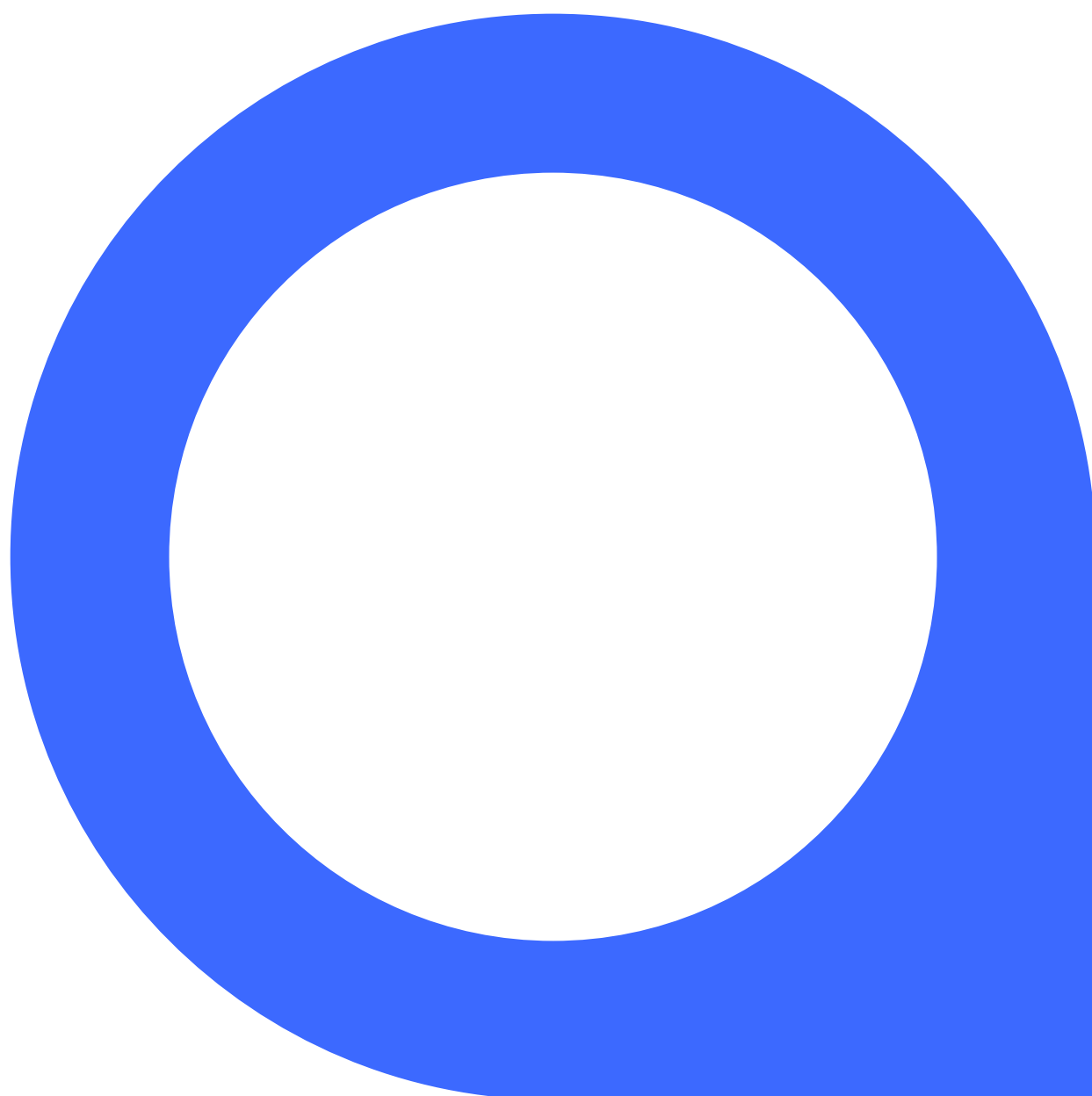


Investment

Exam Marking Guide Semester 2 2024





Marking Guide

This exam represents 80% of the available marks for the Subject Title subject. The remaining 20% comes from the assignment.

Question	Syllabus Learning Objective	Chapter Reference in Course Notes	Total Marks	SA	A	H
1 a	3.1, 3.2	5	8		6	
1 b	3.1, 3.2	5	4		4	
1 c	3.1, 3.2	5	4			6
1 d	3.1, 3.2	5	4			4
1			20	0	10	10
2 a	1.1, 1.2	3	8		8	
2b	1.1, 1.2, 5.2, 7.2, 9.2	3,5,8,10	4		4	
2 c	3.2,6.2	5,7	8		8	
2			20	0	20	0
3 a	1.1, 1.2, 2.1, 2.2, 4.1,8.1	2,3,4,9	6	6		
3 b	1.1, 1.2, 3.2	3,5	8		8	
3 c	8.1,8.2,8.3,8.4,8.5,	3,9	6			6
3			20	6	8	6
4 a	3.2, 9.3	5,10	12			12
4 b	5.2, 5.3	3, 6	8		8	
4			20		8	12
Total			80	6	46	28

**Note to Markers:**

An overarching principle is that marks should be awarded for necessary work undertaken by a student to arrive at an answer to a question. You may think of this as telling a story to answer the question that is asked. In respect of marking, please award marks for defining terms, describing background and context which is relevant to 'telling a story' to answer the question.

*We give guidance to students that copying and pasting is allowed but they need to address the specified scenario to pass the examination. The marking guide for each question will explicitly states if marks can be awarded for generic points or whether the points given must be linked to the given problem context. If the marking guide does not specify otherwise, marks **SHOULD** be awarded for relevant comments that may appear to have been copy pasted from either the modules or another resource, such as a prudential or professional standard.*

Marks should also be awarded for any other relevant point not included in the marking guide.

Where any such marks are awarded, the relevant point should be reported to the Chief Examiner so that they can confirm the validity, include it into the final version of the marking guide and ensure any other marker(s) for that question are aware of the change and award the mark to all candidates making the additional point.

As a rule, a complete sentence should be awarded 1 mark.

A complete sentence includes a clause and a connecting clause. An example sentence is 'The insurer pays a benefit on death' (½ mark for the clause) provided the premiums are paid (½ mark for connecting clause)'.

The exam questions each start with a 'command verb' that provides information to students and markers about what is expected in an answer to the question. Please watch the following short video for information about the learning levels and command verbs used by the Institute: https://www.youtube.com/watch?v=g1Oyv_RpfU4. Definitions of each of these command verbs is also provided within this marking guide.

Please note that many of the answers in this marking guide go well beyond what is required to gain full marks in the question. This is done deliberately to give students and markers a sense of the wide range of acceptable answers that students might give to a question.



QUESTION 1: MARKING GUIDE

(20 marks)

- a) Explain two of the most important risks to the net after tax profit of RIO over the next 5 years with supporting evidence. **(6 marks)** Learning objectives 3.1, 3.2

Command verb Explain (Level 4 – Application-Analyse) 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.

