

Chapter 2

Buying and Selling Securities

1. Maximum investment = \$21,667
Number of shares = 305.16 or 305 shares

2. Margin loan = \$15,500
Margin requirement = 0.4151 or 41.51%

3. Terminal price = \$62
Without margin = 16.98%
With margin = 40.91%

Terminal price = \$44
Without margin = -16.98%
With margin = -40.91%

4. Initial deposit = \$7,950

Terminal price = \$62
Without margin = 16.98%
With margin = 56.60%

Terminal price = \$44
Without margin = -16.98%
With margin = -56.60%

A lower initial margin requirement will make the returns more volatile. In other words, a stock price increase will increase the return, and a stock price decrease will cause a greater loss.

5. Maximum purchase = \$21,818.18

6. Amount borrowed = \$16,500
Margin call price = \$58.93

7. Amount borrowed = \$11,610
Margin call price = \$29.77
Stock price decline = -30.77%

8. Proceeds from short sale = \$63,900
Initial deposit = \$38,340
Account value = \$102,240
Margin call price = \$87.38

9. Proceeds from short sale = \$63,000
Initial deposit = \$34,650
Account value = \$97,650
Margin call price = \$75.12
Account equity = \$22,530

10. Pretax return = 10.00%
 Aftertax capital gains = \$6.30
 Aftertax dividend yield = \$1.53
 Aftertax return = 7.25%

12. 600 shares \times \$46 per share = \$27,600
 Initial margin = \$11,000/\$27,600 = 39.86%

<u>Assets</u>		<u>Liabilities and account equity</u>	
600 shares	\$27,600	Margin loan	\$16,600
		Account equity	<u>11,000</u>
Total	<u>\$27,600</u>	Total	<u>\$27,600</u>

13. Total purchase = \$42,000
 Margin loan = \$27,000
 Margin call price = \$77.14

To meet a margin call, you can deposit additional cash into your trading account, liquidate shares until your margin requirement is met, or deposit additional marketable securities against your account as collateral.

14. Interest on loan = \$1,755
- a. Proceeds from sale = \$48,000
 Dollar return = \$4,245
 Rate of return = 28.30%
 Without margin, rate of return = 14.29%
- b. Proceeds from sale = \$42,000
 Dollar return = -\$1,755
 Rate of return = -11.70%
 Without margin, rate of return = \$0%
- c. Proceeds from sale = \$31,000
 Dollar return = -\$12,755
 Rate of return = -85.03%
 Without margin, rate of return = -26.19%
15. Initial equity = \$20,400
 Amount borrowed = \$30,600
 Interest = \$2,662
 Proceeds from sale = \$57,000
 Dollar return = \$3,338
 Rate of return = 16.36%

16. Total purchase = \$34,400
 Loan = \$19,400
 Interest = \$1,610.20
 Proceeds from sale = \$46,400
 Dividends = \$512
 Dollar return = \$10,901.80
 Return = 72.68%
17. \$1,234.60
18. \$454.55
19. 15.92%
20. 22.98%
 All else the same, the shorter the holding period, the larger the EAR.
21. Holding period return = -8.36%
 EAR = -18.90%
22. Initial purchase = \$27,600
 Amount borrowed = \$16,600
 Interest on loan = \$591.22
 Dividends received = \$150.00
 Proceeds from stock sale = \$31,800
 Dollar return = \$3,758.78
 Rate of return = 34.17% per six months
 Effective annual return = 80.02%

23. Proceeds from sale = $1,500 \times \$47 = \$70,500$
 Initial margin = $\$70,500 \times 1.00 = \$70,500$

<u>Assets</u>		<u>Liabilities and account equity</u>	
Proceeds from sale	\$70,500	Short position	\$70,500
Initial margin deposit	<u>70,500</u>	Account equity	<u>70,500</u>
Total	<u>\$141,000</u>	Total	<u>\$141,000</u>

24. Proceeds from sale = $1,500 \times \$47 = \$70,500$
 Initial margin = $\$70,500 \times .75 = \$52,875$

<u>Assets</u>		<u>Liabilities and account equity</u>	
Proceeds from sale	\$70,500	Short position	\$70,500
Initial margin deposit	<u>52,875</u>	Account equity	<u>52,875</u>
Total	<u>\$123,375</u>	Total	<u>\$123,375</u>

25. Proceeds from short sale = \$115,200
 Initial margin deposit = \$57,600
 Cost of covering dividends = \$900
 Dollar profit = \$10,500
 Rate of return = 18.23%

26. Proceeds from sale = $1,600 \times \$72 = \$115,200$
 Initial margin = $\$115,200 \times .50 = \$57,600$

Initial Balance Sheet

Assets		Liabilities and account equity	
Proceeds from sale	\$115,200	Short position	\$115,200
Initial margin deposit	<u>57,600</u>	Account equity	<u>57,600</u>
Total	<u>\$172,800</u>	Total	<u>\$172,800</u>

Stock price = \$63

Assets		Liabilities and account equity	
Proceeds from sale	\$115,200	Short position	\$100,800
Initial margin deposit	<u>57,600</u>	Account equity	<u>72,000</u>
Total	<u>\$172,800</u>	Total	<u>\$172,800</u>

Margin = 71.43%

Five-month return = 25%

Effective annual return = 70.84%

Stock price = \$79

Assets		Liabilities and account equity	
Proceeds from sale	\$115,200	Short position	\$126,400
Initial margin deposit	<u>57,600</u>	Account equity	<u>46,400</u>
Total	<u>\$172,800</u>	Total	<u>\$172,800</u>

Margin = 36.71%

Five-month return = -19.44%

Effective annual return = -40.48%