

Corporate Finance

Module revision

WEEK ONE

What is Finance?

Finance is the study of how people and businesses evaluate investments and raise capital to fund them.

Knowledge of financial tools is critical to making good decisions in both corporate world and personal lives.

Basic Areas Of Finance

- Corporate finance
- Investments
- Financial institutions
- International finance

Investments

- Work with financial assets such as stocks and bonds
- Value of financial assets, risk versus return, and asset allocation
- Job opportunities
 - Stockbroker or financial advisor
 - Portfolio manager
 - Security analyst

Financial Institutions

- Companies that specialize in financial matters
 - Banks – commercial and investment, credit unions, savings and loans
 - Insurance companies
 - Brokerage firms
- Job opportunities

International Finance

- This is an area of specialization within each of the areas discussed so far
- It may allow you to work in other countries or at least travel on a regular basis
- Need to be familiar with exchange rates and political risk
- Need to understand the customs of other countries; speaking a foreign language fluently is also helpful

Business Finance

- Some important questions that are answered using finance
 - What long-term investments should the firm take on?
 - Where will we get the long-term financing to pay for the investments?
 - How will we manage the everyday financial activities of the firm?

Financial Management Decisions

- Capital budgeting
 - What long-term investments or projects should the business take on?
- Capital structure
 - How should we pay for our assets?
 - Should we use debt or equity?
- Working capital management
 - How do we manage the day-to-day finances of the firm?

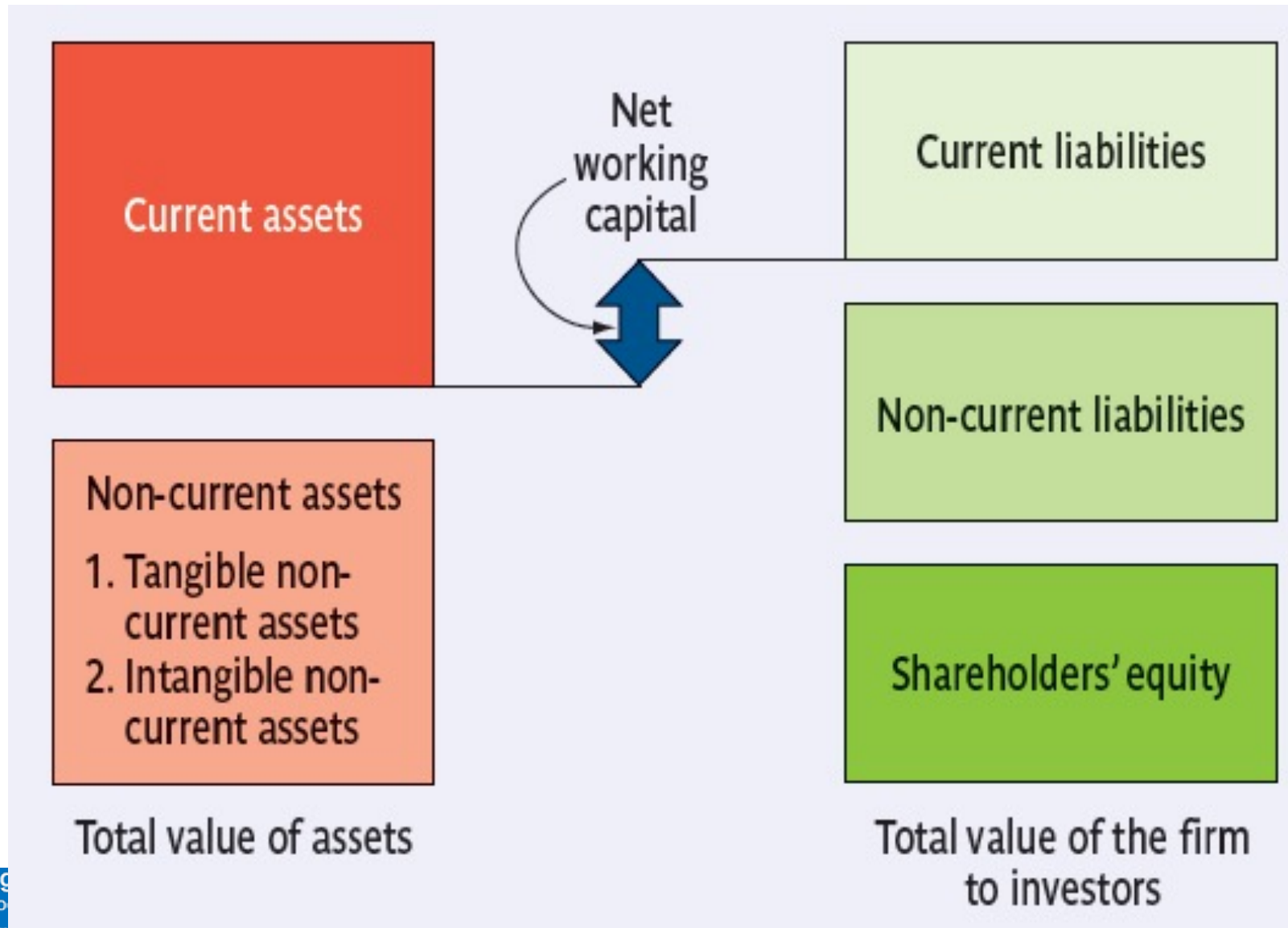
Goal Of Financial Management

- What should be the goal of a corporation?
 - Maximize profit?
 - Minimize costs?
 - Maximize market share?
 - Maximize the current value of the company's stock?
 - Provide for non investor stakeholders?
- Does this mean we should do anything and everything to maximize owner wealth?