Question solution

The most important risks to the net after tax profit (NATP) of RIO are those which affect the profits generated by its major business segments: Iron ore, aluminium, and copper. **(1 mark)** The risks in these business segments arise from the effect of factors such as volatility of sales volumes and prices on revenue as well as factors affecting fixed and variable costs. **(1 mark)**

All three of these business segments have high fixed costs which cannot be changed in the short to medium term, **(1 mark)** Therefore each of these business segments has substantial operating leverage. **(1 mark)** This is very advantageous when revenues are growing but has the reverse effect if they are falling relative to fixed costs. **(1 mark)** The revenue of each business segment is volatile as both the volume of sales and the price per unit sold is variable and affected by economic conditions. **(1 mark)**

Reviewing each these business segments:

- Iron ore is mainly exported to the Peoples Republic of China (PRC). **(1 mark)** The revenue is therefore very dependent on the continuation of strong economic growth in the PRC. **(1 mark)** Real GDP growth in the PRC has historically been above 5% per annum but has fallen below that in the last year and there are signs that it will continue to fall in the absence of major shifts in government policy. **(1 mark)** The demand for steel may fall significantly and there are signs of a reduction in steel capacity taking place. **(1 mark)** The demand for iron ore is forecast to fall by many market observers. **(1 mark)** Some forecasters have said by as much as \$US30 per tonne. **(1 mark)** This alone would reduce RIO's revenue by about 10%. **(1 mark)** A 10% fall in revenue from Iron Ore price falls would reduce the total NATP of RIO by about 10%. **(1 mark)** The risk to RIO's NATP is that falls in volume of sales and price will take place while RIO will be unable to reduce the fixed costs of this business segment. **(1 mark)**



- Aluminium much of which is exported to the residential construction industries of the PRC and the USA, both of which have shown signs of contraction. **(1 mark)** The growth in revenue from this business segment is therefore dependent on growth in construction in both countries. **(1 mark)** Residential construction has been reducing sharply in the PRC **(0.5 mark)** and has also reduced in the USA **(0.5 mark)** due to the increase in the cost of home mortgage finance following sharp interest rate increases by the US Federal Reserve since 2022. **(1 mark)** The risk to RIO's NATP is that falls in volume of sales and price of aluminium will take place while RIO will be unable to reduce the fixed costs of this business segment. **(1 mark)** Moreover, aluminium production is very energy intensive (mainly electricity), so the increases in electricity costs that are currently being experienced, and which may continue, will add to variable costs and reduce profit margins. **(1 mark)**
- Copper much of which is also exported to the PRC **(1 mark)** is priced globally in USD **(0.5 mark)** and has a very volatile price which is affected by the medium term outlook for industrial production. **(0.5 mark)** It is also affected by changing market perceptions of the likely speed of the energy transition to greater use of renewable energy sources, **(1 mark)** which have a high demand for copper, mostly in transmission lines. **(0.5 mark)** The risk to RIO's NATP is that falls in volume of sales and price of copper will take place, if the renewable energy transition is slower than expected, while RIO will be unable to reduce the fixed costs of this business segment. **(1 mark)** Moreover RIO plans to produce much of its copper from a major mine in Mongolia which is starting production in late 2024 after many years of delay due to political difficulties over royalties. Such difficulties may well recur, causing variable costs to rise and profit margins to fall **(1 mark)**

Note to markers: candidates may also refer to risks arising from:

- *Political factors directly affecting revenues and costs in Western Australia, or Guinea*
- *Geopolitical factors such as the impact of the wars in Ukraine or the Middle East on energy prices, inflation, or global GDP growth*
- *Currency fluctuations of the USD versus the AUD*

Candidates should be given credit for valid points clearly expressed with 1 mark being given for a complete sentence.

The explanations provided need to link the factors to effects on the NATP of RIO.

Candidates must cover two risks to get full 6 marks.



An alternative way of answering this question part well is as follows:

Rio Tinto is a worldwide mining organisation who mine various minerals including iron ore, aluminium, copper and other minerals. The **net profit after tax (NPAT)** is highly driven by the revenue that Rio Tinto can generate, especially since mining companies have significant **operating leverage**, which means that the net profit after tax is magnified. **(1 mark)**

Two of the most important risks to the NPAT of Rio Tinto in the next five years are outlined below:

- **Volume:** Since most of Rio Tinto's revenue is driven by iron ore, the volume of this that can be sold is a significant driver. **(1 mark)** China is one of the major buyers of iron ore **(0.5 mark)** and Rio Tinto, along with many other mining organisations, rely on China for these purchases. **(0.5 mark)** These are predominantly used to build steel for commercial buildings. It is expected that China's economy will slow down in the near future, which means that the demand for iron ore will be less. **(0.5 mark)** If the demand for iron ore is less, that is less revenue that Rio Tinto is receiving, **(0.5 mark)** and since it has large, fixed costs (operating leverage), it will magnify the losses in net profit after tax. **(0.5 mark)**
- **Price:** Along with a decrease in volume, a decrease in the price that can be sold per unit will decrease with less demand for iron ore. **(1 mark)** The price that Rio Tinto is able to sell its iron ore for is a significant driver of its revenue, and since it has operating leverage, this will magnify losses of net profit after tax. **(1 mark)**

- b) Explain the actions that RIO can take to mitigate these risks. **(4 marks)** **Learning objectives 3.1, 3.2**

Command verb Explain (Level 4 – Application-Analyse) 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.

Question solution

Price risk: RIO could use financial derivatives (futures, forwards, options, commodity swaps) to reduce risk of adverse commodity price movements in its major products and reduce the variability in its revenue. **(1 mark)** For example RIO could use the sale of iron ore or copper price futures to reduce the effect of a possible fall in the iron ore or copper prices **(1.0 mark)**.

Volume risk: To reduce the risk caused by downturns in volume of sales RIO could try to further diversify its revenue sources **(1 mark)** in order to reduce the reliance of overall profits on iron



ore sales to China. **(0.5 mark)** or sales of aluminium to the construction industries of China or the USA **(0.5 mark)** by

- finding other markets for iron ore or aluminium **(0.5 mark)** such as India or Indonesia or South Africa **(0.5 mark for a credible suggestion i.e. Brazil is not a credible customer for iron ore as it is a major producer)**
- developing markets for other minerals such as copper which will be in increased demand as energy transmission infrastructure is built **(1 mark)**

It has already demonstrated an ability to diversify to some extent with:

- its acquisition of the major aluminium business some years ago **(0.5 mark)** but its experience with that diversification did not go as well as expected and it is still heavily dependent on sales to China. **(1 mark)** Therefore seeking an even more diversified extension of its business or acquisition would be more sensible. **(1 mark)**
- Its acquisition and development of a very large copper mining operation in Mongolia **(1 mark)** although this has been much delayed due to disagreements with the Mongolian government **(1 mark)**

Note to markers: candidates may also refer to mitigating other risks that they have explained in part (a). The explanations of the mitigants need to indicate how the effects on the NATP are reduced.

Candidates must cover both risks to achieve full 4 marks.

- c) Propose an investment research program which will support the ongoing valuation of FMG and RIO. **(6 marks)** Learning objectives 3.1, 3.2

Command verb Propose (Level 6 – Higher Order- Create) Select and communicate a solution, action, or range of possible solutions/actions. Rationale, reasons, or justification must be included.

