Chapter 15

Long-Term Financing: An Introduction

Key Concepts and Skills

- Describe the basic features of common and preferred stock.
- Explain shareholders' rights and voting mechanisms, and corporate governance basics
- Explain the benefits and costs of multiple share classes (assigned readings)
- Explain the different types of bonds and how bond characteristics impact the required yields.

15.1 Features of Common Stock

- Voting rights (Cumulative vs. Straight)
- Proxy voting
- Classes of stock
- Other rights
  - Share proportionally in declared dividends
  - Share proportionally in remaining assets during liquidation
  - Preemptive right – first shot at new stock issue to maintain fractional ownership if desired

Shareholders' Rights

- The right to elect the directors of the corporation by vote constitutes the most important control device of shareholders.
- Directors are elected each year at an annual meeting by a vote of the holders of a majority of shares who are present and entitled to vote.
  - The exact mechanism varies across companies.
- The important difference is whether shares are to be voted cumulatively or straight.

Cumulative versus Straight Voting

- The effect of cumulative voting is to permit minority shareholders' participation/representation in the Board.
  - Under cumulative voting, the total number of votes that each shareholder may cast is determined first. Usually, the number of shares owned or controlled by a shareholder is multiplied by the number of directors to be elected. **Each shareholder can distribute these votes over one or more candidates.**
- Straight voting works like a U.S. political election.
  - Shareholders have as many votes as shares, and each position on the board has its own election.
  - There is a tendency to freeze out minority shareholders.

Cumulative versus Straight Voting

- Imagine a firm with two shareholders: Mr. Smith and Ms. Wesson.
  - Mr. Smith owns 60% of the firm (= 600 shares) and Ms. Wesson 40% (= 400 shares).
  - There are three seats up for election on the board.
- Under straight voting, Mr. Smith gets to pick all three seats (because he owns more shares than Ms. Wesson).
- Under cumulative voting, Ms. Wesson has 1,200 votes (= 400 shares × 3 seats) and Mr. Smith 1,800.
- Ms. Wesson can elect at least one board member by giving all of her votes to one candidate.

Corporate Voting – Another Example

- Mike owns 750 shares of Company ABC.

Currently, the shareholders of ABC are in the process of electing three new directors to the company's board. Mike would like to be elected as one of the new directors.

- How many votes can Mike cast for himself if the firm uses straight voting? If the firm uses cumulative voting?
- Can Mike get himself elected in either situation if there are 2,200 shares of stock outstanding?

Corporate Voting Example Cont.

Straight voting:	
Total votes per position	2200
Less: Mike's votes for himself	750
Votes available from other shareholders	1450

Mike cannot guarantee himself a seat

Cumulative Voting:	
Total Votes for all positions	2200*3=6600
Less: Mike's votes for himself	2250
Votes available from other shareholders	4350

Mike can be assured of being elected

Proxy Voting

- A proxy is the legal grant of authority by a shareholder to someone else to vote his or her shares.
- For convenience, the actual voting in large public corporations is usually done by proxy

Classes of Stock

- When more than one class of stock exists, they are usually created with unequal voting rights.
- Many companies issue ***dual classes*** of common stock. The reason has to do with control of the firm.
- Lease, McConnell, and Mikkelson found the market prices of stocks with superior voting rights to be about 5 percent higher than the prices of otherwise-identical stocks with inferior voting rights.

Dividends

- Unless a dividend is declared by the board of directors of a corporation, it is not a liability of the corporation.
  - A corporation cannot *default* on an undeclared dividend.
- The payment of dividends by the corporation is not a business expense.
  - Therefore, they are not tax-deductible.
- Dividends received by individual shareholders are, for the most part, considered ordinary income by the IRS and are fully taxable.
  - There is an intra-corporate dividend exclusion.

Other Features of Common Stock

- Par versus No-Par Stock
  - The stated value on a stock certificate.
    - Some stocks have no par value.
  - The total par value (the number of shares multiplied by the par value of each share) is sometimes called the *dedicated capital* of the corporation.

Capital Surplus (Paid-in Capital)

- Amounts of directly contributed equity capital in excess of the par value.

Retained Earnings – cumulative undistributed earnings.

