Assets and interest rates

Finance

Rating yr 2 yr 3 yr 5 yr 7 yr 10 yr 30 yr Aaa/AAA 4. 88 4. 87 4. 95 5. 03 5. 16 5. 27 5. 46 Aa1/AA+ 4. 96 5. 01 4. 99 5. 11 5. 24 5. 36 5. 55 Aa2/AA 4. 98 5. 08 5. 07 5. 17 5. 27 5. 39 5. 59 Aa3/AA- 4. 99 5. 1 5. 08 5. 21 5. 31 5. 4 5. 65 A1/A+ 5. 17 5. 19 5. 2 5. 28 5. 39 5. 52 5. 73 A2/A 5. 2 5. 22 5. 22 5. 3 5. 41 5. 54 5. 77 A3/A- 5. 24 5. 25 5. 25 5. 35 5. 44 5. 57 5. 8 Baa1/BBB+ 5. 36 5. 43 5. 48 5. 55 5. 81 6 6. 26 Baa2/BBB 5. 39 5. 51 5. 56 5. 6 5. 88 6. 1 6. 33 Baa3/BBB- 5. 46 5. 56 5. 58 5. 65 5. 94 6. 18 6. 39 Ba1/BB+ 6. 59 6. 66 6. 73 6. 78 6. 95 7. 14 7. 31 Ba2/BB 6. 69 6. 76 6. 83 6. 88 7. 05 7. 24 7. 41 Ba3/BB- 6. 79 6. 86 6. 93 6. 98 7. 15 7. 34 7. 51 B1/B+ 7. 39 7. 46 7. 53 7. 78 8. 15 8. 54 9. 01 B2/B 7. 49 7. 56 7. 63 7. 88 8. 25 8. 64 9. 11 B3/B- 7. 59 7. 66 7. 73 7. 98 8. 35 8. 74 9. 21 Caa/CCC+ 9. 24 9. 31 9. 38 9. 58 9. 65 9. 74 10. 01 US Treasury Yield 4. 74 4. 71 4. 68 4. 63 4. 6 4. 59 4. 56 1. Discuss which interest rates should be used for an asset which is 1 year in length, 5 years in length, 15 years in length and 30 years in length. The interest rate will depend on the credit rating of the corporation that is issuing the asset. The higher the credit rating, the lower will be the spread between the US treasury yield and the interest rate of the corporate bond. Here we will assume that the credit rating of the company is AAA. So for a one year bond the rate will be US treasury yield plus 14 basis points. The interest rate will be 4. 74 plus 0. 14 i. e. 4. 88%. Similar will be the calculation for an asset which is 5 year in length. The interest rate will be 5. 03% (4. 63 plus 40 basis points). For calculating the yield of an asset which is 15 year in length, we will use the rate of the closest matching maturity. 2. Discuss how the interest rate will be impacted if the bond is a government bond or a corporate bond. A government bond is issued and backed by the government while a corporate bond is issued by businesses to raise money for business expenses such as expansions. Government bonds are risk free bonds because the government can raise taxes or print currency to service the debt. Hence, government bonds do not have credit risk, default risk or counterparty risk. On the other hand, corporate bonds have a higher risk associated with default. The level of risk depends on the corporation itself, the business it is in, the market conditions in which it operates and also its credit rating. Since, investors buying corporate bonds will have to take more risk, they demand a higher return for corporate bonds to compensate the higher risk. So, the interest rate for a corporate bond will be higher than that of a government bond. 3. What typically happens to the interest rate as the amount of time increases, i. e. the maturity increases? Explain your answer. The interest rate of a bond increases as the maturity of the bond increases. The reason for this is very logical. Maturity date is the date at which the issuer has to repay the face value to the buyer of the bond. A higher maturity means that the lender/investor will have to take a higher risk by investing the money for a longer period. So the investor will want a higher compensation for assuming the higher risk associated with higher maturity bonds. Therefore, the investor will demand a higher interest rate for a bond that has a larger maturity. 4. Why are the interest rates different for different credit ratings? Explain your answer. Credit rating is “ an assessment of the credit worthiness of individuals and corporations. It is based upon the history of borrowing and repayment, as well as the availability of assets and extent of liabilities”. A higher credit rating would mean that the corporation has a good history of borrowing and repayment. A good history means that the corporation has met its liabilities as and when required is the past and also that the corporation is in a better position of borrowing funds. A lower credit rating means that the corporation does not have a good history of borrowing and repayment. So, for an investor the higher credit rating means that there is more likelihood that the corporation will meet its debt requirements. Therefore, the credit risk will be lower. In other words, a higher credit rating means that the credit risk is lower. Hence, the investor would like to be compensated for lending money to a corporation that has a lower credit rating. So the interest rate at which a corporation with lower credit rating will borrow will be higher than the rate at which a corporation with a higher credit rating will borrow. Works Cited Brigham, E. F., & Ehrhardt, M. C. (2005). Financial Management: Theory and Practice. USA: South-Western Cengage Learning. Investopedia. (2011, January 28). Credit Rating. Retrieved from Investopedia: http://www. investopedia. com/terms/c/creditrating. asp#axzz1kkBBgrua