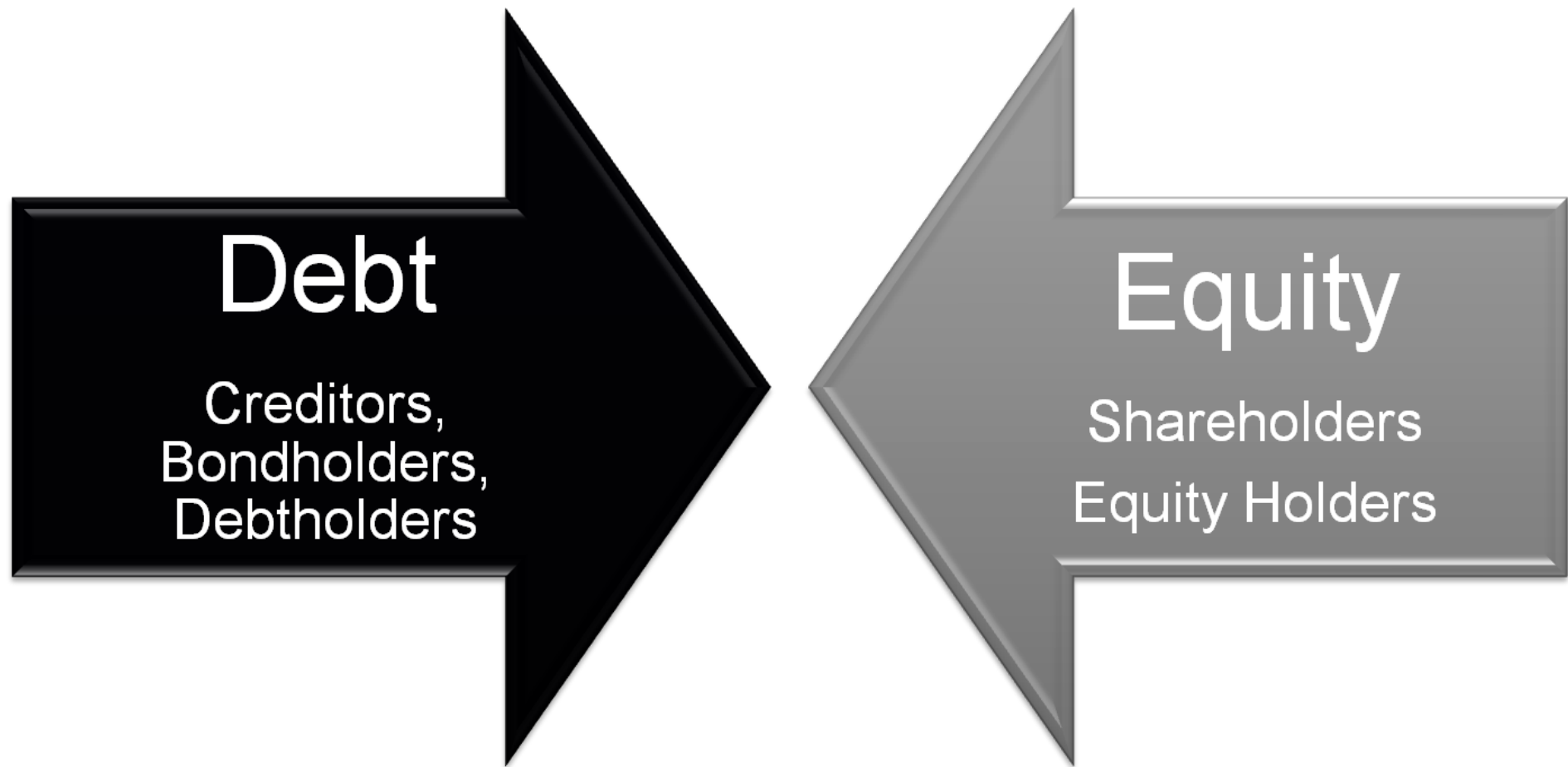
Three Basic Questions Addressed by the Study of Finance:

1. What long-term investments should the firm undertake? (capital budgeting decision)
2. How should the firm raise money to fund these investments? (capital structure decision)
3. How can the firm best manage its cash flows as they arise in its day-to-day operations? (working capital management)