Authorized vs. Issued Common Stock

- The articles of incorporation must state the number of shares of common stock the corporation is authorized to issue.
- The board of directors, after a vote of the shareholders, may amend the articles of incorporation to increase the number of shares.
  - Authorizing a large number of shares may worry investors about *dilution* because authorized shares can be issued later with the approval of the board of directors but without a vote of the shareholders

Market Value, Book Value, and Replacement Value of Equity

- Market Value is the price of the stock multiplied by the number of shares outstanding.
  - Also known as Market Capitalization
- Book Value
  - The sum of par value, capital surplus, and accumulated retained earnings is the *common equity* of the firm, usually referred to as the book value of the firm.
- Replacement Value
  - The current cost of replacing the assets of the firm.

Numerical Illustration

- Assume shares of common stock issued one year ago for $5 per share

CS $1 par 500,000 shares outstanding	500,000
Capital Surplus	2,000,000
Retained Earnings	1,000,000
Total Common Equity	3,500,000

- Calculate the Book Value of Equity per share?

Numerical Illustration (cont'd)

- Suppose the firm has net income to common shareholders of $1.7 million. The firm pays cash dividends of $0.5 million.

- Calculate the new book value of equity.
- Given that the stock price is $12.50, calculate the market value of equity.
- Calculate and interpret the market to book ratio.

Preferred Stock

- Represents equity of a corporation, but is different from common stock because it has preference over common stock in the payments of dividends and in liquidation.
- Preferred shares have a stated liquidating value, usually $100 per share.
- Preferred dividends, which are typically fixed, are either cumulative or noncumulative.
- Preferred stocks can be convertible or redeemable.

Features of Preferred Stock

- Dividends
  - Stated (preferred) dividends must be paid before dividends can be paid to common stockholders.
  - Dividends are not a liability of the firm, and preferred dividends can be deferred indefinitely.
  - Most preferred dividends are cumulative – any missed preferred dividends have to be paid before common dividends can be paid.
- Unlike common stock, preferred stock **generally** does not carry voting rights.

Is Preferred Stock Really Debt?

- Preferred stock could be debt in disguise.
  - The preferred shareholders receive a stated dividend.
  - In the event of liquidation, the preferred shareholders are entitled to a fixed claim (that is junior to debt).
- Unlike debt, preferred stock dividends cannot be deducted as interest expense when determining taxable corporate income.
- Most preferred stock in the U.S. is held by corporate investors because they generally get a 50-percent income tax exemption on the dividends that they receive from the issuer.

The Preferred-Stock Puzzle

- There are two offsetting tax effects to consider in evaluating preferred stock:
  1. Dividends are not deducted from corporate income in computing the tax liability of the issuing corporation.
  2. When a corporation buys preferred stock, a portion of the dividends received are exempt from corporate taxation.

- Most agree that (2) does not fully offset (1). Given that preferred stock offers less flexibility to the issuer than common stock, some have argued that preferred stock should not exist.
  - Yet it does exist!

Debt versus Equity

- Debt
  - Not an ownership interest
  - Creditors do not have voting rights
  - Interest is considered a cost of doing business and is tax deductible (up to 30% of EBIT)
  - Creditors have legal recourse if interest or principal payments are missed
  - Excess debt can lead to financial distress and bankruptcy
- Equity
  - Ownership interest
  - Common stockholders vote for the board of directors and other issues
  - Dividends are not considered a cost of doing business and are not tax deductible
  - Dividends are not a liability of the firm, and stockholders have no legal recourse if dividends are not paid
  - An all-equity firm cannot go bankrupt

15.2 The Bond Indenture

- Contract between the company and the bondholders that includes:
  - The basic terms of the bonds
    - Maturity; Coupon; Denomination (par value), etc.
  - The date and total amount of bonds issued
  - A description of property used as security, if applicable
  - Sinking fund provision
    - Facilitates the amortized repayments over the bond's life
  - Call provisions
  - Details of protective covenants

Bond Classifications

- Registered vs. Bearer Forms
- Security
  - Collateral – secured by financial securities
  - Mortgage – secured by real property, normally land or buildings
  - Debentures – unsecured debt
  - Notes – unsecured debt with original maturity less than 10 years
- Seniority – preference in position over other lenders
  - In the event of default, holders of **subordinated** debt must give preference to other specified creditors who are paid first.

