Question 1:

Which of the following advantages makes the enterprise value/EBITDA ratio a more appropriate choice than the P/E ratio in multiplier models for evaluating public companies?

A. Greater accuracy in determining the multiple's numerator

B. Ability to find comparable companies easily

C. Comparison of companies with different capital structures

Solution:

C is correct.

The EV/EBITDA ratio is favored over the P/E ratio when comparing companies with different capital structures due to its ability to provide a more accurate analysis of operating performance regardless of capital structure. When companies have varying proportions of debt capital, it can lead to higher P/E ratios, making it challenging to compare businesses with similar operations but different financial structures. However, the EV/EBITDA ratio eliminates the influence of capital structure, enabling a more meaningful comparison among companies.

Question 2:

A company uses the proceeds from newly issued bonds to buy back common shares. Holding all else constant, including the common dividend per share, if return on equity increases, the increase is most likely the result of:

A.   book value of equity declining proportionally more than net income.

B.   net income increasing due to the increase in tax-deductible interest expense.

C.   total dividend payments decreasing, resulting in an increase in shareholders' equity.

Solution:

A is correct.

When a company issues debt to finance share buybacks, it has impacts on both the balance sheet and the income statement. On the balance sheet, long-term debt increases, while shareholders' equity decreases. On the income statement, interest expense rises, leading to a decrease in taxable income, tax expense, and net income. Maintaining operating profit constant, net income is bound to decline as the increase in interest expense surpasses the decrease in tax expense.

In this scenario, there is an increase in return on equity (ROE) as stated. However, it is noteworthy that net income has decreased. For ROE to rise while net income declines, the decrease in average shareholders' equity (book value) must be proportionally greater than the decrease in net income.

Question 3:

An analyst gathers the following information about a company's stock:

Selected Data	
Current dividend	€1
Annual dividend growth rate, Years 1–2	7%
Annual dividend growth rate, Years 3+	2%
Required rate of return	6%

According to the two-stage dividend discount model, the intrinsic value of the stock in Year 0 is *closest* to:

A.   €26.54

B.   €27.50

C.   €28.01

Solution:

C is correct.

According to the two-stage dividend discount model (DDM), the **intrinsic value** of the asset (V_0) is the **present value of** two streams of cash flows: the **dividends** from the **high growth stage and** the **dividends** from the **long-term growth stage**.

The dividends in the high growth stage, D_1 and D_2, are obtained by multiplying D_0 by $(1 + 0.07)$ and $(1 + 0.07)^2$, respectively:

D1 = 1.07
D2 = 1.1449

The Year n value of the second stage, V_n, is used as the terminal value input for the first stage. The Gordon growth model (GGM) is used to find the Year n value of the second stage, which comprises infinite time periods with lower, long-term dividends. To use the

GGM, first calculate the dividend in the first year of the long-term growth stage, $D_{n+1} = D_3$, as follows:

D3 = 1.00(1.1449)(1.02) = 1.1678

Use the GGM to calculate V_2:

V2 = 1.1678/(0.06-0.02) = 29.1950

Substitute all values into the two-stage DDM:

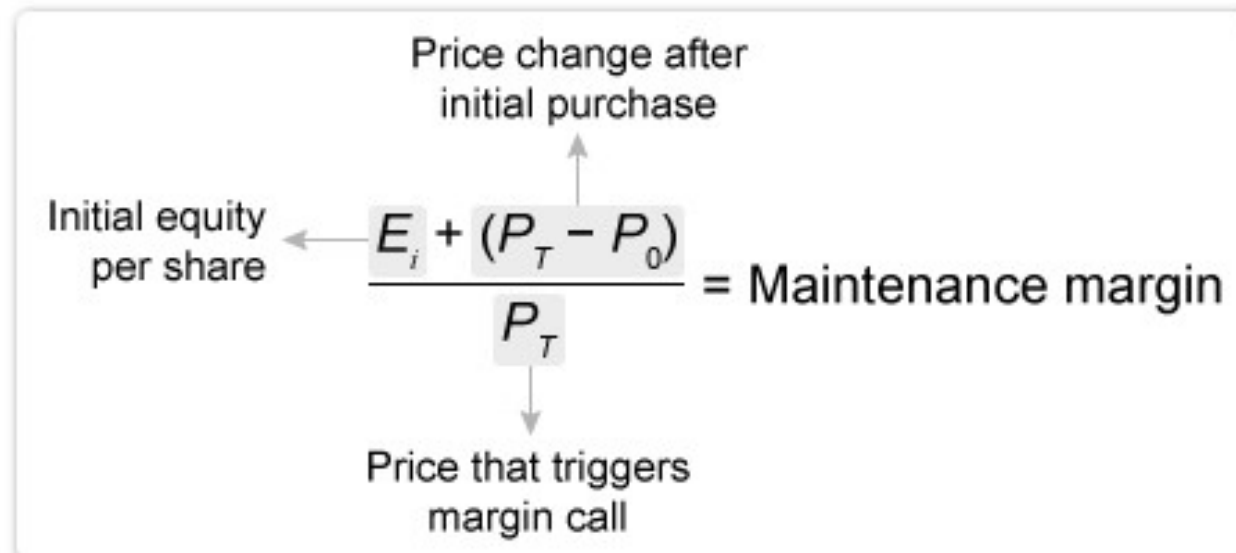$$V_0 = \frac{1.07}{1.06} + \frac{1.1449 + 29.1950}{1.06^2} = 28.0118$$

Question 4:

An investor buys 20,000 shares of a stock for $40 per share, on 40% margin. If the maintenance margin requirement is 25%, then the investor will receive a margin call at a price *closest* to:

A. $32.00

B. $30.00

C. $40.00

Solution:

A is correct.

Margin call price

$$\underset{\substack{\text{Initial equity} \\ \text{per share}}}{\longleftarrow} \frac{E_i + \overset{\substack{\text{Price change after} \\ \text{initial purchase}}}{(P_T - P_0)}}{\underset{\substack{\text{Price that triggers} \\ \text{margin call}}}{P_T}} = \text{Maintenance margin}$$

$$\frac{(0.40\times40)+(Pt-40)}{Pt} = 0.2516+ Pt\ -40 = 0.25Pt$$

0.75Pt = 24   Pt= 32

To conceptually grasp the calculation, understand that the investor initially contributed $16 ($E_i$) per share in equity (40% of purchase price × $40 a share). If the stock price subsequently drops below 32, then the trader's equity per share amounts to 8, or [16 + (32 − 40)]. This results in an equity percentage of 25% (or 8 / 32), which equals the maintenance margin.

Question 5:

Which type of security market index is most in need of periodic rebalancing, and why?

A.   maket cap-weighted index.

B.   equal-weighted index.

C.   price-weighted index.

Solution:

B is correct.

An equal-weighted index assigns an equal weight to each security at the time of index construction, regardless of its market capitalization, price, or other fundamental characteristics. This means that the performance of each security in the index contributes equally to the overall index performance. However, as the prices of the securities in the index change over time, the weightings of the securities will change, and the index may become overweight or underweight in certain securities. Therefore, periodic rebalancing is necessary to ensure that each security continues to be assigned an equal weight in the index. As a result, an equal-weighted index is the type of security market index most in need of periodic rebalancing.

In contrast, a capitalization-weighted index assigns weights to each security based on its market capitalization, with larger companies receiving a higher weighting in the index.

Since the market capitalization of each security changes frequently with market movements, the index does not require rebalancing as frequently as an equal-weighted index.

Price weighted indexes are not rebalanced because the weight of each constituent security is determined by its price

Question 6:

Which form of market efficiency allows investors to achieve positive risk-adjusted returns on average using fundamental analysis?