Question solution

1 mark for each point listed below or a similar relevant point made in a level of detail similar to those listed below

An investment research programme which will support the ongoing valuation of equity securities issued by FMG and RIO needs to support estimates of the following together with the degrees of uncertainty around the estimates **(1 mark if allowance for uncertainty included):**



- Commodity price forecasts for periods such as:
 - from now until five years' time; **(0.5 mark)**
 - five to 10 years; **(0.5 mark)**
 - ten years and beyond **(1 mark)**

for each of iron ore, bauxite, alumina, aluminium, copper, **(1 mark for mentioning all of these 0.5 mark if only some mentioned)** and other commodities which may be potential sources of diversification such as oil, natural gas, hydrogen, lithium, and nickel. **(1 mark for mentioning all of these 0.5 mark if only some mentioned)**

- the supply and demand for each of these commodities over the same periods; **(1 mark)**
- the cost of key inputs such as labour costs, energy costs (oil, gas, electricity, renewable energy), costs of shipping bulk items such as iron ore to markets in China, Japan, South Korea, United States, and Europe; **(1 mark for mentioning all of these 0.5 mark if only some mentioned)**
- activities of major competitors such as BHP and Vale. **(1 mark)**
- forecasts interest rates on debt that may be used to finance operations such as the US treasury bond yield curve out to 30 years, **(1 mark)** and forecasts of credit spreads for various durations, in the corporate bond markets of the USA, Europe, and Australia; **(1 mark)**
- qualitative assessments of the calibre of the senior management and boards of directors of each of the companies including information on prior experience, achievements, or significant problems; **(1 mark for all of these points, 0.5 mark for some)**
- information on political factors that may influence the speed with which extension or development of the businesses can take place such as the development of the Simandou Iron Ore mine by RIO in the Republic of Guinea, and in the case of FMG political support in Australia for the development of the green hydrogen business leading to production credits being offered. **(2 marks if examples of such factors for both RIO and FMG mentioned, 1 mark if such factors mentioned for 1 company, 0.5 mark if general point made but no examples cited)**
- assessment of the companies' operations including the following:



- a. Volumes of commodities produced from all relevant operations. This can be used to estimate the revenue from mining. **(1 mark)**
- b. Expected CAPEX and how it will be funded. **(1 mark)**
 - projections of revenues and costs across all business lines, future dilution, dividends, tax, and other components required to calculate EPS and DPS. **(1 mark)**
 - estimation of the relevant discount rates considering the prevailing market interest rates and equity risk premiums **(1 mark)**
- d) Evaluate the use of sensitivity analysis and scenario analysis to allow for uncertainty in the valuation of the equity securities of companies such as RIO and FMG. **(4 marks)** **Learning objectives 3.1, 3.2**

Command verb Evaluate (Level 5 – Higher Order- Evaluate) Judge or assess the worth of.

Question solution

Note to markers: The answer provided needs to:

- *define each of sensitivity and scenario analysis; (1 mark for each)*
- *describe the advantages and disadvantages of each; and (1 mark for each advantage or disadvantage)*

Sensitivity analysis varies one variable at time in the valuation model and shows as output the degree to which the valuation varies in response to the variation in the single variable. **(1 mark for the definition)**

Advantages

- clarifies the effect of varying each key assumption on the outcome **(1 mark)**
- easy to explain to people using the output of the valuation model **(1 mark)**
- can be used to stress volumes to understand how changes in operations affect the valuation. **(1 mark)**

Disadvantage

- will underestimate the impact of several assumptions changing at once **(1 mark)**



- does not allow for correlation effects between factors **(1 mark)**

Scenario analysis varies several variables simultaneously and shows the valuation for each scenario, with at least two distinct scenarios being described, together with the parameter values set for at two or more key assumptions **(1 mark for the definition)**

Advantages

- shows the impact of several assumptions changing at once **(0.5 mark)**
- allows a more realistic view of what may occur in practice **(0.5 mark)**

Disadvantage

- obscures the effect of varying each key assumption on the outcome **(0.5 mark)**
- requires more effort to provide a clear explanation or narrative so that users of the valuation model can understand what is being presented **(0.5 mark)**

Scenario analysis allows estimating the value of the security based on a specific set of scenarios and then assigning probabilities to these scenarios to better understand the outcome. **(1 mark)**

This method is especially useful as it can consider the impact of risk factors such as trade embargoes, sanctions and tariffs which are very common for commodity markets in the current geopolitical climate. Sensitivity assessment cannot be used for this. **(1 mark)**

While these methods are different and should be used for different analysis, both should be used to assess uncertainty **(1 mark)** because the valuations need to allow for the high degree of uncertainty in both the volume of commodities produced and sold by each company and the volatility of prices of the commodities **(1 mark)**.

END OF QUESTION 1: MARKING GUIDE



QUESTION 2: MARKING GUIDE

(20 marks)

- a) Explain two potential major risks that could have been foreseen at the time of acquisition (2017) of the office property in New York and how each of them could have been mitigated (8 marks) Learning objectives 1.1, 1.2

Command verb Explain (Level 4 – Application-Analyse) 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.

Question solution

Potential major risks that could have been foreseen in 2017, the time of acquisition, were:

- An increase in vacancy levels in office space for a period of up to three years following a recession. (1 mark) This is due to a cyclical rather than a secular or more permanent reduction in demand for office space. (1 mark) It normally occurs during recessions and can cause market wide vacancies of up to 15% of available space. (1 mark) Based on historical evidence in range of major cities, such downturns may lead to reductions in rental income that can take up to 3 years or more to recover to their previous level. (1 mark). (Note: A more permanent shift in rental income such as that caused by the impact of the COVID pandemic in 2020 would not have been foreseeable by most investors.) The risk of increased vacancy could have been mitigated by selection of and securing stronger tenants (compared with the major tenant with a weak business model which defaulted) (1.0 mark) or insistence on longer leases (compared with the retailer whose lease expired in 2024) (1.0 mark).
- The escalation in debt servicing costs on a loan which had:
 - a. An exceptionally high loan-to -valuation ratio of 77% (1 mark);
 - b. a very short term of just 3 years compared with a much longer likely holding period for such an investor with this type of asset (1 mark);
 - c. a long term base rate which had a higher term premium (1 mark);
 - d. an expensive margin above the base rate (1 mark);



There are a number of interaction effects which made the situation worse that need to be explained

(1 mark if this important general point is made):

- the interaction of the short term of the loan, the high margin of 4% p.a. over the long term Treasury bond yield and the exceptionally high level of debt relative the value of the asset made the debt servicing cost relative to the rental income of the asset high even before the prospect of an increase in bond yields was considered. **(1 mark)**
- The loan was made at a time when the base rate was known to be at historically low levels, induced by extremely stimulatory monetary policy where quantitative easing was known to be suppressing long term government bond yields and it was widely known that this policy would not be kept in place indefinitely **(1 mark)**
- If a recession were to occur, it was likely that short term interest rates would be reduced by monetary policy, cushioning the effect of a temporary reduction in rental income on the office property, if in fact the loan interest rates was linked to short term rates, however this was not the case. **(1 mark)** There was a mismatch between the asset and liability characteristics. **(1 mark)**

(Note: None of the above analysis is predicated on an increase in inflation which was unforeseen in 2017 by most economists, central bankers, and investors.)