Required Yields

- The coupon rate depends on the risk characteristics of the bond when issued.
- Which bonds will have the higher coupon, all else equal?
  - Secured debt versus a debenture
  - Subordinated debenture versus senior debt
  - A bond with a sinking fund versus one without
  - A callable bond versus a non-callable bond

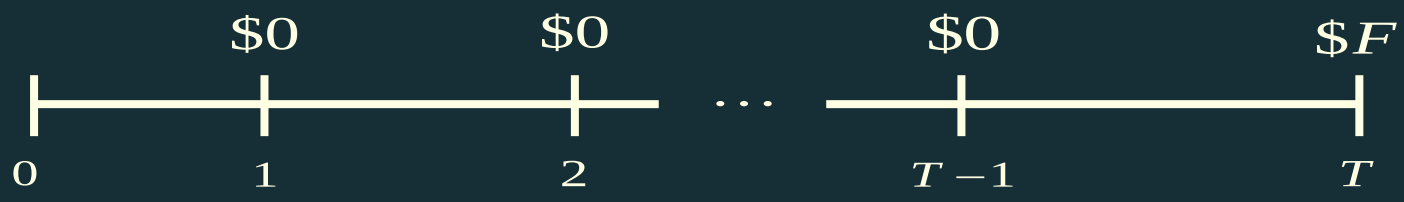
Zero Coupon Bonds

- Make no periodic interest payments (0% coupon rate)
- The entire yield to maturity comes from the difference between the purchase price and the par value in the form of capital gain yield
- Cannot sell for more than par value
- Sometimes called zeroes, deep discount bonds, or original issue discount bonds (OIDs)
- Treasury Bills and principal-only Treasury strips are good examples of zeroes

Pure Discount Bonds

Information needed for valuing pure discount bonds:

- Time to maturity (T) = Maturity date - today's date
- Face value (F)
- Discount rate (r)

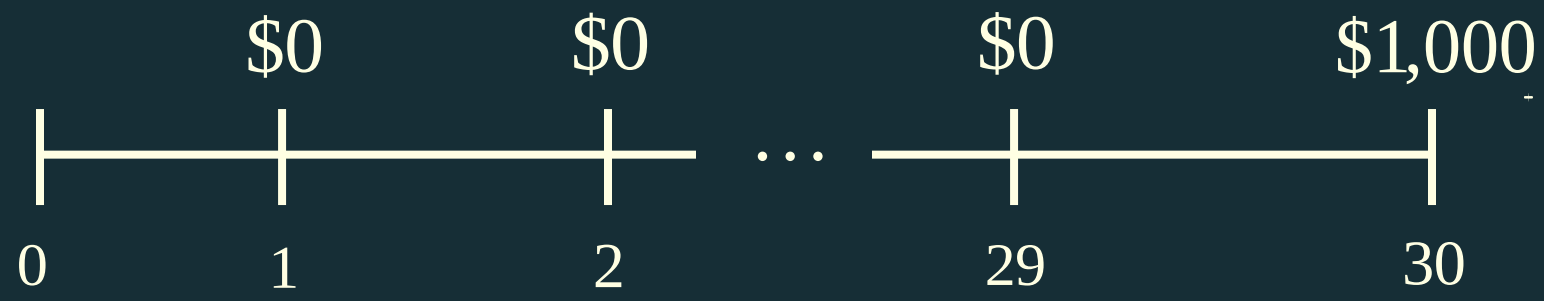


Present value of a pure discount bond at time 0:

$$PV = \frac{F}{(1+r)^T}$$

Pure Discount Bonds: Example

Find the value of a 15-year zero-coupon bond with a $1,000 par value and a YTM of 12%.



$$PV = \frac{F}{(1+r)^T} = \frac{\$1{,}000}{(1.06)^{30}} = \$174.11$$

Pure Discount Bonds: Example Cont.

