

Long Term Financing Debt

Sources of financing

- Debt
 - Bank Loans
 - Bonds
- Equity
 - IPOs
 - Right Issues
 - an invitation to existing shareholders to purchase additional shares in the company (Pre-emption rights)
- Preference shares
- Convertible and Warrants

Some fundamental features of debt finance

- Debt is something that has to be repaid
- Debt finance is less expensive than equity
 - The costs of raising the funds
 - The annual return required to attract investors is less
 - Tax deductibility of interest
- Lenders do not, generally, share in the value created by and extraordinarily successful business
- Absence of voting power
- When a company pays interest the tax authorities regard this as a cost of doing business and it can be used to reduce the taxable profit
- Creditors are able to claim some or all of the assets of the firm in the event of non-compliance with the terms of the loan

Debt and vs Equity Capital

- **Debt**

- Different types of debt
- Lower risk
- Lower returns thus cost of financing lower
- Ranks ahead in event of liquidation
- Must be repaid at some future date
- Tax deductibility
- No control or ownership

- **Equity**

- Common shares {unlike preferences shares}
- Risky and thus more expensive
- Last in the queue for payment
- No redemption, dividend optional
- Provides ownership
- Dividends not tax deductible

Tax Deductibility

Preference shares versus bonds

	Company A	Company B
Profits before tax, dividends and interest	200,000	200,000
Interest payable on bonds	80,000	0
Taxable profit	120,000	200,000
Tax payable @ 30% of taxable profit	36,000	60,000
	84,000	140,000
Preference dividend	0	80,000
Available for ordinary shareholders	84,000	60,000

Tax benefit from a debt instrument in this case is:

$$\text{Interest payable} * \text{tax rate} = 80,000 * 30\% = 24,000$$

Corporate Debt

- Private Debt
 - Bank Loans
 - Term Loan
 - Syndicated Bank Loan
 - Revolving Line of Credit
 - Asset-Backed Line of Credit
 - Private Placements

Bank borrowing

- Borrowing from banks is attractive to companies for the following reasons:
 - Administrative and legal costs are low
 - Quick
 - Flexibility
 - Available to small firms

Factors for a firm to consider when borrowing via debt

- Costs
 - Arrangement fee
 - Interest rate commitment can be either fixed or floating
 - If it is floating then the rate will generally be certain percentage points above the banks' base rate or LIBOR
 - Floating-rate borrowings have advantages:
 - If interest rates fall the cost of the loan falls
 - Fixed rates are usually above floating rates
 - Returns on the firm's assets may go up at times of higher interest rates
 - Floating rates have some disadvantages
 - The firm may be caught out by a rise in interest rates
 - Uncertainty about the precise cash outflow

Factors for a bank to consider when lending

- Banks concerned about the borrower's competence and honesty
- 'Asymmetric information'
 - One party in the negotiation is ignorant of, or cannot observe, some of the information which is essential to the contracting and decision-making process
- Companies may overcome bank uncertainty to some degree by providing as much information as possible
- Collateral
- Loan covenants place restrictions on managerial action
- Personal guarantees of directors

Corporate Debt

- Public Debt
 - The Prospectus
 - Indenture
 - A formal contract between a bond issuer and a trust company, which represents the bondholders' interests

Corporate Debt

- Public Debt
 - Unsecured Corporate Debt
 - Notes
 - Debentures
 - Secured Corporate Debt
 - Mortgage Bonds
 - Asset-Backed Bonds

Corporate Debt

Secured Debt

Mortgage bonds (secured with real property)

Asset-backed bonds (secured with any asset)

Unsecured Debt

Notes (original maturity of less than 10 years)

Debentures

Corporate Debt

- Public Debt
 - Seniority
 - A bondholder's priority, in the event of a default, in claiming assets not already securing other debt
 - Subordinated Debenture
 - A debenture issue that has a lower priority claim to the firm's assets than other outstanding debt
 - Tranches
 - Different classes of securities that comprise a single bond issuance

