## Chapter 9: Financial market terminology, technicalities and theories

# Textbook Questions

### Review questions

*The following questions appear in the textbook on page 245.*

*Answer the following questions.*

**Discuss the difference between the over-the-counter (OTC) market and an exchange traded market.**

**An exchange is a formal marketplace where financial instruments (spot and derivative) are bought and sold. Trading is governed by law and the rules and regulations of the particular exchange. By contrast, an over-the-counter (OTC) market is a market where trades are conducted outside formal exchanges – that is, directly between two principals or counterparties. However, many OTC market transactions are facilitated by financial intermediaries (such as banks). The dealers of such financial intermediaries act as market makers to both counterparties. OTC dealers stand ready to buy at the bid price and sell at the (higher) ask or offer price, hoping to profit from the difference between the two prices. Prices in the OTC market are determined either between the two principals or by a market maker acting as intermediary. In the OTC market, all risks, including credit risk – that is, the risk that the counterparty will default – are borne by the two parties to the transaction. On an exchange credit, risk is borne by the exchange through its clearing house.**

**Explain the difference between holding period return and effective annual return.**

**The holding period return (HPR) is the *total return* on an asset or portfolio of assets over the period it was held, expressed as a percentage of the initial value. HPR does not take into account reinvestment income between the time the cash flows occur and the end of the holding period. HPR is always written without “per annum” (or “p.a.”) following it, except where the holding period is one year. The effective annual return (EAR) is an annual rate which assumes that past return is repeated for the remainder of the year if the holding period is less than a year, and that the same return is achieved each year if the holding period exceeds one year – that is, it is a compound growth measure.**

**What does it mean if the beta value of a share is equal to one?**

**It means that the return on the share behaves exactly as the market does. For example, if the market improves/falls by 10 per cent, the share’s return also rises/falls by 10 per cent.**

**What is the difference between a bank’s trading book and its banking book?**

**For the purpose of determining a bank’s capital charges on market risks arising from interest rate and equities positions, a distinction is made between positions in a bank’s trading book and banking book. According to the Basel Committee on Banking Supervision, a bank’s trading book consists of positions in financial instruments and commodities held either with trading intent or in order to hedge other elements of the trading book. To be eligible for trading book capital treatment, such financial instruments must either be free of any restrictive covenants on their tradability or it must be possible to hedge them completely. In addition, positions should be frequently and accurately valued, and the portfolio should be actively managed. All financial instruments that are not actively traded by the bank, implying that they are held to maturity, are recorded in the banking book.**

**In the payment and settlement process, what is the difference between a primary level and secondary level custodian of securities?**

**Primary custodians are central securities depository participants (CSDPs) which are the only market players that can interact directly with STRATE. The current (early 2011) CSDPs are the SARB, the four major banks, Society Generale, Computershare and Eskom. The second sector of custodians is the members of the JSE, who are not permitted to retain electronic scrip on behalf of members but must lodge them with a CSDP. Records of clients’ scrip holdings are held on their brokers’ record systems, which simplifies trading.**

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**You have bought a Sydney Kumalo sculpture for R150 000 on 1 September 2005. You sell it for R425 000 on 1 September 2011. Calculate your holding period return as well as your effective annual return on the art investment over the period held.**

**HPR = (end value + cash flow)/(start value) – 1**

**= (425 000 + 0)/(150 000) – 1**

**= 2,8333 – 1**

**= 1,8333 or 183,33%%**

**EAR = (1 + HPR)1/n –1 where n = holding period in years**

**= (1+1,8333)1/6 – 1**

**= 1,1896 – 1**

**= 0,1896 or 18,96% p.a.**

**Note that the EAR in this case can also be calculated as:**

**[(end value)/(start value)]1/n – 1**

**= (425 000/125 000)1/6 – 1**

**= 1,1896 – 1 = 18,96% p.a.**

**If you put away R500 per month (on month ends) for the following 25 years and you earn a stable return of 8,7% p.a. (NACM) throughout the entire period, how much money will you have accumulated at the end of the period?**

**The future value of his annuity is:**

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**= R533 337,19**

**Mary’s eldest daughter is going to college for 2 years. She has indicated that she will need about R2 000 per month to cover her basic expenses. How much must her mother invest at the start of the period so that her daughter can draw exactly R2 000 at the end of each month for the following 24 months? Assume a nominal return of 12% p.a. (monthly compounded) on her money for the period.**

**Mary has to determine the present value of an ordinary annuity with 24 monthly payments of R2000 each and an investment rate of 12 per cent NACM. That is, she will need to invest the present value of an ordinary annuity, calculated as follows:**

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**= R42 486,77**

**Thabo wants to augment his pension by saving a certain sum of money at the end of every month for the next 22 years in order to have an additional R4 million available when he retires. His research shows that fund manager A has on average produced a steady effective annual return of 12,5% per annum over the last 20 years. Assuming the returns could be duplicated over the next 22 years, what amount must he save every month with the fund manager in order to have an extra R4 million at the end of the period?**

**Firstly, Thabo needs to convert the EAR of 12,5 per cent per annum into an NACM.**

**Using (F.9.16): i = [(EAR + 1)1/f – 1] × f where i is the nominal return (NACM), an EAR of 12,5 per cent is equal to a NACM of [(0,125 + 1)1/12 – 1] × 12 = 11,84% p.a.**

**Secondly, entering this into (F.9.29):  yields the following cash flow:**

**CF = [4 000 000(0,1184/12)]/[(1+0,1184/12)12×22 –1]**

**= R3 193,90 per month**

**Briefly explain the essential features of the Efficient Market Hypothesis.**

**According to the efficient market hypothesis (EMH), at any given time financial instrument prices fully reflect all available information. The market is efficient if the reaction of market prices to new information is instantaneous and unbiased. The main outcome of this theory is that price movements are random and do not follow any patterns or trends. This means that past price movements cannot be used to predict future ones. Rather, prices follow a random walk – that is, an inherently unpredictable pattern.**

**There are essentially three forms of EMH:**

1. **The *weak form* of the EMH claims that all past market prices and data are fully reflected in asset prices. The implication of this is that technical analysis will not be able to consistently produce excess returns, though some forms of fundamental analysis may still provide them. Technical analysis involves studying past asset price series and trading volume data in attempt to profit from periodic changes in these trends. Fundamental analysis focuses on determining the intrinsic value of a share. The emphasis is on future earnings. It requires the analysis of all variables that affect the level and growth rate of a company’s earnings such as the quality and depth of management; the competitive position of the company; the strength of the company’s balance sheet; the economic, technical, political and legal environment in which the company operates; and the industry environment and characteristics.**
2. **The *semi-strong form* of the EMH asserts that all publicly available information is fully reflected in asset prices. The implication of this is that neither technical nor fundamental analysis can be used to produce excess returns.**
3. **The *strong form* of the EMH states that all information – public and private – is fully reflected in asset prices. The implication of this is that even insider information cannot be used to beat the market.**