- If you hold the bond for the entire year, how much in interest income will you have to declare on your tax return?
- The price at the end of one year is:

$$PV = \frac{F}{(1+r)^T} = \frac{\$1{,}000}{(1.06)^{28}} = \$195.63$$

- So, the implied interest, which will be taxable as interest income, is:

- Implied interest = \$195.63 – 174.11 = \$21.52

Coupon Bonds: Example

- Bond price is the present value of the bond's coupons and par value.
- Find the value of a 15-year 8% coupon bond with a $1,000 par value and a YTM of 12%.

$$PV = \frac{F}{(1+r)^T} = \sum_{i=1}^{30} \frac{\$40}{(1+r)^i} + \frac{\$1{,}000}{(1.06)^{30}} = \$724.70$$

- You hold the bond for 1 year. How much in interest income will you have to declare on your tax return?

15.3 Floating Rate Bonds

- Coupon rate floats depending on some index value
- Examples – adjustable rate mortgages and inflation-linked Treasuries
- They have less price risk than fixed rate bonds
  - The coupon floats, so it is less likely to differ substantially from the yield to maturity.
- Coupons may have a “collar” – the rate cannot go above a specified “ceiling” or below a specified “floor.”

Treasury Inflation Protected Securities (TIPS)

- The par value and coupon payments increase in direct proportion to the Consumer Price Index.
  - For example: Consider a newly issued bond with a 3-year maturity, par value of $1,000, and coupon rate of 4% with annual payment. Assume that inflation turns out to be 2%, 3% and 1% in the next 3 years.

Principal and Interest Payments for a Treasury Inflation Protected Security

TABLE 14.1

Principal and interest payments for a Treasury Inflation Protected Security

Time	Inflation in Year Just Ended	Par Value	Coupon Payment	+	Principal Repayment	=	Total Payment
0		$1,000.00					
1	2%	1,020.00	$40.80		$ 0		$ 40.80
2	3	1,050.60	42.02		0		42.02
3	1	1,061.11	42.44		1,061.11		1,103.55

Other Bond Types

- Income bonds
- Convertible bonds
- Put bonds
- There are many other types of provisions that can be added to a bond, and many bonds have several provisions – it is important to recognize how these provisions affect required returns.

Securitized Bonds

- Also called asset-backed bonds
- Bondholders receive interest and principal payments from a specific asset rather than a specific company or government
- Mortgage backed securities are the best-known type of securitized bond, but other asset-backed bonds include
  - Car loans
  - Credit cards

15.4 Bank Loans

- Lines of Credit
  - Provide a maximum amount the bank is willing to lend
  - If guaranteed, referred to as a revolving line of credit
- Syndicated Loans
  - Large money-center banks frequently have more demand for loans than they have supply.
  - Small regional banks are often in the opposite situation.
  - As a result, a lager money center bank may arrange a loan with a firm or country and then sell portions of the loan to a syndicate of other banks.
  - A syndicated loan may be publicly traded.