Bonds

- A bond is a long-term contract in which the bondholders lend money to a company
- The company (usually) promises to pay the bond owners a series of interest payments, known as coupons, until the bond matures
- At maturity the bondholder receives a specified principal sum called the par (face or nominal) value of the bond
- These negotiable (that is tradable in a secondary market) instruments come in a variety of forms:
 - Straight, plain vanilla or bullet bonds
 - Coupons every three months
 - Zero coupon bonds
 - Floating-rate or variable-rate bonds

Credit rating

- Debt rating depends on
 - Likelihood of payments of interest and/or capital not being paid (that is, default)
 - The extent to which the lender is protected in the event of a default (the recoverability of the debt)
- ‘Investment grade’, many institutional investors are permitted to invest in investment grade bonds only
- The specific loan is rated rather than the borrower

A comparison of Moody's and Standard & Poor's rating scales

Standard & Poor's	Moody's	Grades	
AAA	Aaa	Prime, maximum safety	Investment grade bonds
AA+	Aa1	High grade, high quality	
AA	Aa2		
AA-	Aa3		
A+	A1	Upper medium	
A	A2		
A-	A3		
BBB+	Baa1	Lower medium	
BBB	Baa2		
BBB-	Baa3		
BB+	Ba1	Speculative	Non-investment grade, high-yield or 'junk' bonds
BB	Ba2		
BB-	Ba3		
B+	B1	Highly speculative	
B	B2		
B-	B3		
CCC+	Caa1	Substantial risk	
CCC	Caa2	In poor standing	
CCC-	Caa3		
CC	Ca	Extremely speculative	
C	C	May be in default	
D		Default	

SIMPLIFIED VIEW OF BOND RATINGS

Description	S&P RATING
Highest quality	AAA
High-medium quality	A
Medium quality	BBB
Low quality (speculative)	B
Poor quality	CCC
Default	D

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20 MINUTE BREAK

Definition of a Bond

- A bond (fixed income security) is a financial obligation of an entity (the issuer) who promises to pay a specified sum of money at specified future dates.
- Key features of a bond include:
 - Coupon rate
 - Face value (or par)
 - Maturity (or term)

The Basic Features of a Bond

- **Maturity** – or term to maturity – is the number of years the debt is outstanding or the number of years remaining prior to the final principal payments.
- The maturity date is the date (i.e. 25/7/2038) that the debt will cease to exist.
 - 1 to 5 year maturity bonds – short-term
 - 5 to 12 years – intermediate
 - Over 12 years – long-term

The Basic Features of a Bond

- **Par Value** – The par value (principal, face value, redemption value, or maturity value) of a bond is the amount that the issuer agrees to repay the bondholder at or by the maturity date.
- Bonds can have any par value.
- Bond prices are quoted as a percentage of par value, with par value equal to 100.

The Basic Features of a Bond

- **Coupon rate** (nominal rate) is the interest rate the interest rate that the issuer agrees to pay each year is called the coupon rate; the coupon is the annual amount of the interest payment and is found by multiplying the par value by the coupon rate.
- The annual amount of the interest payment made to the bondholders during the term of the bond is called the coupon.
- The coupon is equal to the coupon rate times the par value. (For example, 8% coupon rate and a par value of \$1,000 will pay annual interest of \$80).

