DEBT SECURITIES (FIN5DBS), SEMESTER 1, 2012 – ADDITIONAL QUESTION FOR TUTORIAL 2

On October 14th 1999, Macquarie Bank Limited announced the release of an issue of Macquarie Income Securities (MIS) to raise $200 million. A Macquarie Income Security is a stapled security comprising a Preference Share and a Subordinate Unsecured Note (known as a Holder's Interest). Following their anticipated issue date of November 19th 1999, the MIS will be tradeable on the Australian Securities Exchange (ASX). The following table provides specific information relating to the MIS issue:

Issue type	Stapled security including a preference share and an unsecured note (or holder's interest)
Par value	$100 per MIS
Maturity date	No maturity date – perpetual unless redeemed by the issuer
Interest rate	90-day bank bill rate + 1.70% margin which will be reset quarterly on the first business day of each Interest Period. A minimum interest rate of 7.25% per annum is guaranteed until the interest period ending on January 15th 2003
Interest payment details	Quarterly on January 15th, April 15th, July 15th and October 15th. Interest will cease to be paid if a Payment Direction Event occurs, namely: i) a Liquidation event occurs in relation to Macquarie; ii) Macquarie acknowledges in writing that it is unable to pay its debts within the meaning of the Corporations Law; iii) At any time Macquarie gives written notice to the Trustee that it requires all Moneys Owing in respect of the Notes to be paid to it as they become due; or iv) APRA determines in writing that Macquarie has a Tier 1 Capital Ratio of less than 5% or a Total Capital Adequacy Ratio of less than 8%. Should any of these occur, investors will become entitled to receive dividends on the stapled Preference Share
Preference dividend rate	180-day bank bill rate + 1.70% margin which will be reset semi-annually on the first business day of each Dividend Period
Preference dividend payment details	Preference dividends will not initially be paid, and will only become payable once a Payment Direction Event has occurred. Paid semi-annually on January 15th and July 15th
Redemption details	Investors will have no rights to require repayment of the par value from the issuer. Neither the unsecured note or the preference share are convertible into Macquarie ordinary shares Macquarie has the right to repurchase the MIS for the $100 par value at any time after 5 years following the Issue Date, with the prior approval of APRA
Security status	MIS will rank ahead of Macquarie ordinary shares and equal with Converting Preference Shares for the payment of interest (or dividends), but will rank behind all deposit liabilities and creditors of Macquarie

Solution to Additional Question for Tutorial 2

a. The interest rate details relating to the MIS indicate that a 7.25% per annum minimum interest rate was guaranteed until the January 15th 2003 interest payment date. Explain what this guarantee represented and who it would have benefited (Macquarie or investors).

This guarantee represents an embedded option in the form of a floor on the coupon interest rate offered on the MIS for the first three years of the security's issue. This provides a benefit to the holders of the MIS as it provides protection against a decrease in the general level of interest rates during this period by fixing the minimum interest rate payable at 7.25%. Thus, if the 90-day bank bill rate decreases below 5.55% during the period prior to January 15th 2003, MIS holders would effectively exercise this option and enforce Macquarie Bank to pay a minimum 7.25% coupon rate.

This guarantee may also provide some benefit to Macquarie Bank by holding up the coupon rate offered at this minimum level of 7.25% if interest rates fall substantially, which may increase its attractiveness in the market to investors and enhance the liquidity of the issue.

b. The redemption details specify that Macquarie Bank Limited has the right to repurchase the MIS for the $100 par value any time after the notes have been outstanding for 5 years. Outline what this repurchase clause represents, who it potentially benefits, and the circumstances that are likely to result in the MIS being repurchased.

The repurchase right represents a call provision (another form of embedded option), enabling Macquarie Bank to redeem the MIS at the $100 par value, as long as they have been on issue for at least five years. This repurchase option is beneficial to the issuer (Macquarie Bank) rather than the MIS holders, although the degree of benefit of a call provision in relation to a floating rate note is greatly reduced relative to a fixed rate note. This is because Macquarie Bank will benefit when interest rates fall due to the reset coupon rate process each quarter (although this is potentially limited in the first three years due to minimum interest rate guarantee discussed in part a.), whereas a declining interest rates environment is the typical scenario where a call provision is of most value to issuers. The circumstances that are likely to result in the MIS being repurchased are:

- If Macquarie Bank no longer needs access to the funds for operational purposes. This relates to the perpetual nature of the bonds, and coupon interest payments being required to be made as long as the MIS are outstanding.
- A substantially increase in the underlying level of interest rates, which increases the cost of the MIS above the return that is being earned on the funds by Macquarie Bank.
- An improvement in the credit rating of Macquarie Bank, which would potentially allow the company to issue new debt securities at a margin lower than the 1.70% applicable to the MIS.

c. Explain whether investors in the MIS are subject to any interest rate risk.

The MIS investors' exposure to interest rate risk is minimised by the floating (reset) interest rate which will provide protection against changes in the value of the MIS due to underlying interest rate changes (and particularly declines in value if interest rates increase). Due to the quarterly reset frequency, however, there is some potential exposure to interest rate risk effects if market interest rates changes in between reset periods (and particularly soon after an interest rate reset date).

d. The MIS are still listed on the ASX and currently trading at a price of approximately $67 per MIS. Suggest the likely reason(s) why the current price of the MIS is significantly less than its $100 par value.

As outlined in the answer to part c., the large fall in price of the MIS is not due to a substantial increase in market interest rates. Something has occurred to make them less attractive as an investment, and this is most likely related to the certainty associated with the receipt of cash flows from the MIS in the future. This must be caused by a change in underlying risk of the issuer, Macquarie Bank, and it is likely that the company's credit rating has declined, or its perceived credit risk has increased, since the issue of the MIS. The effect of this is that MIS holders would now want a higher margin than the 1.70% that the MIS are offering, and investors are now only prepared to pay a lower price than the $100 par value to buy the MIS. This outcome can likely be corroborated by the large fall in the Macquarie Bank share price than has occurred, particularly, over the last five years.