University of Richmond
Robins School of Business

§11. Equity Securities

FIN 360: Principles of Financial Management

TABLE OF CONTENTS

EQUITY SECURITIES

EQUITY VS. DEBT

Bonds are debt instruments issued to raise money for projects. A person or entity holding a bond is entitled to repayment based on the contractual agreement. **Equity securities**, such as common stock, however, represent *ownership* interests in a firm. A firm can issue equity securities to raise money for projects: investors contribute money to the firm in exchange for a percentage of ownership.

Table 1: Debt vs. Equity

Debt	Equity
Borrowing, not an ownership interest.	Ownership of the *residual claim*, or what remains after debt.
Creditors do not have voting rights.	Vote on the board and other issues.
Interest payments are tax deductible (paid *before* taxes.)	Dividends are not a "cost of doing business" nor tax deductible (paid *after* taxes, and then taxes paid *again* by the shareholder – **double taxation**).
Creditors have legal recourse if interest or principal payments missed.	Dividends are not a liability nor required to be paid, shareholders cannot sue for dividends.
Excess debt can lead to financial distress, default, and bankruptcy.	An all-equity firm cannot go bankrupt since bankruptcy is inability to meet *debt* obligations.

Raising Capital

Firms often issue both debt and equity to raise money for projects, as each has distinct benefits and costs. The optimal mix depends on factors such as the firm's financial position, stage of development, and market conditions.

What is a cost of debt to a firm? What is a cost of equity to a firm?

Debt allows a firm to raise capital without giving up control, is typically less costly than equity (as bondholders generally require a lower rate of return than equity investors do), and offers tax advantages, since interest payments are tax-deductible. However, the cost of debt increases as the firm takes on more leverage and risk.

Debt is a liability while equity is not. Equity may be the only source of financing for startup firms, but dividends are not required to be paid, nor a liability to the firm.

COMMON STOCK

Rights

As **stockholders** or **shareholders**, the equity investors are entitled to:

1. Voting rights at the firm's annual meeting.
2. Dividends, if paid.
3. **Residual claim** – what remains after debt is paid in the event of liquidation.
4. **Preemptive rights** in some cases, or the ability of existing shareholders to purchase newly issued shares by the company before it is offered to others. Issuing new shares can be **dilutive** to existing owners, so this gives existing owners an opportunity to maintain their ownership stake. Preemptive rights are not very common in publicly traded companies.

Voting

Generally, owning a share entitles the holder to one vote. Thus, larger shareholders can exert significantly more influence, just by holding more shares. Some firms have **dual class share structures** whereby some shares have more than one vote. This protects founders' power over the firm.

Figure 1: Dual Class Shares and Voting Rights (Class B = 10 votes per share)

Alphabet

	Voting Shares Beneficially Owned				
	Class A Common Stock		Class B Common Stock		
Name of Beneficial Owner	Shares	%	Shares	%	Total Voting Power[1] %
Executive Officers and Directors					
Larry Page	—	—	389,051,160	44.9	26.7
Sergey Brin[2]	—	—	363,474,028	41.9	25.0

Voting for directors can be either through **straight voting**, where you cast votes for each director or **cumulative voting** where you can throw all your votes in support for one or a few directors. Cumulative voting may give more power to smaller voters, but is rare in the United States.

The Securities and Exchange Commission's Investor.gov website explains straight and cumulative voting:

> *"For example, if the election is for four directors and you hold 500 shares (with one vote per share), under [straight] voting you could vote a maximum of 500 shares for each one candidate (giving you 2,000 votes total—500 votes per each of the four candidates).*
>
> *With cumulative voting, you are afforded the 2,000 votes from the start and could choose to vote all 2,000 votes for one candidate, 1,000 each to two candidates, or otherwise divide your votes whichever way you wanted."*

Voting is done by **proxy**, submitting your vote via ballot or a grant of authority to another individual to vote your shares. **Proxy fights** occur when shareholders attempt to oust existing directors by soliciting proxies from other dissatisfied voters.

Staggered (or **classified**) **boards** occur when the firm only has some of their directors up for election at an annual meeting rather than all. In this way, it may take multiple years for a firm's board to be ousted by voters. This can protect existing management. Because it is unpopular for shareholders, staggered boards have decreased substantially in recent years.

