semester. This is an important role which is greatly appreciated by your profession. The information contained in this note will assist you in your role.

Please note that marking is due to be completed by **Monday 11 September 2023**.

The specific skills that are being developed and assessed are:

- acquisition of subject knowledge;
- application of subject material in an unfamiliar context; and
- communication of relevant points in language appropriate to the audience, in a logical and coherent manner.

The assignment is weighted 20% of the final result. It is marked out of 20 and consists of:

- Part A 20 multiple choice questions, delivered online via the learning management system (10 marks); and
- Part B short answer questions (10 marks) which is the part requiring marking.

Marking resources and contacts are provided in Appendix 1.

Marking material

Asset liability management assignments do not use a rubric, rather a model solution for the short answer questions.

A marking guide containing the model solutions and mark allocations for Part B is provided in Appendix 2.



Expected standards

Assignments for this subject accounts for 20% of the total mark and students complete their assignment by week 8. Whilst it is a summative assessment as it counts towards the final mark, part of the assignment is effectively a formative assessment as it should be used as a teaching tool. Specifically, the assignment allows students to self-reflect their ability to communicate clearly and to develop an understanding of their additional effort required to improve their speed of communication before the final examination.

A guide to the expected standard of communication for the Actuary level subjects is the quality expected from an employee in their first year of work.

Process

Each marker will mark all Part B questions for approximately 70 student submissions.

Markers can access candidate answers online through the Assignment Markers Resource in Canvas: <https://actuaries.instructure.com/login/canvas>.

<https://actuaries.instructure.com/courses/384>

You may print the submissions and use them for your marking but please treat them securely as they are confidential documents.

Please note that candidate answers are uploaded in batches. You will be informed when your candidates' submissions have been uploaded.

Marking spreadsheet

Each assignment or assignment section will be marked independently by one marker and the results entered in the marking spreadsheet provided.

You will be invited to access the marking spreadsheet via MS Teams. This will allow both markers to enter their marks into the one spreadsheet simultaneously in a secure environment. If you don't already have MS Teams access, then one extra step is required to sign up (it is free).



In the 'Comments' column in the template, please provide brief comments for each candidate covering:

- reasons for your decisions with reference to what was done well and what was not done well; and
- details on any serious misunderstandings.

Please mark in 0.5 marks, that is possible marks for each question or sub-question are 0, 0.5, 1.0 etc.

Marking a sample of assignment papers first

Each marker and the Chief Examiner will mark a sample of three papers (selected by the Chief Examiner) and then collectively review the interpretation of the rubric and marking guide. It is possible that changes to the marking guide will be required.

Please place your marks in the "Sample" Tab of the marking spreadsheet.

The Chief Examiner will arrange a conference call with the markers to go through the outcome of the sample submission marking to ensure an agreed consistent approach for the rest of the marking.

Marking the rest of the assignment papers

The remaining submissions are then each marked independently by the markers and the results entered in the "All" tab of the marking spreadsheet provided.

The Chief Examiner will also organise meetings as needed to provide markers with support and to facilitate consistency in marking.

If you come across an unusual answer that you are not sure how to mark, please contact the Chief Examiner.

Review sample gradings

Once you have completed marking all of your allocated student questions, you should check that you are comfortable with your ranking of the attempts. Please look at a few papers either side of the 60% mark (6 out of 10) to confirm you agree with the outcomes.



Review of borderline candidates

After marking the rest of your assignments, you may be asked to review a handful of assignments that were marked by another marker as being near the pass mark. You may then need to discuss with the original marker any differences between their original marks and your reviewed marks before reaching a consensus view of the mark that should be awarded for each assignment. If needed, the Chief Examiner will be available during this review process to help you reach a consensus view on the right mark for a student.

Submit

When you have completed the marking process and finalised your marks and comments in the spreadsheet then please advise the Chief Examiner by email.

Your email should also provide a brief commentary (no more than half a page in length), setting out:

- how the candidates generally answered each question sub-part;
- whether each sub-part was interpreted correctly;
- common features of strong and weak answers;
- any common difficulties answering any sub-part;
- any overall comments that you have on the questions; and
- any outcomes of reviewing submissions around the cut-off pass mark of 60%.

The marks for the Part B short answer questions are then combined with the Part A multiple choice quiz by the Chief Examiner to determine the student's overall grade.

