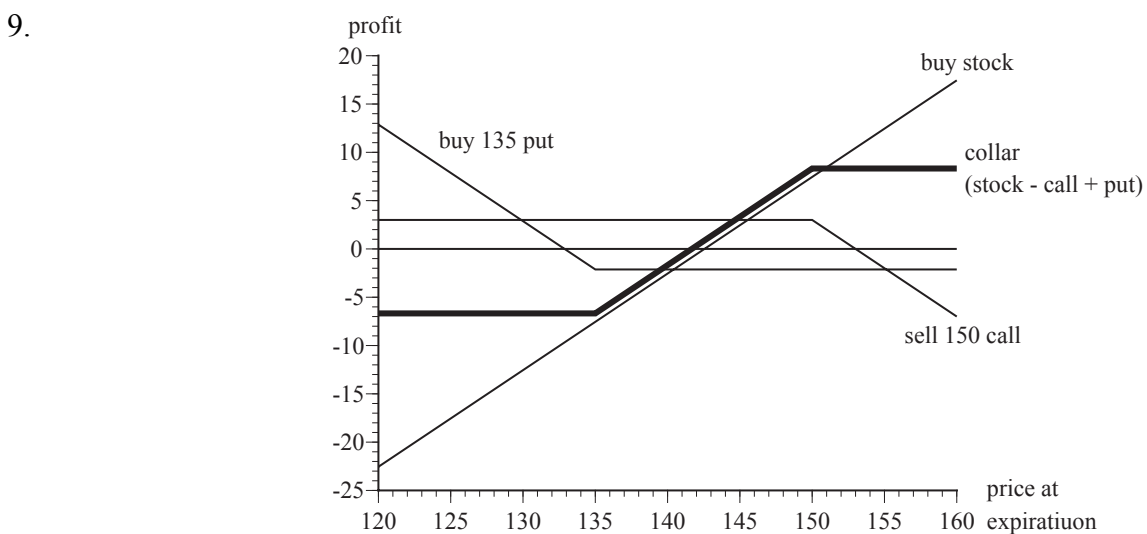


Final Examination Answers

1. Not if the adjustable rate explodes.
2. Stories in the *Journal* are surely old news, already reflected in futures prices. A study by three economists concluded that the odds of an honest trader making a \$100,000 profit on a \$1,000 investment during this time period was less than 1 in 31 trillion. [Anderson, Seth C.; Jackson, John D.; Steagall, Jeffrey W.. A note on odds in the cattle futures market, *Journal of Economics and Finance*, 18 (3): 357–365.] Another skeptical study is “Hillary Clinton’s Cattle Futures Trading Profits,” *Marshall Magazine*, Winter 1998.
3. The dividend discount model  $P = D/(R-g)$  assumes that stocks will be held forever. The dividend growth rate should be the long-run growth rate, which is surely not 11.89%.
4. buying call options [<http://moneymorning.com/2015/03/18/an-easy-way-to-make-a-quick-300-on-apple-nasdaq-aapl/>]
5. [Burton Malkiel, *A Random walk Down Wall Street*, 2015, p. 229.] There is a crucial difference between stock-price changes being unpredictable and stock prices being good estimates of intrinsic values.
6. [James D. Bowyer, “To Sell or Not to Sell,” *United*, April 1986.] Higher interest rates increase shareholders’ required returns, which reduce the present value of any given cash flow, including that from stocks.
7. These technicians belong to the momentum school, When the price rises to 30, this signals them that the price will continue to rise and that they should buy the stock. If the price doesn’t rise to 30, then it has no momentum and is of no interest to them.
8. [Charles P. Pierce, “Just Maybe...Right?,” *Sports Illustrated*, May 16, 2016, pp. 47 - 49.] This is clear evidence of regression to the mean. These 13 teams generally won more than half their games the remainder of the season (they were above-average teams), but none of them did as well after the first 30 games as they did during the first 30 games.



10. In theory, stock prices are related to longer-term rates (or a complete term structure). Also, in these data there was very little variation in the federal funds rate.
11. a. Shareholders must pay taxes on dividends, but only pay taxes on stock repurchase if they sell (and, then, only on their capital gains).  
 b. Debt creates a tax shield.  
 c. They may not have any sufficiently profitable projects.
12. If stock splits are so great for shareholders, why don't all companies split their stock? The answer is that stock splits do nothing at all for shareholders. A stock split increases the number of shares, true enough, but it reduces the value of each share proportionately. The real mystery is why companies split their stock.
13. [Mike Patton, "Economy is Weak, Stocks Are In A Bubble, And Washington Must Change Course," Forbes, May 30, 2015.] There is no logical reason why the market value of any basket of stocks (The Dow, the S&P 500, or the Wilshire 5000) should equal GDP.
14. The stock price can be expected to drop on the ex-dividend date by the size of the dividend. It would be misleading to show a negative return on that date and a positive return later, when the dividend is paid.
15. Let's see what the conservation of value says. The total market value is  $(\$20/\text{share})(1.1 \text{ million shares}) = \$22 \text{ million}$ . If the firm distributes \$2.2 million to shareholders, its total market value will fall to  $\$22 \text{ million} - \$2.2 \text{ million} = \$19.8 \text{ million}$ . If the cash is distributed as a dividend, the number of shares is constant. So, the shareholders get a \$2 dividend and the value of their stock falls by \$2 to \$18:  $\$19.8 \text{ million}/(1.1 \text{ million shares}) = \$18$ . If the cash is distributed as a share repurchase of 100,000 shares at \$22/share, the number of shares falls to 1 million, each with a market value of  $(\$19.8 \text{ million})/(1 \text{ million shares}) = \$19.8$ . The firm paid  $\$2/\text{share}(100,000 \text{ shares}) = \$200,000$  more than the shares were worth, and value of the remaining shares dropped by  $\$200,000/(1 \text{ million shares}) = \$0.20$ , from \$20 to \$19.80.  
 It is not true that "investors would receive benefits of \$2 per share in either case, either in the form of a \$2 cash dividend or a \$2 increase in the stock price." With a dividend, shareholders get no benefit—a \$2 dividend, offset by a \$2 price decline. With a share repurchase, shareholders lose because the company paid more than the shares are worth.  
 The textbook's mistake was to assume that earnings per share and the P/E ratio are both constant.
16. There is a perfectly logical reason why a fairly valued stock may have a q-value larger or smaller than 1: its profit rate is smaller or larger than the shareholder's required return.
17.  $1 + R = 1.15^{26} = 37.8568$ , so  $R = 36.8568$ , or 3,685.68%
18. Higher interest rates increase the value of futures contracts because they increase the cost of carry.
19. The higher tax rate on interest will lower the required return on stocks, making them more valuable. Since there will be an immediate effect on the present value of future dividend income, the effect should be immediate.
20. The argument for diversification is stronger if the returns are negatively correlated because, in this case, diversification reduces the portfolio's standard deviation more.