Figure 2: A Proxy Card

NVIDIA CORPORATION

The Board of Directors recommends you vote FOR all the Nominees:

1. Election of Directors

Nominees:	For	Against	Abstain
1a. Robert K. Burgess	☐	☐	☐
1b. Tench Coxe	☐	☐	☐
1c. John O. Dabiri	☐	☐	☐
1d. Persis S. Drell	☐	☐	☐
1e. Jen-Hsun Huang	☐	☐	☐
1f. Dawn Hudson	☐	☐	☐
1g. Harvey C. Jones	☐	☐	☐
1h. Melissa B. Lora	☐	☐	☐
1i. Stephen C. Neal	☐	☐	☐
1j. A. Brooke Seawell	☐	☐	☐
1k. Aarti Shah	☐	☐	☐
1l. Mark A. Stevens	☐	☐	☐

The Board of Directors recommends you vote FOR Proposals 2 and 3.	For	Against	Abstain
2. Advisory approval of our executive compensation.	☐	☐	☐
3. Ratification of the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for fiscal year 2025.	☐	☐	☐

The Board of Directors is not making a voting recommendation on Proposal 4.	For	Against	Abstain
4. Advisory approval of a stockholder proposal to replace the supermajority voting provisions in our charter and bylaws with a simple majority voting standard.	☐	☐	☐

NOTE: In their discretion, the proxyholders are authorized to vote upon such other business as may properly come before the meeting or any adjournment thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

Preferred Stock

Recall that **preferred shares** are equity shares that often pay **cumulative dividends**. That is, they pay dividends in perpetuity that, if ever a dividend is skipped, the skipped dividends must be paid up before common shareholders can be paid.

While preferred stock is senior to common stock, it is subordinate to bonds. Given they make fixed payments, they are not as susceptible to sizable gains if the company announces good news nor sizable losses if the company announces bad news. Individual investors do not commonly invest in preferred stocks.

In general, preferred stocks have no voting rights and may even be **callable**.

> Banks and financial institutions are among the largest issuers of preferred stock because it allows them to raise capital while still maintaining the capital requirements they must by law adhere to. That is, it prevents their debt-to-equity ratio from getting too high (relative to issuing bonds).

Trading and Markets

Secondary Markets

Equity securities exchange hands among **dealers** (who have an inventory of securities), **brokers** (who match traders and transact on behalf of their clients), and investors in **secondary markets**.

When this trading occurs in secondary markets, the firm itself is generally not a party to the transaction and realizes no direct profits or losses from a trade, unlike when the firm raises money through the sale of stocks or bonds in the **primary market**. Trading implies that the ownership makeup of the firm is changing, and if buyers of the company's stock are willing to pay more (less) for the shares, the value of the company will be increasing (decreasing).

- **Dealers** participate in markets by maintaining an inventory of securities that they sell from and add to by buying and selling with market participants. They make money on the **bid-ask** spread, or selling securities at **ask** prices slightly higher than their **bid** prices.

- **Brokers** will buy and sell securities on behalf of their clients, making money on commissions and fees for matching buyers to sellers.

- **Broker-dealers** serve both roles, serving as an **intermediary** by matching buyers and sellers or trading from their own account.

How does the compensation differ among brokers and dealers? How does the risk they bear differ?

Exchanges and Dealer Networks

Markets and exchanges are the venues where trading of securities takes place. Much of trading today is now electronic. **Electronic Communication Networks (ECNs)** match buyers and sellers directly via electronic networks, but traditional exchanges and networks are still popular among investors:

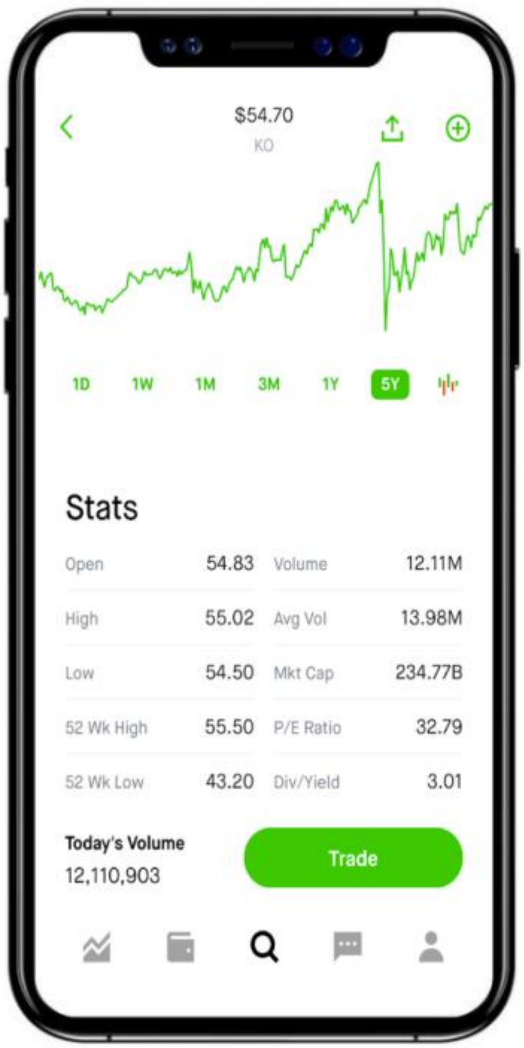
New York Stock Exchange

Floor brokers on the NYSE receive a request from their clients to buy or sell a stock. They then seek out a dealer on the NYSE floor, known as a **designated market maker** (**DMM**) to buy or sell the shares. The DMM may also match that broker with another broker who wants to sell (buy) what the first broker is buying (selling).

National Association of Securities Dealers Automated Quotations (NASDAQ)

NASDAQ is an electronic market of dealers only. They post their bid and ask prices and transact directly with one another by trading **over the counter** virtually.