A. Weak form efficiency only.

B. Semi-strong form efficiency only.

C. Strong form efficiency only.

Solution:

A is correct

In the weak form of market efficiency, past prices and trading volumes are reflected in current prices, but not private or public information. This means that fundamental analysis can be used to achieve positive risk-adjusted returns on average, as investors can use publicly available information to identify undervalued securities. In contrast, in the semi-strong form of efficiency, public information is reflected in current prices, meaning that fundamental analysis cannot be used to achieve superior gains. Similarly, in the strong form of efficiency, all information (public and private) is reflected in current prices, so neither fundamental nor technical analysis can be used to achieve abnormal returns.

Therefore, the correct answer is A.

The table below summarizes the possibility of earning abnormal returns through various strategies and active management, assuming different types of market efficiency.

	Technical Analysis	Fundamental Analysis	Insider Trading	Active Management
Weak	No	Yes	Yes	Yes
Semi-Strong	No	No	Yes	No
Strong	No	No	No	No

Question 7:

Which stage of a firm's development is least likely to attract investment from SSEI VCs, a venture capital firm that invests in various stages of a company's growth?

A.   Early-stage investing.

B.   Mezzanine financing.

C.   Late-stage investing.

Solution:

C is correct.

Venture capital firms like SSEI VCs make investments in private equity to finance different stages of a company's development, including seed or startup stage, early stage, and mezzanine financing stage. At the late-stage, a company is typically closer to going public or being acquired, which may require larger sums of money than Stratton VCs may not be willing to invest. Late-stage investing may also be more competitive and have a lower potential for significant returns compared to earlier stages. Therefore, the least likely stage for SSEI VCs to invest its funds would be the late stage.

Question 8:

As a research analyst for AMC Investment Management Firm, Rajesh follows a sector rotation strategy that favors cyclical companies. In which industry is Rajesh most likely to invest during an economic recovery phase?

A. Health care companies

B. Technology hardware companies

C. Steel manufacturing companies

Solution:

C is correct

During an economic recovery phase, cyclical industries tend to perform well, such as manufacturing, construction, and basic materials. Steel manufacturing companies fall under the basic materials sector, which is highly cyclical and sensitive to economic fluctuations. The demand for steel increases as the economy recovers and construction and manufacturing activities pick up. Therefore, Ramesh is most likely to invest in steel manufacturing companies during an economic recovery phase.

Technology hardware companies (choice B) are part of the technology sector, which is generally considered a growth industry rather than a cyclical one.

Question 9:

The shares of Orange Limited are currently trading at $75 and pay a yearly $6 dividend. In the after-hours, the company announces that it has closed-in on a $100 million project from a big investment bank. The information causes a revision of orange's next year forecasted share price which rises to $90. If analysts expect the shares of the company to generate a yearly holding period return of 15%, then the price of orange's stock is most likely to open at a price of:

A. $71.19.

B. $83.48.

C. $78.64.

Solution:

B is correct.

Let the next day opening price of the share be x.

As the market expects a one-year holding period return of 15%:

15% = ($90 - x + 6) / x

1.15x = 96

x = 83.48

Therefore, the stock will open at a price of $83.48.

Note: This can also be done with the use of the financial calculator as:

N=1; I/Y=15; PMT =6; FV=90;

CPT → PV = -83.48

Question 10:

An equity analyst is comparing two market-leading companies in the consumer products industry. Company A has been acquiring small firms at market prices (which are significantly higher than average historical prices) to grow inorganically. Company B has been gradually improving operational efficiency at its factories to achieve growth. The question is, which company is most likely to have a higher price-to-book (P/B) multiple?

A.   Company A

B.   Company B

C.   Both companies are equally likely to have a higher P/B multiple.

Solution:

B is correct.