In summary two major risks and potential ways of mitigating these risks were:

- Interest rate risk on the very high level of debt
 - Reduce the proportion of the purchase funded by debt **(1 mark)** to a level where the expected cost of debt servicing was less than the expected rental income on the property **(1 mark)** even if there were substantial vacancies **(0.5 mark)** and a substantial increase in interest rates **(0.5 mark)** i.e. conduct thorough scenario analysis **(0.5 mark)**
 - Use longer term loan contracts at fixed interest rates where the term of the loan matched the expected holding period of the property asset **(1 mark)**
- Net earnings risk on the properties



- Diversification of the tenant base (i.e. exposure to larger number of firms renting the office space). **(0.5 mark)** This would reduce the reliance on an individual counterparty and would reduce the impact of default of that counterparty. **(1 mark)**
- Stricter tenant assessment procedures. **(0.5 mark)** This would reduce exposure to companies that might not be able to pay in an economic downturn (e.g. introduction a policy stating stricter requirements of counterparty financials). **(1 mark)**

An alternative way of answering this question part well is as follows:

This superannuation fund has \$200 billion in assets in its Balanced investment option, in which \$30 billion is dedicated to unlisted property. In 2017, it used some of this to purchase a commercial building in New York. This purchased was significantly leveraged, and due to the subsequent economic and market conditions, is now facing some major risks. Two of the risks that may have been foreseen at the time of purchase and could have been mitigated are explained below:

- **Leverage:** This superannuation fund borrowed \$400 billion of the \$520 billion price to purchase this asset. While interest rates were low, this would have magnified returns for the benefit of members, however, there was a foreseeable risk that this could have been detrimental to members. At the time of purchase, interest rates were very low as a result of monetary policy adopted to boost inflation. The fund's managers **should have been aware** of the reasons for this low interest rate and been able to forecast that it is likely this would not last. This could have been **mitigated** by lowering the percentage of debt used in the purchase. If the fund's managers preferred to keep this percentage, they could have hedged against potential interest rate increases using a derivatives contract such as a **swap agreement**.
- **Tenancy Agreements:** At the time of purchase, the property was 100% occupied. The fund's managers should have recognised that there will be periods in the future where this would not be the case. To mitigate this risk, they could have taken out agreements with current tenants to lease for longer periods of time. This reduces the risk of needing to find other tenants if these ones decide to exit. This may have introduced some credit risk, and also some competition, so the risks need to have been weighed up, but a **consideration** of this should have been done.



b) Explain two reasons why a regular valuation of the office property is required and how the need to have daily unit prices can be accommodated. **(4 marks)** Learning objectives 1.1, 1.2, 5.2, 7.2, 9.2

Command verb Explain (Level 4 – Application-Analyse) 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.

Question solution

Note to markers: a regular valuation of the property is required for up to seven reasons as set out below. Candidates need to provide explanations for 2 to achieve full marks for this question part. Award 1 mark for each reason given in full or 0.5 mark if the point is made incompletely.

- Compliance with the Global Investment Performance Standards (GIPS) (covered in Chapter 08) which almost all major investing institutions adhere to because there is a need for an agreed standard for comparability of performance in an asset class where transaction information is sparse ; **(1 mark)**
- The Fund provides for daily transactions by members of the Balanced option so that a daily unit price is required to ensure fairness between members who are investing contributions, withdrawing from their account, or holding their investment; **(1 mark)**
- The prudential regulator which licences the Fund’s operations requires transparency and fairness in the operations of institutions which it supervises in order to maintain public confidence in those institutions; **(1 mark)**
- The performance of the unlisted property portfolio needs to be fairly and accurately measured to determine whether it has met its objectives because the owners or their representatives (e.g. trustees or directors) need to be able to fairly hold management to account and also to remunerate them fairly for results achieved; **(1 mark)**
- The performance of the particular asset needs to be fairly and accurately measured to determine whether it has performed in line with expectations or better or worse so that the



judgment and remuneration of the investment managers can be properly and fairly assessed by the Chief Investment Officer and the Board of the Fund ; **(1 mark)**

- It will assist with attribution analysis which is needed for the owners (or their representatives) to assess the efficacy of the overall investment process of the Fund; **(1 mark)**
- It will inform any review of the investment governance of the Fund which may arise from instances such as total loss on a particular asset to allow key decisions to be evaluated and similar errors avoided in future; **(1 mark)**

The need to have daily unit prices can be accommodated even though the unlisted property is independently valued only once a year, in accordance with the Global Investment Performance Standards (GIPS). This can be done by:

- Setting up a link between the annual independent valuation and a key component used in a discounted cash flow valuation of the asset such as the price of the US ten-year Treasury bond; **(1 mark)**
- Adjusting the valuation of the asset which is used as input to the daily unit pricing process, on a daily basis by the percentage change in the price of the US ten-year Treasury bond; **(1 mark)**
- While not perfect, as it ignores intra-year shifts in vacancy, rental income and operating costs of the building, **(0.5 mark)** any large shifts in these (which should be monitored by the unlisted property portfolio managers) ought to lead to a complete new independent valuation. **(1 mark)** In the absence of major shifts in these other variables it provides a reasonable basis for daily adjustments to the valuation. **(0.5 mark)**

Note to markers: any reasonable alternative to the procedure set out in A to C above should be awarded up to 3 marks

- c) Examine four factors that would support choosing option (b) **(8 marks)** Learning objectives 3.2, 6.2

Command verb Examine (Level 4 – Application-Analyse) Inspect (something) thoroughly in order to determine its nature or condition.

Question solution



Option (b) (defaulting on the debt, transferring ownership to the lender, and reducing the value of its holding to zero) could be chosen instead of option (a) (retaining the asset and continuing to fund the negative net income from the asset for some indeterminate period and substantially reducing the value of the holding in its unlisted property portfolio) because:

- The downturn in office occupancy in New York (as in many other cities) was considered to be a secular behavioural change in working habits rather than a cyclical economic phenomenon. **(1 mark)**. This is due to the disruption of the 2020-22 COVID pandemic leading to a demonstration that many white collar jobs can be completed without the need for full time office accommodation, **(1 mark)** especially as teleconferencing and other developing technologies were assisting the shift in behaviour **(0.5 mark)** along with workforce shortages which had developed. **(0.5 mark)**
- In this environment the vacancies in the building due to the default by a weak tenant with 30% of the space and the exit of another major tenant at the end of a lease that was too short, cannot be easily filled. **(1 mark)** The rental income will continue to be suppressed for some indeterminate period likely to be measured in years rather than months **(1 mark)**
- The debt servicing cost will not be easily reduced given that the original loan (which was too large to be easily serviced at historical interest rates) **(1 mark)** especially as inflation is not reducing as fast as was hoped **(0.5 mark)** and the US ten year treasury bond yield may increase further as US fiscal deficits persist and at best is unlikely to reduce much below 4% p.a. unless there is a significant US recession. **(1 mark)**
- In the event of recession the US ten year bond yield may reduce to say 3% p.a. or below **(0.5 mark)** but this would still imply a borrowing cost of close to 7% p.a. **(0.5 mark)** on a debt which now represents over 80% and perhaps over 90% of the value of the property. **(0.5 mark)** In a recession, the rental income would likely decline further. **(1 mark)**
- In all conceivable scenarios over the next 5 years the net rental income of the property is likely to be less than the cost of servicing the debt. **(1 mark)**



- In the USA it is legally possible for a borrower to default on the debt and 'hand the keys' to the lender with minimal damage to reputation. **(1 mark)** Other prominent investors such as PIMCO and Brookfield have done so recently. **(1 mark)**
- While the \$US520 million gross investment and the \$US120 million (\$A175 million) net investment was large in absolute terms, it is relatively small compared with the \$A30 billion that the Balanced option has invested in unlisted property (which has been revalued downwards in the last year by 10% or \$A3,000 million). **(1 mark)** In terms of the unit price of the Balanced option, the \$A175 million total loss is a 0.09% decline, which is well within daily fluctuations. **(1 mark)**

END OF QUESTION 2: MARKING GUIDE



QUESTION 3: MARKING GUIDE

(20 marks)

- a) Discuss your views on whether or not the economic and investment market conditions which have applied since 2022 will continue for the next 5 years with reference to private equity and private credit assets. **(6 marks)** Learning objectives 1.1, 1.2, 2.1, 2.2, 4.1,8.1

Command verb Discuss (Level 2 – Simple Application- Understand) Write about a subject or topic in detail taking into consideration issues and ideas. Provide more than one fact or observation relevant to the topic.