The Chief Examiner may need to discuss Part B outcomes with the original markers before determining the marks that should be awarded a pass grade.



Appendix 1: Resources

Materials

The following materials were provided to students:

- assignment question (ALM 2023 S2 Assignment Submission Cover Sheet and Part B FINAL.docx).

The following additional materials are provided to subject markers:

- assignment marking input spreadsheet (see also Teams);
- assignment marking guide (this document); and
- guidance from the Education team via <https://actuaries.instructure.com/courses/384>.

First Three Papers

25099
36172
40038

Marking schedule

Item	Date
Assignment due	28 August
Assignment answers uploaded to Assignment Marking Resource	29 August
First three papers marked and submitted to Chief Examiner	31 August
Marker calibration meeting with Chief Examiner	1 September
Independent Marking Completed	11 September



Asset Liability Management

Assignment Marking Guide S2 2023

Contact details

Contact details for markers are:

Title	First Name	Last Name	Contact Details	Location
Marker	Martina	Shan	martinashan12@gmail.com	0426 446 105
Marker	Natalie	Tan	nptan@kpmg.com.au	86638150
Chief Examiner	Janice	Jones	Janice.jones@actuaries.asn.au	0407086494



Appendix 2: Marking guide

This assignment represents 20% of the available marks for the Asset Liability Management subject.

Part A Multiple Choice Questions (20 questions 0.5 mark each = 10)

Part A is a multiple choice quiz worth 10 marks. No Marking Guide Required

Part B is a short answer paper (10 marks)

Question	Learning Objective	Module	Simple Application	Application	Higher order	Total
1	3.3	6	6	0	0	6
2	3.2	5	0	4	0	4
Total			6	4	0	10

Students were provided with information on the meaning of the Command Verbs used for each question, as per table below.

Verb	Level	Meaning
<i>Contrast</i>	Simple Application	Describe the differences between two or more items.
<i>Explain</i>	Application	Give an account of something with the goal of clarifying it to someone or making something easier to understand. Calls for even more information than describe, showing that you can convey 'why' or 'how' or 'so what'. A connection is expected between the item(s) and something else.

Note that for each question a sample answer has been prepared with marking guide, plus additional guidance for you. Alternative answers may be possible where noted.



Question 1

An active equity investment manager needs to estimate the intrinsic value of an equity security and is considering which valuation model to employ.

Contrast the dividend discount model to the free cash flow model, including the assumptions required. [6 marks]

Sample answer

Both models are discounted cash flow methods, where future cash flows are modelled applying data and assumptions (0.5), and then discounted back to the present date using an assumed discount rate. (0.5)

(max 1 mark for common DCF method)

Cash flow

A dividend discount model estimates the expected future dividends (0.5) **while** the free cash flow model estimates the free cash flow available for distribution to shareholders and lenders (0.5) generated in each future year.

(max 1 mark for different cash flows being modelled)

Discount rate

The DDM discount rate is the required rate of return of the investor (0.5) which will allow for the uncertainty of the expected payment of the dividends (0.5) and will usually be derived by adding a risk premium (0.5) to the long-term risk-free rate (0.5).

(Max 1 mark for describing the DDM discount rate)

The free cash flow model discounts the estimated future free cash flow at the weighted average cost of capital (0.5), which is a form of the discount rate. The weighted average cost of capital is a proportional weighted calculation (0.5) of a company's cost of equity (0.5) and cost of debt capital (0.5).

(Max 1 mark for describing the FCF discount rate)

Other Assumptions



Both approaches require assumptions about the future growth of the company (0.5) and future revenue and expenses (0.5) however this information is applied differently.

(max 1 mark for common assumptions)

The DDM then makes assumptions e about

- the future earnings (growth) of the company (0.5), which in turn depends on assumptions about revenue and expenses (0.5 if not mentioned above); and
- the proportion of earnings distributed in dividends to shareholders (0.5), that is, the payout ratio (0.5)

Free cash flow model then makes assumptions to about

- growth (rate) in cash flows (0.5); and
- the elements from which net cash flow is derived (0.5) such as revenue, expenses and tax (0.5 if not mentioned above).

(max 2 mark for elaborating on different assumptions used)

Marking Guide 1.0 mark per point but only if point is distinct and contributes to discussion of a similarity or a difference. 0.5 mark if partially explained.