Since Company A has been acquiring companies at market prices, its balance sheet will reflect these assets at their overvalued market price. Company B, on the other hand, has been improving operational efficiency at its factories, so its assets will be recorded at historical prices. As a result, the P/B multiple of Company B will likely be higher than that of Company A.

Question 11:

An equity trader is implementing a trading strategy that involves identifying and trading stocks using momentum-based trading strategy. Which of the following valuation approaches is the most appropriate for this strategy?

A.   Dividend discount model (DDM)

B.   Capital asset pricing model (CAPM)

C.   Price-to-earnings (P/E) ratio

Solution:

C is correct.

A momentum trading strategy focuses on identifying stocks with strong price momentum, rather than on determining their intrinsic value. Price-to-earnings (P/E) ratio is a commonly used valuation approach for such a strategy, as it helps to identify stocks that are relatively undervalued or overvalued based on their current price compared to their earnings. DDM and CAPM are used for determining the intrinsic value of a stock based on its future cash flows or expected returns, respectively, and are not directly relevant to a momentum-based trading strategy.

Question 12:

Which of the following statements is true regarding market efficiency, transaction costs, and information-acquisition costs?

A. Market efficiency is absolute and does not consider transaction costs or information-acquisition costs.

B. Transaction costs are irrelevant when determining market efficiency.

C. Market efficiency should be viewed within the bounds of transaction costs.

Solution:

C is correct.

Transaction costs refer to the expenses incurred when buying or selling securities in order to take advantage of perceived market inefficiencies. These costs include brokerage fees, commissions, bid-ask spreads, and other related expenses. In practical terms, these costs play a crucial role in determining the efficiency of a market.

For instance, let's consider a situation where there is a violation of the principle that two identical assets should sell for the same price in different markets. This violation suggests a possible market inefficiency as prices appear to be inconsistently processing information. To exploit this inconsistency, a trader could engage in arbitrage by simultaneously shorting the asset in the higher-priced market and buying the asset in the lower-priced market. However, if the price discrepancy between the two markets is smaller than the transaction costs involved in the arbitrage for the lowest cost traders,

the arbitrage opportunity will not be realized. In such a case, both prices can be considered efficient within the bounds of arbitrage.

It is important to note that the bounds of arbitrage vary depending on the liquidity of the market. In highly liquid markets, such as the market for US Treasury bills, transaction costs tend to be lower, resulting in narrower bounds of arbitrage. Conversely, in illiquid markets, where trading volumes are lower and transaction costs are higher, the bounds of arbitrage can be wider.

Information-acquisition costs: Practically, expenses are always associated with gathering and analyzing information. New information is incorporated in transaction prices by traders placing trades based on their analysis of information.

Active investors who place trades based on information they have gathered and analyzed play a key role in market prices adjusting to reflect new information. The classic view of market efficiency is that active investors incur information acquisition costs but that money is wasted because prices already reflect all relevant information. This view of efficiency is very strict in the sense of viewing a market as inefficient if active investing

can recapture any part of the costs, such as research costs and active asset selection. Grossman and Stiglitz (1980) argue that prices must offer a return to information acquisition; in equilibrium, if markets are efficient, returns net of such expenses are just fair returns for the risk incurred. The modern perspective views a market as inefficient if, after deducting such costs, active investing can earn superior returns. Gross of expenses, a return should accrue to information acquisition in an efficient market.

Question 13:

An investor purchased a share of stock on margin with an initial margin requirement of 35% and a maintenance margin requirement of 25%. The leverage ratio for the transaction is closest to:

A.   1.40.

B.   4.00.

C.   2.86.

Solution:

C is correct.

Leverage ratio   = 1/Initial margin requirement

= 1/0.35

= 2.86

Question 14:

Which of the following objectives is the primary goal of regulatory oversight of pension funds, with respect to meeting obligations to employees of the sponsor?

A.   Ensuring compliance with fraud prevention measures.

B.   Establishing industry-specific best practices.

C.   Ensuring that long-term liabilities are adequately funded.

Solution:

C is correct.