Question solution

The candidate should clearly indicate their views on important issues such as economic growth, inflation, the likelihood of a recession within 5 years, short term interest rates, long term bond yields, and credit default rates in a form such as that shown below. Note that if the marker disagrees with the views of the candidate, that is not a reason to withhold marks. There is no right or wrong set of views, but the views discussed need to be coherent and clear. An example of a coherent and clear discussion is as follows:

- Growth is weakening in several important economies such as China, the US, Japan, and Europe. **(0.5 mark)** due to declining consumer and business confidence. **(0.5 mark)**
- Inflation is moderating but persisting above the central bank targets. **(1 mark)**
- Short term interest rates may reduce over the next year or two especially if inflation continues to moderate and moreover if there is a recession in 2025, **(1 mark)** however they are very unlikely to fall to the very low levels that applied between 2009 and 2021 which assisted the financing of many private equity investments. **(1 mark)**
- Inflation over the next 5 years as implied by the pricing in the inflation linked and nominal bond markets will be 2.2% p.a. **(1 mark)** If this is so, short term credit risk free rates should average around 3% p.a. based on historical norms. **(1 mark)** Credit risky loans (such as those to private equity) should be at rates between 7% p.a. and 10% p.a. **(0.5 mark)** This is much more expensive than applied during the years following the GFC. **(1 mark)**



- Financing via long term debt is likely to be even more expensive **(0.5 mark)** as the US Treasury ten-year bond yield, the key global indicator of the cost of long term money is more likely to move higher from its current 4.3% p.a. to above 5% p.a. **(1 mark)** as supply of bonds increases with continuing record fiscal deficits **(1 mark)** and the QE inflated demand from central banks disappears **(0.5 mark)** at the same time as major sovereign wealth funds in China, Russia and Saudi Arabia and other places seek to diversify away from US Treasury bonds which are easily affected in a world where sanctions are more common. **(1 mark)**
 - While public equity markets are at historic highs exits via IPO are difficult to achieve. **(1 mark)** If there is a recession and/or increased political and policy turmoil, realisation of profits from private equity will not get any easier in the next 5 years. **(1 mark)**
 - If there is a recession, bond yields will fall, **(0.5 mark)** but the growth of public equity market earnings will also slow or even turn negative for a year or two. **(1 mark)** Public equity market returns, with which private equity returns have been historically correlated, may stall or decline. **(1 mark)**
 - A recession may stall the demand for private credit which may also become riskier as business failures and defaults increase. **(1 mark)**
 - While the operating conditions for private equity funds look unlikely to improve much in the next 5 years, **(1 mark)** the operating conditions for private credit funds look no better and may be worse. **(1 mark)**
- b) Explain the differences in the drivers of return and risk of Private Equity and Private Credit investments. **(8 marks)** Learning objectives 1.1, 1.2, 3.2

Command verb Explain (Level 4 – Application-Analyse) 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.

Question solution

The following is a sample explanation, it is possible to express it differently, but it needs to cover the points made.

The returns on private credit (PC) investments can be considered as comprising the following components:

- Credit Risk- free interest rate (e.g. In Australia the 90-day bank bill rate or the RBA cash rate) **(0.5 mark)**



- Credit risk premium driven by level of credit risk associated with the issuer of the investment i.e. the borrower's default risk. **(0.5 mark)**
- Inflation risk premium driven by the expectations of the inflation rates **(0.5 mark)**
- Illiquidity premium driven by the private nature of the investment, the lack of transaction data, and inability to sell or liquidate it in a short period of time. **(0.5 mark)**

(2 marks for full description)

The returns for private equity (PE) investments can be considered as comprising the following components:

- Credit- risk free interest rate for a long-term bond (e.g. ten-year treasury bond yield) **(0.5 mark)**
- Equity risk premium which may be different for various industry sectors **(0.5 mark)**
- Illiquidity premium driven by the private nature of the investment, the lack of transaction data, and inability to sell or liquidate it in a short period of time. **(1 mark)**

(2 marks for full description)

There are several drivers of returns for these investments:

- both private equity and private credit returns are affected by the movements in the credit risk free interest rates and the illiquidity premium; **(1 mark)**
- the credit risk premium and inflation risk premium are specific to private credit while the equity risk premium is specific to private equity. All of the premia vary over time based on market conditions. **(1 mark)**
- In private equity the exit multiples obtained via trade sales (M&A) or public market listing (IPO), are significant drivers of the return as this is the mechanism by which the value of such investments is realised. M&A and IPO activity are highly correlated with economic growth and changes with economic cycles. **(1 mark)**
- For private credit investments an important consideration is the ability for borrowers to access funding through other means (banks, public markets, other types of non-bank lenders). If the target borrower segment has limited access to funding, then lending margins need to be higher for private credit. **(1 mark)**

The main drivers of risk are:



- For private credit the main risk is the default risk (i.e. inability of the borrower to repay principal or interest in full). This risk does not apply to PE investments. **(1 mark)**
- For PE investments the main risks are earnings growth **(1 mark)** or exit multiples below expectations. **(1 mark)**

The major differences in the drivers of return and risk of Private Equity and Private Credit arise from the use of or provision of financial leverage. **(1.0 mark)**

Private credit is the provision of finance usually in the form of a loan from a private (i.e. non-bank) lender to a borrower secured on an asset or a cashflow, for a limited term at a cost defined as a rate of interest, usually expressed in terms of a credit risk spread in excess of the interest rate or yield on a credit risk free security such as a government bond of the same term to maturity. **(1 mark)** The rate of return to the investor (the lender) is limited to the defined rate of interest. **(1 mark)** It may be less if there is a default (or a delay) by the borrower on any of the agreed payments of interest or principal (the amount of the loan). While there is an upper limit on the return there is no limit on the loss which may be 100%. **(1 mark)**

As a non-bank lender the private credit provider has no ability to access assistance or liquidity from a central bank. **(1 mark)** The private credit investor succeeds or fails based on their ability to make accurate credit assessments of borrowers capacity and willingness to repay interest and capital on time. **(1 mark)**

The key to maximising returns on private credit is finding users of financial leverage who can employ it to make sufficient return to cover their interest costs, repay the loan, and still make enough excess return to meet their return on equity objectives. **(1 mark)** If borrowers are unable to achieve this, they not only fail to meet their return on equity objective, but they may also default on interest or capital payments on the loan. **(1 mark)**

Competing with other private credit providers to build volume may cause private credit investors to charge too small a credit risk spread to compensate for the risks accepted in the lending process, **(1 mark)** or they may encourage lending to borrowers who have an inadequate capacity or willingness to make repayments as per the loan contracts. **(1 mark)** Selling or providing financial leverage via private credit requires skills in making accurate credit assessments of borrowers capacity and willingness to repay interest and capital on time, **(1 mark)** usually based on experience across differing economic conditions (or credit cycles). **(0.5 mark)** The rate of mistakes in credit assessments varies between lenders of differing experience. **(1 mark)** It also varies over time as economic conditions shift and the demand for



the products and services of the borrowers varies over time. **(1 mark)**

The difficulty in successfully making credit assessments is made more challenging by the lack of a continuous flow of information as most of the businesses of the borrowers are private rather than publically listed. **(1 mark)**

Private equity investment does not have to use financial leverage (debt or loan finance) , but it usually does, **(1 mark)** as the cost of the debt, the rate of interest, is usually significantly less than the expected rate of return on the business. **(1 mark)** It is normal for the cost of debt capital to be less than the cost of equity capital. **(1 mark)** It is likely that the return on equity is higher due to:

