Research
Based
Curricula

You've Got to Speculate to Accumulate: Financial Markets and Portfolio Investments

Key Stage 5 Business

Model Answers

2019

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Resource One
Model Answers

Answers

1. No, because exchange occurs at the same period of time. In this case every Sunday.
2. Risk-averse person is the one who, when faced with two investment opportunities with the similar returns will choose the one with lower risk. In turn, risk-preferring person will always prefer higher risk.
3. Ms. Black can "buy" Ms. White's farm by agreeing to pay 1,000 tons of apples per year to Ms. White. Ms. White will still operate her farm, but she will receive 1,000 tons of apples each year, being insulated from the variations in productivity from one year to the next. Because good and bad weather occur with equal probability, Ms. Black's average yearly production will increase from 1,500 tons to 3,000 tons. Ms. Black would hold a residual claim, similar to a common stock. Each year she will receive the output that remains after she pays Ms. White 1,000 tons of applies. Ms. White would hold a contractual claim, which is like a bond.
4. No; there is an opportunity for a mutually beneficial exchange. Mr. Green can lend $100 to Mr. Brown at a rate of interest greater than 10% but less than 15%. Both parties will be better off.

Resource Two
Model Answers

Answers

1. Bonds are called risk-free securities because the future stream of payments promised to the holder of the security is known in advance. Nevertheless, there are some risks when holding bonds. In the case of stocks, not only the same sources of risk are present, but, additionally, it is not known in advance what payments (if any) the stockholder will receive. The firm has to generate enough cash to pay the bondholders and then, if there is any residual left, the stockholders can be compensated, or, which increases the uncertainty, a part of it can be reinvested with the hope of generating higher future earnings.
2. Stocks
3. Bond
4. Dividends
5. Common stock

Resource Three
Model Answers

Answers

1. $R_{t,t+2} = (1 + R_{t+1})(1 + R_{t+2}) = (1 + 0.1)(1 + 0.2) - 1 = 1.32 - 1 = 0.32 = 32\%$

2. Arithmetic average: (0%+30%)/2=15%

   Geometric average: R=[1.3*1]$^{1/2}$-1=14%

3. 1.15*1.15=1.3225

   No, the above investment earns 30%, while 15% per year earns 32.25%

4. $R_t = (90 - 85)/85 = 90/85 - 1 = 1.0588 - 1 = 0.0588$

   1+R_t=1.0588

   The one-month investment in Microsoft yielded a 5.88% per month return. Alternatively, $1 invested in Microsoft stock in month *t-1* grew to $1.0588 in month *t*.

5. The two-month net return is:

   $R_t(2) = (90 - 80)/80 = 90/80 - 1 = 1.1250 - 1 = 0.1250$

   or 12.50% per two months. The two one-month returns are:

   $$R_{t-1} = (85 - 80)/80 = 1.0625 - 1 = 0.0625$$

   $R_t = (90 - 85)/85 = 90/85 - 1 = 1.0588 - 1 = 0.0588$

   and the geometric average of the two one-month gross returns is:

   $$1 + R_t(2) = 1.0625 * 1.0588 = 1.1250$$

Resource Four
Model Answers

Answers

1. **Equal-weighted**: Wealth shares are 1/2-1/2
   Spend $50 on ABC Co. and $50 on XYZ Ltd
   Buy 5/4 shares of ABC Co. and 5/2 shares of XYZ Ltd

   Price weighted: Wealth shares are 40/60 and 20/60
   Spend $66.6 on ABC Co. and $33.3 on XYZ Ltd.
   Buy 1.66 shares of ABC Co. and 1.66 shares of XYZ Ltd.
   Lesson: price-weighted means equal number of shares! Can track performance of portfolio simply by adding prices of assets

   Value weighted: Market capitalizations are $40 * 100 = $4000 and $20 * 50 = $1000, so wealth shares: 4/5 and 1/5
   Spend $80 on ABC Co. and $20 on XYZ Ltd.
   Buy 2 shares of ABC Co. and 1 share of XYZ Ltd.
   Corresponds to holding 2% of entire market

2. $R_p = \omega_A R_A + \omega_B R_B = 40\% * 25\% + 60\% * (-10\%) = 4\%$

Stock	Investment	Value after 1 yr	Rate of return
A	$4000	$5000	R_A = 25%
B	$6000	$5400	R_B = -10%
Total	$10000	$10400	R_p= 4%

4. The one-period returns on the two stocks are:

$$R_{msft,t} = (90 - 85)/85 = 0.0588$$

$$R_{sbux,t} = \frac{28 - 30}{30} = -0.0667$$

The one-month rate of return on the portfolio is then:

$$R_{p,t} = (0.7391)(0.0588) + (0.2609)(-0.0667) = 0.02609$$

and the portfolio value at the end of month t is:

$$V_t = V_{t-1}(1 + R_{p,t}) = \$1{,}100 * 1.02609 = \$1{,}180$$

Resource Five
Model Answers

Answers

1. A company that pools investors' money to create an investment portfolio
2. A professional investment manager manages a mutual fund on behalf of the investors.
3. Hedge funds use more complicated investment strategies, hence, managers are considered to be more sophisticated. Hedge funds can quickly react to market conditions, therefore, they are called smart money
4. C

Resource Six
Model Answers

Answers

1. Yes, in many well-functioning financial markets. Buying a negative amount of a stock is called taking a short position, or shorting the stock
2. In a long (buy) position, the investor is hoping for the price to rise. An investor in a long position will profit from a rise in price
3. In the case of a short stock position, the investor hopes to profit from a drop in the stock price. This is done by borrowing X number of shares of the company from a stockbroker, and then selling the stock at the current market price. The investor then has an open position for X number of shares with the broker, that has to be closed in the future. If the price drops, the investor can purchase X amount of stock shares for less than the total price they sold the same number of shares for earlier. The excess cash is her profit.
4. In the case of a forward contract, the exchange of money and assets is made only at the final date.
5. For futures the exchange is more complex, occurring in stages - futures are marked to market which entails less bookkeeping. It is for this reason that futures are traded on exchanges
6. When people decide to hedge, they are insuring themselves against a negative event. For example, if you buy homeowner's insurance, you are hedging yourself against fires, break-ins or other unforeseen disasters.

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