The primary objective of regulatory oversight of pension funds is to ensure that the entities can meet their long-term obligations to employees of the sponsor. This requires monitoring the level of funding and reserves maintained by the pension fund to ensure that they are sufficient to cover future payouts to plan participants. The oversight is focused on promoting financial stability and protecting the interests of plan beneficiaries, rather than controlling fraud or establishing industry-specific standards.

Question 15:

An equity portfolio manager is considering purchasing a company's stock and forecasts the current dividend of USD 3.00 to grow at a rate of 11% annually for the next four years. Thereafter, the analyst expects the dividends to grow at 4.0% in perpetuity. The required return on equity is 9.0%. Based on a two-stage dividend discount model, the value of the stock is closest to:

A.   USD 69.10

B.   USD 75.12

C.   USD 79.67

Solution:

C is correct.

First we need to find V4

V4 = D5/(r-g) = $(3 \times 1.11^4 \times 1.04)/0.05$ = 94.728

Now we need to find V0

CF1= 3.33

CF2 = 3.6963

CF3= 4.1029

CF4= 4.5542 + 94.728 = 99.2822

I=9%

CPT NPV = 79.668

Question 16:

Which of the following index weighting schemes may result in a bias towards small issues?

A. An index that is weighted based on the price of its constituent securities.

B. An index that is equally weighted across all constituent securities.

C. An index that is weighted based on the total market value of its constituent securities.

Solution:

B is correct.

The equal weighting scheme is known to have a bias towards small issues. While price-weighted indexes are biased towards higher-priced securities, and value-weighted indexes are biased towards larger issuers, the equal weighting scheme gives equal weight to all securities in the index, regardless of their size or market value. As a result, smaller issues are overrepresented in the index, while larger issues are underrepresented. This can lead to a bias towards smaller issues in the index.

Question 17:

Which of the following order types is preferred by traders when settlement costs are based on the number of transactions needed to fill an order instead of the order size?

A. Market orders

B. Hidden orders

C. All-or-nothing orders

Solution:

C is correct.

When the settlement costs of a trade are based on the number of transactions required to fill an order rather than the order size, traders prefer using all-or-nothing (AON) orders. This type of order can only be executed if the entire order size can be filled in one transaction. By using AON orders, traders can avoid additional settlement costs that would arise if their order was filled in multiple transactions. Limit orders and hidden orders are not specifically designed to address settlement costs and may not be appropriate in such situations.

Question 18:

Which of the following factors is most likely used as the basis for an investment grade (IG) corporate fixed-income index?

A. Market and type of issuer.

B. Type of security and maturity.

C. Type of security and credit quality.

Solution:

C is correct.

An investment grade (IG) corporate fixed-income index is most likely based on the type of security and credit quality. The "corporate" component of the index name refers to the type of issuer, while "investment grade" indicates a high credit quality. The credit quality of the index is usually determined based on the credit rating assigned to the bonds that make up the index. The type of security is usually limited to fixed-income securities issued by corporations with investment-grade credit ratings. This ensures that the index includes only high-quality bonds with relatively low risk of default. Therefore, the type of security and credit quality are the key factors used to construct an IG corporate fixed-income index.

Question 19:

An equity analyst is analyzing a company that recently paid an annual dividend of USD 2.40. The analyst expects dividends to grow at a constant rate of 5.0% indefinitely. The expected return on the market portfolio is 12.0%, the risk-free rate is 6% and the stock has a beta of 1.40. Based on the Gordon growth model, the value of the stock (in USD) is closest to:

A. 29.74

B. 26.81

C. 22.76

Solution:

B is correct.

Re = Rf + b(Rm-Rf) = 6 + 1.40(12-6) = 14.4%

$V0 = \dfrac{D0(1+g)}{r-g}$ = [2.40(1.05)] / (0.144-0.05)

   = 26.81