- the lack of an upside limit on returns **(1 mark)**
- the presence of operating leverage whereby the costs of a business which is growing usually grow less rapidly than the revenues **(1 mark)**
- the use of financial leverage (debt finance) can magnify the scale of the business. **(1 mark)**

Historical evidence suggests that private equity investment usually achieves returns that are not only markedly higher than returns on private credit **(1 mark)** but also higher than returns on public equities **(0.5 mark)** and that it depends on skills and success in:

- i. identifying businesses which have a capacity to grow in scale if they have access to more capital in the form of equity and debt; **(1 mark)**
- ii. identifying people with the skills and experience to grow the business; **(1 mark)**
- iii. the capacity to dispassionately reorganise businesses (including the people and other resources used by the business); **(1 mark)**
- iv. improve the operating margins, perhaps as a result of increased scale, but also by cutting costs per unit of revenue; **(1 mark)**
- v. maximising the prudent use (but not overuse) of debt capital to expand the business; **(1 mark)**
- vi. achieving an increase in the Net After Tax Profit (or sometimes EBITDA) which confirms the growth of the business and attracts the attention of potential buyers, providing a pathway to a profitable exit; **(1 mark)**



- vii. finding a buyer for the business at an expanded price per unit of net profit or EBITDA, either through a trade sale to a competitor or an Initial Public Offering (IPO) via a public equity market. (1 mark)

An alternative way of answering this question part well is as follows:

Private equity and private credit are two private assets that investors use, and although they are related, the drivers of the risk and return are different. These are outlined below:

Private equity

Private equity is an investment where an investor purchases a holding in a company that is not listed. This is usually done through non-public offerings, where unlike public equities, the payments are made via constant instalments, rather than upfront. Private equity gives investors the opportunity to take more of an active role in the entity which it holds shares in. This means, it can apply its expertise to significantly boost the profits of the entity. Investments are usually made in companies who are small and require significant funding, or companies who are still in the development stage. Since there is an active involvement, investors tend to focus on a particular sector where they have extensive knowledge and can provide assistance. The **returns** come from being able to deliver profits to these companies and share in the profits. The shares can then be sold for a profit to what was purchased at. The **risks** in investing in private equity is that there is no guarantee of returns and if its solutions fail, it may be left with nothing. Typically, these are small companies who are close to defaulting, so the risk is high for investors who inject large amounts of capital into them. There is also an illiquidity risk since these are not listed and sales need to be made directly to other investors. If the bid-ask spread is wide, they may have to settle and sell the assets for a discount. There is also no guarantee that the value of them is correct, as they are directly priced by investors.

Private credit

Private credit is an investment which commenced not long after the GFC. After the GFC, the commercial banks decided to not loan to borrowers who are considered 'high risk'. This left a gap in the market as these borrowers still required loans, so in came private credit. The **returns** on private credit have historically been quite large as they need to be higher than bank loans to compensate them for the increased risk. This **risk** is the fact these borrowers may default due to their high risk, and it is also a private asset which means illiquidity and infrequent valuations. As interest rates go up, the return to the investor will increase, but so does the probability of default, which may offset any increased benefits.



Private equity and credit are similar in the fact they are both unlisted, illiquid assets, that require higher returns for this inherent risk. The returns may be correlated as when more loans are being made, private equity may be doing well. As private equity performs well, the risk of defaulting on private debt reduces. However, the assets are **different** as private equity (usually funded by private credit) is using skill to actively make a company achieve returns and profit. Hence, the returns on private equity are not capped. Private credit benefits from charging high rates to borrowers and requires skill in selecting suitable borrowers, a different skill to private equity. Its return is also capped at the interest rate, and experiences losses when defaults occur.

- c) Propose the steps required for the firm to evaluate whether to proceed with the proposed expansion into Private Credit. **(6 marks)** Learning objectives 8.1,8.2,8.3,8.4,8.5,

Command verb Propose (Level 6 – Higher Order- Create) Select and communicate a solution, action, or range of possible solutions/actions. Rationale, reasons, or justification must be included.

Question solution

We should first decide on whether we can manage the inherent conflict of interest for any firm that is providing management of both private equity funds, which are major users of private credit, and private credit funds which provide such debt. **(1.0 mark)**. One way of doing this is to have separate teams of people managing each of Private Credit and Private Equity Funds and keeping all access to information from equity issuers and borrowers entirely separate. **(1.0 mark)**

If the answer is yes then we can proceed further and evaluate the following:

The market for private credit:

- Demand.** Evaluate if there is sufficient demand for private credit investments, assessing the characteristics of the investors in private credit funds and of the borrowers from private credit funds **(1.0 mark)**
- Supply.** The firm should assess competitor products and the level of return and risk that has been delivered to investors in private credit funds. **(1.0 mark)**
- Macro-economic conditions.** The firm should assess what will be the prevailing level of interest rates, default rates and other macro factors that may affect the returns and risks of private credit investments. **(1.0 mark)**



2. **Fund's capability.** The firm should assess whether it has the right capabilities to manage private credit investments. This includes an understanding of the market expectations, active credit portfolio management (e.g. delinquency management) and other operational and strategic capabilities. **(1.0 mark)**
3. **Funding.** Private credit investments require a level of funding that can be committed to a portfolio of loans that will create the desired level of diversification. **(1 mark)** The fund needs to assess whether it can attract the right level of funding through either retail, wholesale, or institutional sources. **(1.0 mark)**
4. **Business case.** If the private credit market is attractive and the fund has the right capabilities the fund should put together a business case to assess what the financial implications of entering this market are. This will include:
 - a. **Revenue.** The level of interest charged to borrower and the fees charged on the loans together with the volume of loans. **(0.5 mark)**
 - b. **Costs.** This includes funding costs as well as operational costs. **(0.5 mark)**
 - c. **Risks.** This includes operational (e.g. inability to attract the required level of funding, or successfully manage the portfolio) and financial risks (e.g. lower than expected level of return or volume). **(1 mark)**

Expanding into the management of Private Credit funds will require people with different experience and skills, **(1 mark)** and expansion into that field will require either recruitment of a whole team with suitable skills, experience, and track record in private credit, and maybe the acquisition of an existing business. **(1 mark)**

It is proposed that we proceed as follows in our evaluation whether to go ahead with the proposed expansion into Private Credit:

Use our private equity skills in finding successful businesses capable of expansion with more resources to identify candidate private credit fund managers for review **(1 mark)**

Once at least two candidate teams have been identified, secure a right to a confidential review, and conduct a quantitative review of each their funds' performance with a particular focus on the rate of loan arrears and credit defaults at varying stages of the economic cycle **(1 mark)**

Gain a qualitative understanding of their investment philosophy, investment process, the skills and experience of the key credit analysts and portfolio managers **(1 mark)** with a view to answering the following questions about each team:

- Does the private credit manager have a clear and realistic understanding of what the credit markets will let them achieve with the private credit fund that they are



managing? **(1 mark)** (This is often referred to as an investment philosophy and it relates to their understanding of the investment markets in which they are operating and covers their beliefs about how the markets operate based on evidence and experience in operating in those markets). **(1 mark)**

- Have they explained satisfactorily:
 - the investment process that leads to decisions on the selection and weighting of assets within the investment portfolio of the fund. **(1 mark)**
 - a performance review and attribution analysis demonstrating that they understand why they are succeeding in meeting their investment objectives or otherwise, and lessons learned from past mistakes. **(1 mark)**

If we are satisfied with the evaluation of one of the candidate teams and that they have a compatible investment philosophy and process well with the existing business **(1 mark)** we then need to proceed to aspects of whether implementation is feasible:

Ensuring that investment objectives for the private credit funds meet the reasonable expectations of investors in such funds **(1 mark)** and are expressed in terms that are SMART (i.e. Specific, Measurable, Achievable, Relevant and Time bound) **(1 mark)**

Having a link between the incentive remuneration of the private credit investment team and outcomes achieved for the investors in the private credit funds. **(1 mark)**

An alternative way of answering this question part well is as follows:

This firm is currently operating in private equity, which means it has skill in being able to actively achieve returns for companies who are struggling and require funding. This is a different skill set to what is required for private credit which involves selecting and lending to specific borrowers. If this firm wishes to convert from private equity to private credit, it should take the following steps to evaluate the suitability of this strategic proposal:

- **Skill identification:** Since a different skillset is required, the firm needs to assess whether it has the required skills to perform private credit investing. It is possible from its involvement in private assets that it may have these skills, especially from being on the other side (a borrower) for some time.