READING A STOCK QUOTE

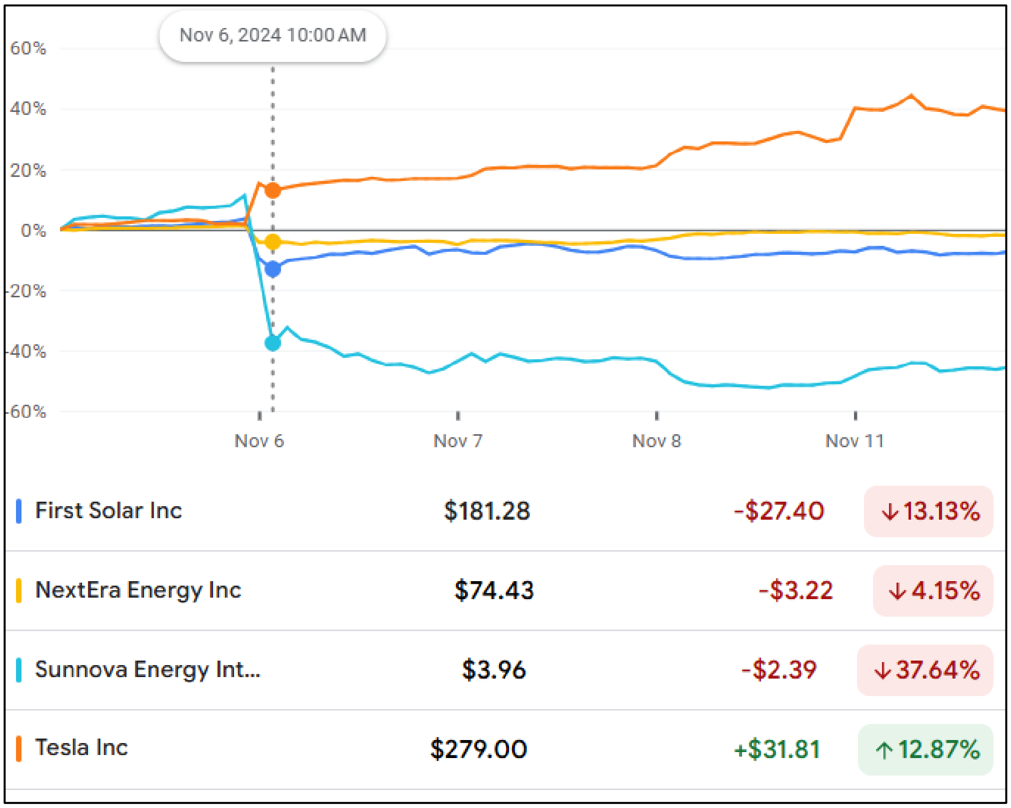


This stock, with ticker **KO** trades at **$54.70,** began the day trading at **$54.83**, went as high as **$55.02** during the day and as low as **$54.50**. Over the last 52 weeks, it was as high as **$55.50** and as low as **$43.20**. KO shares exchanged hands **12.11 million** times today, a bit lower than its daily average of **13.98 million**. The size or market capitalization (overall value) of this firm is **$234.77 billion** (shares outstanding multiplied by its current price). The stock price per share divided by its earnings (net income) per share, or the P/E ratio, is **32.79**. Finally, the dividend yield or annual dividend divided by stock price is **3.01%**.

Capital Market Efficiency

Stock prices vary through time as buyers and sellers of securities bid up the prices of securities or sell out of (and reduce) the price of securities. Their actions are based on reaction to news and information, practically immediately, after news comes to markets.

Figure 3: Stock Price Reaction to News



The Efficient Market Hypothesis

The **efficient market hypothesis** is the idea that security prices reflect all available information. When news comes to markets, millions of highly competitive investors react such that it is difficult or impossible to consistently make gains by trading on news. Thus, stock prices "efficiently" reflect news and information.

There are three types or "forms" of market efficiency, ranging from least information inclusive to most information inclusive:

1. **Weak Form**: security prices reflect all past and publicly known stock price information.

> By weak form efficiency, looking at past stock prices and charts would <u>not</u> help you pick good stocks. Forward looking types of analysis (i.e., ratios and projections) may be useful.

2. **Semistrong** Form: security prices reflect everything in weak form as well as all publicly known financial information about the stock as well as investors' expectations about the future.

> By semistrong form efficiency, looking at past stock prices and charts and/or conducting financial analysis would <u>not</u> help you pick good stocks. Inside information may be useful but is illegal!

3. **Strong Form**: security prices reflect everything in **weak** and **semistrong** form, as well as private information.

> By strong form efficiency, looking at past stock prices and charts and/or conducting financial analysis and/or knowing about positive or negative news about a company before it is publicly known would <u>not</u> help you pick good stocks.

If markets are indeed efficient, there is no reason to believe that some stocks are "too low" or "too high." The price should equal its "true" or **intrinsic** value, with all news "baked in." You would not be able to consistently and repeatedly earn short-term abnormal returns by buying stocks, but you could still be able to earn a positive return by investing in *growth*, particularly with long buy-and-hold strategies.

IN SUMMARY

Equity securities represent an ownership interest in a firm. As such, the owners of the firm are entitled to certain rights, including voting and a share of the profitability through dividends. We'll next consider what an equity security should be worth, by taking the present value of the cash flows it is entitled to receive.