Must cover at least one common feature and at least one difference to gain full marks.
Maximum marks 6

Learning Objective assessed:

3.3. Compare valuation methods including discussing assumptions and evaluating limitations

Module 6 Equities (Simple Application 6)



Question 2

The table below summarises a Telstra Corporation debt security issued in 2017, with information as of 29 June 2023.

Explain two of the key risks for corporate debt, with respect to this particular security. [4 marks]

Issuer	Telstra Corporation Ltd (a listed Australian telecommunications provider)
Issue Date	19 April 2017
Maturity date	19 April 2027
Capital structure	Senior Unsecured
Coupon Type	Fixed
Coupon Rate	4.00% pa
Payment frequency	Semi-Annual
Next interest payment date	19 October 2023
Issue Size	\$550 Million
Market	Bonds were issued to wholesale investors. Not traded on a listed market.
Telstra Corp Credit Rating Long Term	S&P A- (stable)
Telstra Corp Market Cap (ASX)	\$50 Billion

Sample answer

The two main sources of risk when investing in debt securities are credit risk and interest rate risk, however as this could be considered too short term for interest rate risk, liquidity risk or inflation risk would also be reasonable to include. **Only mark the first two presented.** (Student may select others)

Credit risk (or default risk) is the risk that the issuer of a debt security does not make the agreed payments of interest and capital at the agreed times. (0.5)

- Telstra is a listed corporation, of significant size \$50bn, the debt issue is therefore 1% of the company's current value (0.5) which is a low proportion (0.5), however we don't know what other debt capital is on issue from this table (0.5), overall this represents a small addition to the corporate credit risk (0.5)



- the company is rated S&P A- (0.5), which is investment grade (0.5) and indicates a low risk (higher than sovereign but lower risk than many other corporations) (0.5)

Interest rate risk is the sensitivity of the price of a debt security to changes in the market level of interest rates. The longer the term to maturity of a debt security, the greater the sensitivity. (0.5)

- The remaining term is 3.5 years and the bonds are paying 4% pa (0.5) which is lower than the cash rate now (0.5), and potentially lower than the cash rate will be through to maturity in 2027. (0.5)
- If cash rates rise, the market value will decline further, however if cash rates fall then the bond becomes more attractive (market value will increase) (0.5), so this bond has interest rate risk. (0.5)
- Cash rates have somewhat uncertain outlook, so interest rate risk remains in place (0.5), but declining as we approach Oct 2027. (0.5)
- Interest rate risk or sensitivity is usually measured by the duration of the debt security which is effectively the weighted average term of the agreed payments of interest and capital promised by the terms of issue of the debt security. (0.5 for defining duration)
- As the maturity date (April 2027) approaches (0.5) the duration and therefore sensitivity declines. (0.5)

Liquidity risk is the risk that the security cannot be sold (traded) when the investor requires, at the price the investor seeks (0.5)

- This bond is not traded on a listed market and is held only by wholesale investors (0.5). It may not be easy to find another investor interested in purchasing a bond at the time or price the seller wishes to exit. (0.5) The price offered may be even lower if there is known to be a forced sale. (0.5)
- This bond has relatively high liquidity risk compared to securities traded on a listed market. (0.5)



- As the bond is not listed, to even request a price quote from the market can be a signal to the market (0.5) of the desire to sell and work against a seller, ie buyers will quote even lower (0.5)

Inflation risk is that the returns from the investment are not sufficient to generate a 'real return' ie net of inflation for the investor.

- Current inflation expectations will be priced into the bond's market value (0.5) but any further unexpected increases in inflation will devalue the real return (4% less inflation) (0.5) and devalue the bond (0.5). This may more important to investors requiring a real rate of return rather than an absolute rate. (0.5)

Marking Guide

Only mark first two risks presented.

0.5 mark for identifying a relevant risk. 0.5 for incorporating a fact from the table. 0.5 mark for correctly relating the fact to the risk. 0.5 for part points 0.5 for conclusion Max 2 marks per risk. **If no reference to table, cannot score more than 2 out of 4.**

Learning objectives assessed:

3.2. Discuss the components and drivers of the three principal asset classes' risk and return

Module 5 Debt securities (Application 4 marks)