15.5 International Bonds

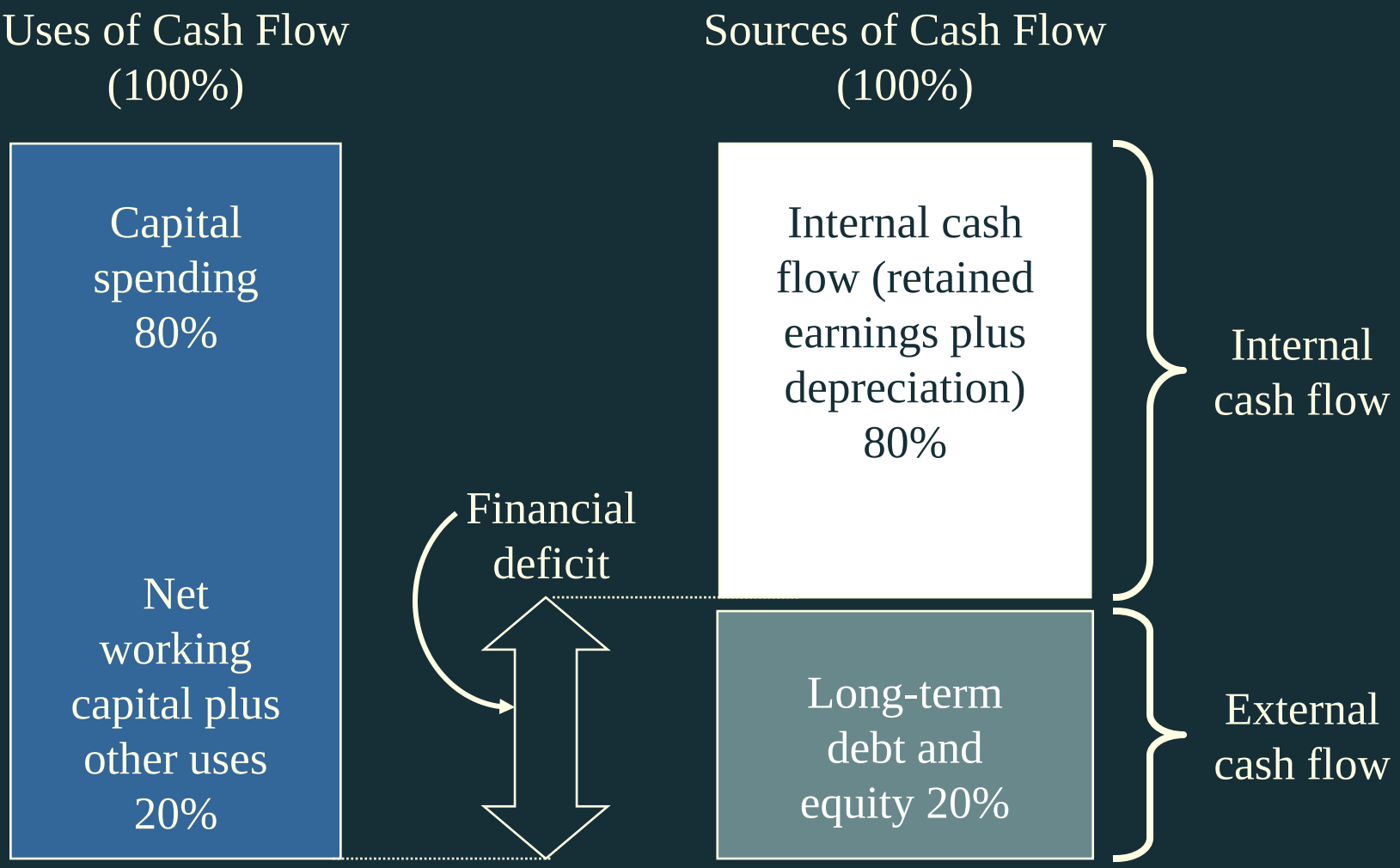
- **Eurobonds**: bonds denominated in a particular currency, usually the issuer's home currency, and issued simultaneously in the bond markets of several countries
- **Foreign bonds**: bonds issued in another nation's capital market (and its currency, i.e., host country's currency) by a foreign borrower
  - Yankee bonds (US); Rembrandt bonds (the Netherlands)
  - Samurai bonds (Japan); Bulldog bonds (Great Britain)
  - dim sum bonds (Chinese yuan-denominated bonds issued in Hong Kong)

15.6 Patterns of Financing

http://www.federalreserve.gov/releases/z1/

- Internally generated cash flow dominates as a source of financing, typically between 70 and 90%.
- Firms usually spend more than they generate internally—the deficit is financed by new issues of debt and equity.
- Net new issues of equity are dwarfed by new sales of debt, consistent with the pecking order hypothesis.
- Firms in other countries rely to a greater extent than U.S. firms on external equity.
  - Note that interest expenses are tax-deductible!

The Long-Term Financial Deficit



15.7 Recent Trends in Capital Structure

- Which are best: book or market values?
  - In general, financial economists prefer market values values since they better reflect current opportunity costs of investment.
  - However, many corporate treasurers may find book values more appealing due to the volatility of market values.
- Whether we use book value, debt ratios for U.S. non-financial firms have been around 50 percent of total financing. With market value, below 40 percent.

Quick Quiz

- Describe the basic characteristics of common and preferred stock.
- Differentiate between cumulative voting and straight voting.
- Identify the rights of shareholders and bondholders.
- How would the following characteristics impact the yield on a bond:
  - Callable
  - Sinking Fund