Critical Thinking & Conceptual Questions

1. Describe the differences between debt and equity, and why a firm might issue each to pay for projects and investments.
2. Explain the tax benefit of debt to a firm. Explain double taxation in the context of dividends.
3. Creditors do not have voting rights like equity holders do, but how might they control some of the actions of the firm through protective covenants?
4. What does it mean for a firm to be financed entirely through equity?
5. What is "ownership dilution," and how do preemptive rights associated with common stock protect investors from the effects of dilution?
6. Describe how cumulative voting works, and how it may give more power to smaller voters when voting in corporate elections.
7. How do dual class share structures and staggered (or classified) boards protect existing managers and directors of a firm? All else equal, would you want a firm that you own stock in to have a dual class share structure or staggered board?
8. Does your vote really matter in corporate elections? Who controls the firm and has voting power?
9. Why specifically do banks and financial institutions find it useful to issue preferred stock?
10. Explain how preferred shares and common shares differ when it comes to dividends.
11. Preferred stock is an equity security but is often called a "hybrid" of debt and equity. In what ways does preferred stock exhibit a mix of both debt and equity features?
12. Preferred stockholders *do not vote* in corporate elections. What, then, makes them "preferred"?
13. Why would an investor purchase equity shares if the company doesn't pay dividends?
14. What's the difference between dealers and brokers? How are they compensated?
15. Explain (briefly) the risks that brokers and dealers are subject to.
16. Explain the mechanism behind stock prices "moving." That is, what causes a stock's price to rise or fall throughout the course of the day?
17. Explain the process of trading on the floor of the NYSE and how this process differs from trading on the NASDAQ.
18. Dealers on the floor of the NYSE are known as "designated market makers." Describe their role. What does it mean to be a "market maker"?
19. What might explain why a company experiences trading volume in a day significantly above its normal trading volume?
20. What does the saying "stock prices *reflect* information" mean? What causes stock prices to reflect information?
21. A financial analyst tells you: "It is a waste of time to look at stock price charts. Everyone already has access to those charts and uses them to make trading decisions. What you should do is conduct financial analysis, use ratios, and use forecasts to pick good stocks." What version of market efficiency do you think this analyst believes in?
22. You tell a friend, "My relative works for the US Department of Defense (DoD). They told me that the DoD will announce in one week a $200 billion deal with Lockheed Martin to produce a new fleet of helicopters. Go buy some Lockheed stock today!"

a. Your friend responds: “It doesn’t matter. The stock price already reflects this news even if it wasn’t publicly announced yet.” What type of market efficiency does your friend believe in?
b. You purchased Lockheed stock based on this information prior to the announcement. What are the potential consequences of your actions?
c. You told your friend this information, and they bought Lockheed stock, profiting when the stock price jumped 10% once the news became public. What is a potential consequence of your friend’s actions? What is a potential consequence of *your* actions?

23. How feasible is strong form market efficiency? Do we think that stock prices reflect all private information?
24. Which version of market efficiency is most likely to explain how markets function in practice?
25. Assume that you believe markets are efficient. Is it possible for you to make money by investing in stocks?

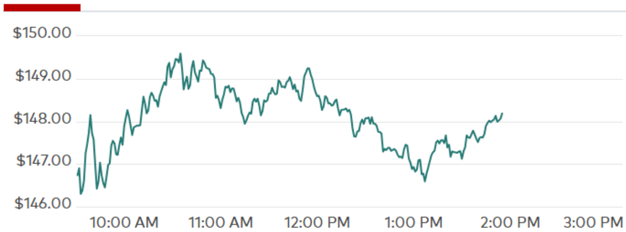
ANALYTICAL QUESTIONS

Below is a stock quote for NVIDIA Corp. from Vanguard. Reference this stock quote to answer the questions that follow. Assume this stock quote is current and that this data reflects NVIDIA's stock as of right now.

Price chart

As of 1:55 PM ET 11/12/2024 - Real-time Quote Market data provided by FactSet.

1 day | 5 day | 1 month | 3 month | 1 year | 5 year



Performance

As of 1:55 PM ET 11/12/2024

1 Week ↑ +6.77%	1 Month ↑ +7.76%
3 Months ↑ +38.67%	6 Months ↑ +61.62%
1 Year ↑ +200.53%	5 Years ↑ +2691.05%

Detailed quote information

As of 1:55 PM ET 11/12/2024

Open $146.78	High $149.65	Low $146.01	Previous close $145.26
Average volume 221.67M	Shares outstanding 24.53B	Ask/Size $148.19/1000	Bid/Size $148.18/100
Market cap 3.56T	EPS $2.15	P/E ratio 68.20	Dividend yield 0.02%

1. What is the total value of NVIDIA's equity?
2. How much would you have to pay for this stock right now?
3. If you had a share, how much could you sell it for right now?
4. Is this stock's price now higher or lower than it ended yesterday?
5. Has the stock risen or fallen from its open today? By how much?
6. How many times has this stock exchanged hands today?
7. Interpret the stock's P/E ratio. What does it mean and how is it calculated?
8. About how much does this company pay in dividends per year? Why might investors be okay with such a low dividend?