Bond Covenants

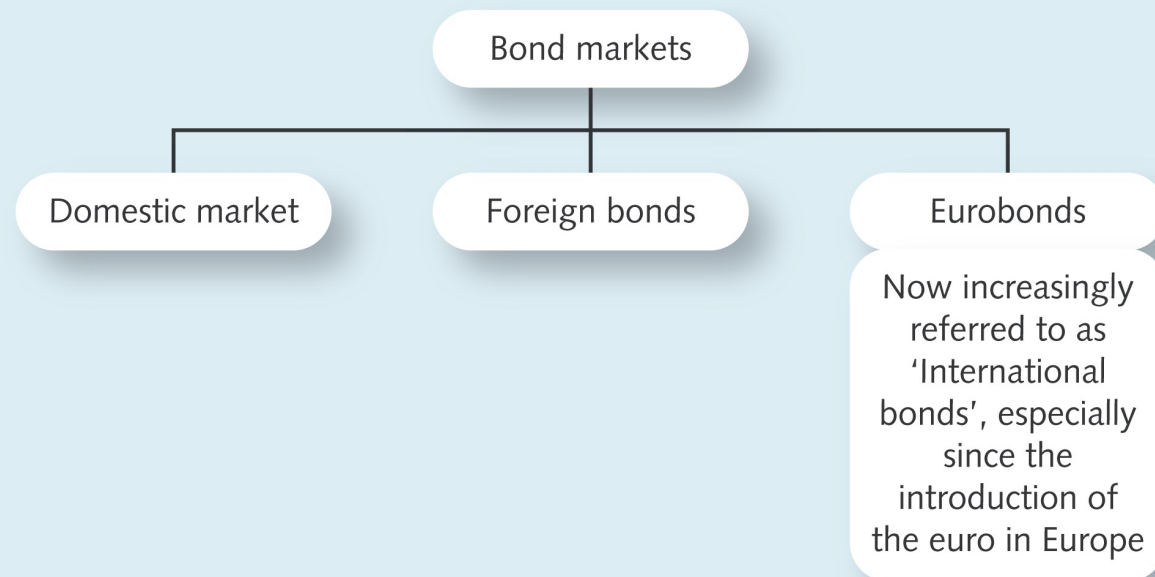
- Covenants
 - Restrictive clauses in a bond contract that limit the issuer from taking actions that may undercut its ability to repay the bonds
- Advantages of Covenants
 - With more covenants, a firm firms can reduce its costs of borrowing.
 - The reduction in the firm's borrowing cost can more than outweigh the cost of the loss of flexibility associated with covenants

Bond Covenants

Restrictions on:	Typical Restrictions
Issuing new debt	New debt must be subordinate to existing debt No new debt unless firm maintains specific leverage or interest coverage ratios
Dividends and share repurchases	Payouts can be made only from earnings generated after the bond issue Payouts can be made only if earnings exceed some threshold
Mergers and acquisitions	Mergers are allowed only if the combined firm has a minimum ratio of net tangible assets to debt
Asset disposition	Maximum amount of assets that can be sold, and/or minimum amount of assets that must be maintained Restrictions on making loans or any other provision of credit
Requiring Maintenance of:	
Accounting measures	Minimum retained earnings, working capital, and/or net assets Maximum leverage ratios

Source: Adapted from the American Bar Association's *Commentaries on Debentures*.

Bond markets



Characteristics of debt securities that cause their prices to vary

1. Credit (default) risk
2. Liquidity
3. Tax Status
4. Term to Maturity

Characteristics of Debt Securities

1. Credit (default) risk

- Securities with a higher degree of risk have to offer higher yields to be chosen
- Credit risk is especially relevant for longer-term securities
- Investors must consider the creditworthiness of the security issuer:
 - Can use bond **ratings** of rating agencies
 - Higher the rating, the lower the perceived credit risk
 - Ratings **can change over time**
 - **economic conditions** change
 - Business itself changes
 - Ratings for different bond issues by the same issuer can vary

Characteristics of Debt Securities

1. Credit (default) risk

Rating agencies

- Moody's Investors Services, Standard and Poor's Corporation, Fitch Ratings, DBRS, etc
- Agencies use **different methods** to assess the creditworthiness of firms and governments
 - A particular bond issue could have **different ratings** from each agency
 - Differences generally are usually small
- Some financial institutions **required** to invest only in **investment-grade bonds**
 - rated Baa or higher (Moody's), BBB or higher (S&P)
 - And non investment grade?