- **Profit identification:** If it has the required skills, it should evaluate the profit that is likely to lead from a switch. If private credit is not forecasted to be profitable for a particular reason such as competition, increased defaults, or uncertain future, it is not worth commencing this business.
- **Risk identification:** When assessing the profit, it should also assess the risks involved in this. The level and magnitude of these risks need to be assessed to determine whether it complies with its own risk appetite, and whether management and the executives are content with these. It is also important to generally be aware of all the risks before engaging in a new investment.
- **Speak with private credit investors:** Since it is a private equity fund, it may have connections from private credit lenders who it has dealt with over the years. It could seek their advice and input into factors that produce returns and risk, the likely future of private credit and any other information it seeks. It is likely experts in this field have a better understanding than can be found from publicly available sources.
- **Assess investor base appetite:** The investor base in this fund needs to be queried to determine whether they approve of this change. It is likely many of these investors came to this firm purely because it was a private equity firm, and they were not interested in private credit. The potential reasons, returns and risks for this change need to be effectively communicated to investors to gauge a census for this change. It is likely if investors are not happy with this decision, they may pull their funds out, which will limit the lending that the firm will be able to do.

END OF QUESTION 3: MARKING GUIDE



QUESTION 4: MARKING GUIDE

(20 marks)

- a) Evaluate the unlisted real estate restrictions listed in terms of their effectiveness in mitigating the risks which have been experienced in recent years by institutional investors in unlisted real estate **(12 marks)** Learning objective 9.3

Command verb Evaluate (Level 5 – Higher order - Evaluate) Judge or assess the worth of.

Question solution

In order to evaluate the unlisted real estate restrictions listed in terms of their effectiveness in mitigating risks which have been experienced in recent years by major institutional investors in unlisted real estate, the candidates need to describe the risks and their effects in a manner similar to that set out below. They can then make their evaluations referring to the risks.

A suitable description of the risks is as follows:

- The rise of private credit. Following the GFC of 2009-2010, commercial banks, which traditionally have been more cautious or conservative than non-bank lenders, have been encouraged by new regulatory policies to reduce lending on commercial real estate. **(1 mark)** This has allowed private credit non-bank (and potentially less cautious) lenders to expand the scale of their lending to commercial real estate owners, particularly for the purposes of acquisition of properties. **(1 mark)** A large volume of lending proposals since 2009 were arguably less closely analysed for risks of default than had been previously the case. **(1 mark)** Covenants on loan such as maximum loan to valuation ratios and minimum interest coverage ratios became less restrictive, and hence less effective in protecting borrowers from employing too much financial leverage in acquisitions. **(1 mark)** The intense competition between private credit lenders led to the credit spreads above the credit risk free loans which were very low by historical standards. **(1 mark)**
- The very loose monetary policy adopted by all major central banks between 2009 and 2021 led to historically low credit risk free interest rates on both short term loans (out to 5 year terms) and longer term loans with interest rates linked to the long term government bond yields. **(1.0 mark)** This combined with the historically low credit risk spreads offered by lenders, caused the cost of finance across the whole maturity spectrum from 3 months to 10 years in all of the major currencies: US Dollar, Yen, Euro British Pound, Renminbi, Canadian Dollar, and Australian Dollar. **(1.0 mark)**



- The very low level of long term bond yields had an effect on valuations of commercial real estate properties in the period 2009 to 2021, by reducing the discount rate used in valuations. **(1.0 mark)** At the same time the historically high level of low cost financing available led to higher prices being paid relative to the rental income of the properties, **(1 mark)** so that capitalisation rates based on market evidence were also reduced. **(0.5 mark)** The result was that both main methods used for property valuations were leading to higher than normal valuations relative to rental income in the period 2009 to 2021. **(1.0 mark)**
- In the period 2021 to 2023, inflation rose sharply, central banks raised the short term credit risk free rate on which the interest rates on many floating rate loans on commercial real estate were based. **(1.0 mark)** The interest rates on longer term loans which were maturing were also eventually impacted by the rise in medium to long term bond yields which arose from the increase in inflation as well as the reduction of central bank purchases of bonds under the quantitative easing programs that had been in place since 2009. **(1.0 mark)** The cost of finance for leveraged unlisted property investments rose sharply in the period 2022 to 2023, by between 200% and 400% of the previous cost of servicing the loans, **(1.0 mark)** at the same time as a secular shift away from usage of commercial real estate was reducing the rental income. **(0.5 mark)** The interest cover ratios (net rent to interest payments) for many commercial real estate properties shifted from being comfortably above the minimum required by lenders to well below, and even below a ratio of 1.0 times. **(1 mark)** The office sector was most severely affected due to the reduction in usage and rents paid **(1 mark)**. Major retail shopping centres, particularly those depending on office workers as customers, were also severely affected and well as by the secular shift to online shopping. **(1 mark)** Logistics (warehouses and delivery depots) benefitted from the shift to online shopping. **(1 mark)** More recently other assets such as data centres have benefitted from the growth of usage of cloud storage **(1 mark)**

The restrictions set out below are evaluated in terms of their effectiveness in mitigating risks which have been experienced in recent years by major institutional investors in unlisted real estate such as A, B,C and D noted above:

- The unlisted real estate portfolio shall be diversified in accordance with the following regional allocation:
- a. United States of America: 30-70 per cent
- b. United Kingdom:10-40 per cent



- c. Germany: 0-20 per cent
- d. France: 0-30 per cent
- e. Japan: 0-20 per cent
- f. Other individual countries: 0-10 per cent

Evaluation: This restriction is aimed to mitigate the concentration risk i.e. if the property market were to decline in a specific country or region. **(0.5 mark)** Whilst there appears to be diversification by country or region the allocated countries all have developed economies that have strong and intricate economic ties. **(1 mark)** There is likely a strong correlation between the return characteristics amongst commercial real estate in the countries listed. **(1 mark)** The effect of high inflation and higher interest rates was observed across the commercial real estate markets in many of the regions. **(1 mark)** This set of restrictions would not have mitigated any of the risks which emerged during the period as noted in A,B,C and D as all the major economies listed were affected. **(1.0 mark)**

- The unlisted real estate portfolio shall be diversified in accordance with the following sector allocation:
- a. Office: 40-70 per cent
- b. Retail: 0-30 per cent
- c. Logistics: 0-40 per cent
- d. Other: 0-10 per cent

Evaluation: This set of restrictions would not have significantly mitigated the risks which emerged in the office or retail sectors during the period as noted in A,B,C and D. **(1.0 mark)** The allowable allocations (and the minimum of 40% for office) reflects the usage pattern of the period prior to 2020, **(1 mark)** and arguably did not pay enough attention to the potential future effects of developing technology on work and shopping habits. **(1 mark)** While the widespread effects of the 2020-21 COVID pandemic could not be reasonably forecast prior to 2020, it may have simply accelerated trends affecting office and retail usage (and valuations) which were already underway. **(1.0 mark)**

- The debt ratio of the unlisted real estate portfolio shall not exceed 25 per cent. No single investment shall be financed with more than 70 per cent debt measured against the value of the asset at acquisition or when refinanced.