Characteristics of Debt Securities

1. Credit (default) risk

- Shifts in credit risk premiums
 - Risk premium corresponding to a particular bond rating can change over time
- Accuracy of credit ratings
 - Credit ratings serve as reasonable **indicators of the likelihood of default.**
 - Can be used to arrive at *probability of default* (PD)
 - However, credit rating agencies **do not always detect financial problems** of firms

Characteristics of Debt Securities

2. Liquidity

- **Liquid** securities can be easily converted to cash without a loss in value
 - Short-maturity securities with an active secondary market are liquid
- Securities with **lower liquidity** have to offer a **higher yield** to be preferred
- Low liquidity, low returns, fixed income annuities have become very **popular in recessions**
- Fixed Income Securities sales increased by 74% from Jan-March 2009 in the US market. Why is that?

Characteristics of Debt Securities (cont'd)

3. Tax status

- Investors are more concerned with **after-tax income** than before-tax income
 - Taxable securities have to offer a higher before-tax yield to be preferred
- The after-tax yield is equal to:

$$Y_{at} = Y_{bt}(1 - T)$$

Characteristics of Debt Securities

3. Tax status

- Computing the equivalent before-tax yield
 - The before-tax yield necessary to match the after-tax yield on a tax-exempt security is:

$$Y_{bt} = \frac{Y_{at}}{(1 - T)}$$

Example: Computing the Equivalent Before-Tax Yield

Assume a firm in the **30 percent tax** bracket is aware of a tax-exempt security that pays a **yield of 9 percent**. To match this after-tax yield, taxable securities (with similar maturity and risk) must offer a before-tax yield of:

$$Y_{bt} (1 - T) = Y_{at}$$

$$Y_{bt} = \frac{Y_{at}}{(1 - T)} = \frac{9\%}{(1 - .3)} = 12.86\%$$

Characteristics of Debt Securities

4. Term to maturity

– Term structure of interest rates

- defines relationship between maturity and annualized yield

– Special provisions

- A **call feature** allows the issuer of bonds to buy the bonds back before maturity

- The yield on callable bonds should be higher than on non callable bonds

- A **convertibility clause** allows investors to convert the bond into a specified number of common stock shares

- The yield on convertible bonds is lower than on nonconvertible bonds

Corporate Debt

- Public Debt
 - Domestic Bonds
 - Issued by a local entity and traded in a local market, but purchased by foreigners
 - Denominated in the local currency
 - Foreign Bonds
 - Issued by a foreign company in a local market and are intended for local investors
 - Denominated in the local currency
 - Yankee bonds
 - Foreign bonds issued in the United States

Corporate Debt

- Public Debt
 - Eurobonds
 - International bonds that are not denominated in the local currency of the country in which they are issued
 - Global Bonds
 - Combines the features of domestic, foreign, and Eurobonds, and are offered for sale in several different markets simultaneously
 - Can be offered for sale in the same currency as the country of issuance

International Sources of Debt

- Eurobonds are bonds sold outside the jurisdiction of the country of the currency in which the bond is denominated.
- Foreign bond is a bond denominated in a currency of the country where it is issued when the issuer is a non-resident.
 - e.g. in Japan bonds issued by non-Japanese companies denominated in yen are foreign bonds.
 - The interest (coupons) and capital (principal) payments will be in yen.

Advantages and drawbacks of Eurobonds as a source of finance for corporations

Advantage

- 1 Large loans for long periods are available.
- 2 Often cheaper than domestic bonds.
- 3 Ability to hedge interest rate and exchange-rate risk.
- 4 The limitations placed on management are less than those for a secure bond.
- 5 The lower level of regulation allows greater innovation and tailor-made financial instruments.

Drawback

- 1 Only for the largest companies – minimum realistic issue size is about £50m.
- 2 Because interest and capital are paid in a foreign currency there is a risk.
- 3 The secondary market can be illiquid.

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