Evaluation: The 70% limit per property is arguably too loose. **(1 mark)** The 25% limit at the portfolio level would have mitigated overall risk to the portfolio return due to effects A,B,C and D. **(1 mark)** It could be improved by setting guidelines for the maximum cost of loans relative to the net rental income at both the individual asset level and the unlisted property portfolio level. **(1 mark)** The Fund has a large volume of assets outside of the unlisted property portfolio (the other 98.1% of the Fund) which could be readily used to pay back loans if they become too expensive. **(1 mark)** This would require loan terms for the unlisted property portfolio to include the right to early repayment, especially on variable or floating rate loans. **(1.0 mark)**

- The average economic vacancy rate shall not exceed 15 per cent. Properties under development shall be excluded from this calculation.

Evaluation; This restriction is intended to ensure a higher occupancy and utilisation rate of the unlisted properties. **(0.5 mark)** This encourages the managers to look for high quality, higher yielding investment options. **(1 mark)** This would also encourage the signing of longer leases or looking for more stable tenants. **(1.0 mark)**

This may not have been as effective as expected during COVID and in a post-COVID world. **(1 mark)** There is a shift in commercial real estate after COVID with a higher proportion of WFH employees. **(1.0 mark)**

This restriction may have forced the sale of many office spaces during COVID at a severe loss. **(1 mark)** It could be argued that a less prescriptive restriction may have been more effective for an investor taking a longer-term view. **(1.0 mark)**

This is a useful (although not that restrictive) limit. **(1 mark)**

It needs to be more specific as to the time at which it is assessed. **(1 mark)**

An annual assessment would be worthwhile. **(1 mark)**

The question then arises as to the action that follows if the limit is breached. There should be guidelines **(0.5 mark)**

such as:

For property assets which are major contributors to the overall portfolio vacancy:

- Review the level of debt and decide on reduction in debt if appropriate; **(1 mark)**



- Review the expected persistency of the vacancy and whether it can be reduced by a more active leasing program; **(1 mark)** and
- Review whether the asset should be retained or sold **(1 mark)**

b) Determine whether the Fund should continue with unlisted real estate investment **(8 marks)**

Learning objectives 5.2, 5.3

Command verb Determine (Level 4 – Application- Analyse) Find the solution by argument or calculation, making clear your reasoning.

Question solution

The question can be discussed in terms of arguments for and against retaining unlisted real estate investment as part of the Fund's overall asset allocation.

Arguments for

- Unlisted property or real estate has historically had a pattern of returns which are different from and uncorrelated with those of other asset classes such as equities and fixed interest **(0.5 mark)** and so offers a degree of diversification **(0.5 mark)** which could reduce the volatility of the portfolio return **(0.5 mark)**
- There is the potential for returns higher than those on fixed income and maybe as high as those on equities because real estate has significant fixed costs that do not grow in line with growth in gross rental income, which often correlates with inflation. **(1 mark)** Therefore the net rental income and the value of the property, which is linked to it ought to grow faster than inflation in the long term. **(1 mark)** This is called operating leverage and takes place even if no debt is used to finance the acquisition of the property. **(0.5 mark)**
- Lenders such as banks, and more recently non-banks, or private credit providers are very willing to lend up to 60% of the value of a property at an interest rate which is generally below the long term expected growth rate of the net rental income or the long term expected rate of growth of the value of the property. **(1 mark)** Therefore financial leverage can be used to magnify the expected long term rate of return to the owner of the property. **(1 mark)**
- The factors that influence returns in unlisted property may be slower moving and more easily predictable than those in other growth assets such as public or private equities.



(1 mark) This reduces the uncertainty in the investment and may translate into higher return per unit of risk taken. **(1 mark)** It also suggests that the reward for research in unlisted property may be greater than in other asset classes. **(1 mark)**

- All of this argues in favour of a meaningful allocation of the whole portfolio to this asset class i.e. closer to 20% than 0%. **(1 mark)**

Arguments against

- The historical pattern of returns which are different from and uncorrelated with those of other asset classes such may not persist in various future periods **(0.5 mark)** because correlation does not necessarily mean causation **(0.5 mark)** and the expected degree of diversification will not be achieved **(0.5 mark)** nor will the volatility of the portfolio returns per unit of returns be reduced **(0.5 mark)**
- The beneficial effects of operating leverage go into reverse during periods of falling occupancy and rental income **(1 mark)** as has occurred frequently over the last 50 years, albeit temporarily **(1 mark)**
- The use of financial leverage can detract from the returns to the investor, **(0.5 mark)** especially if interest rates rise more than expected **(0.5 mark)**
- The factors that influence returns in unlisted property may appear to be slower moving and more easily predictable than those in other growth assets but this is often due to a lack of transparency and a lack of transactions **(1 mark)** This may actually increase the uncertainty in the investment **(1 mark)** and may translate into higher risk taken (unknowingly) per unit of expected return. **(1 mark)** The reward for research in unlisted property may not be greater than in other asset classes. **(1 mark)**
- All of this argues in favour of a lower allocation of the whole portfolio to this asset class i.e. closer to 0% than 20%. **(1 mark)**

Based on the analysis of the arguments for and against set out above, a determination in favour of exiting the asset class is as follows:

- Given:
 - the current low allocation (1.9% of the portfolio) which does not provide meaningful diversification benefits (even if it is accepted that they exist) **(0.5**



mark); and

- the amount of work involved (897 properties across 14 countries) **(0.5 mark)**

it would be sensible to exit this asset class. **(1 mark)**

An alternative determination in favour of retaining the allocation is as follows:

The fund should continue with the unlisted real estate investments for the following reasons:

- While the unlisted real estate market has underperformed in the recent years (especially the offices segment that the fund has high allocation to), the fund has relatively low allocation to unlisted real estate investments (roughly 2%). **(1 mark)** Therefore, the negative returns impact is quite low on the overall portfolio, but some level of diversification is still provided. **(1 mark)**
- Unlisted real estate is considered a growth asset and with lower correlation to other growth assets (e.g. public/private equity). **(1 mark)** NBIM's investment goal is to maximise the long-term value of the fund; therefore, it is reasonable to allocate some level of capital to this asset class. **(1 mark)**
- While unlisted real estate has underperformed in the recent past, the current market outlook might suggest that significant returns might be captured in the medium to longer term. **(1 mark)** For example, due to reduced supply of capital to commercial real estate as regional US banks exit the market due to underperformance. **(1 mark)**

If the fund decides to continue with unlisted real estate investment, it is recommended that it considers updating the restrictions policy. Specifically:

- Reduce the higher bands for some geographical allocations (USA and UK), which will force greater regional diversification. This will reduce the risk associated with geographical exposure. **(1 mark)**
- Update debt restrictions to introduce requirements around debt servicing to ensure that investments are still profitable even if interest rates increase. **(1 mark)**
- Provide a clear set of requirements for underperforming assets if their vacancy rates are above a threshold. **(1 mark)**



END OF QUESTION 4: MARKING GUIDE

END OF MARKING GUIDE