The Balance Sheet Model of the Firm



Capital Structure



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

The Financial Manager

Responsible for
Investment
Decisions

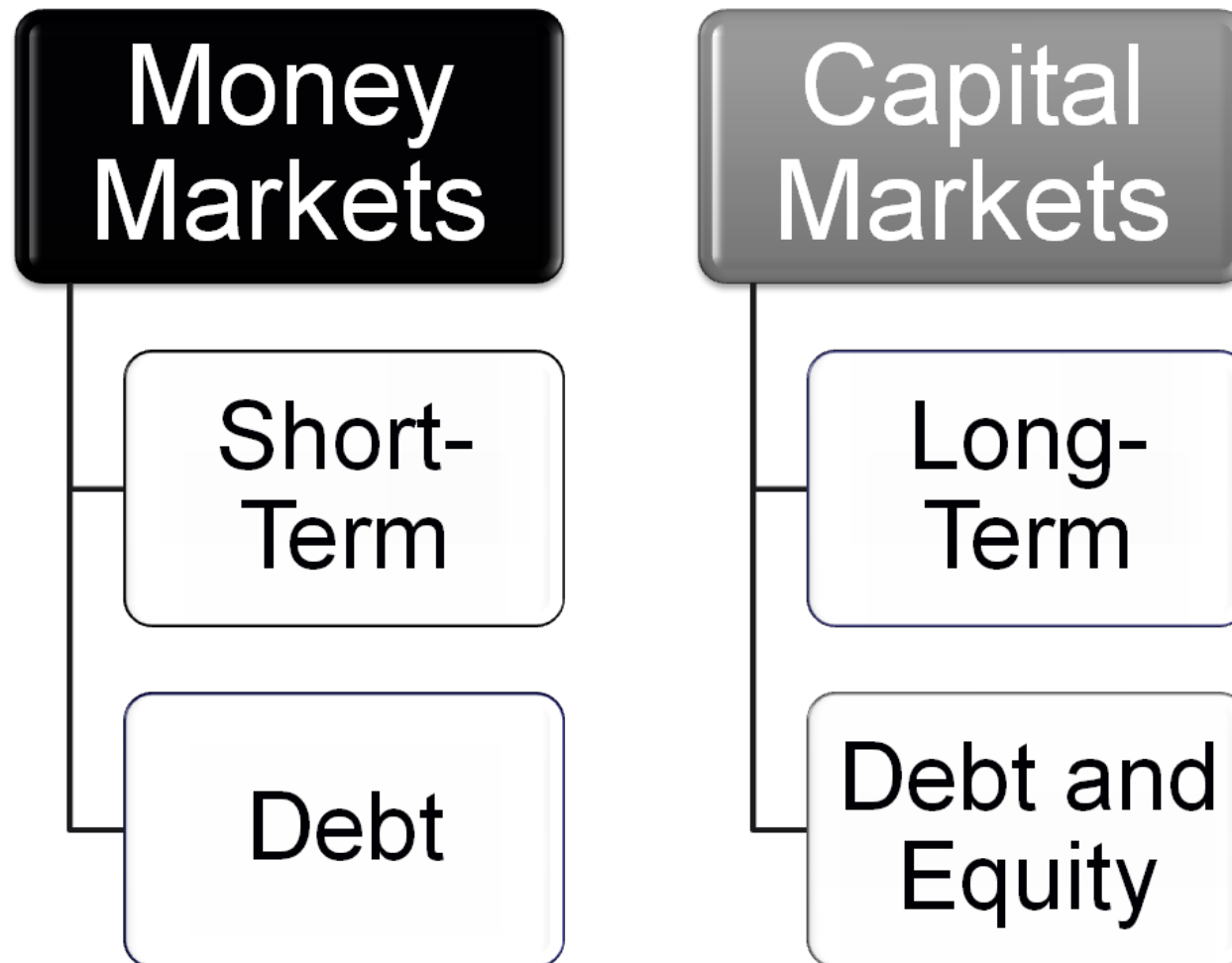
Responsible for
Financing
Decisions

Responsible for
Short-Term
Financial
Planning

Oversee
Accounting and
Audit Function
in Firm

Ensure the
Financial
Welfare of the
Firm

Financial Markets



How Financial Markets Work?

Primary Markets

Securities are sold to investors

Money that is raised goes to issuing firm

First share issue is called an Initial Public Offering

Second Share Issue is called a seasoned offering

Secondary Markets

Investors trade securities with each other

Money that is raised goes to seller of securities

Share Prices

Time Value of Money

- Business or financial investments extend over long periods of time, so we must recognise the time value of money.
- Investments that promise returns earlier in time are preferable to those that promise returns later in time.

WEEK TWO

Financial Markets

- What are Financial markets?
- Mechanisms where funds are transferred
 - from a surplus of liquidity
 - To a deficit of liquidity
- But who is holding the liquidity?
 - people and firms

The Bond Market and Interest Rates

- A **security** (financial instrument) is a claim
 - on the issuer's future income or assets
- A **bond** is a debt security
 - promises to make payments periodically for a specified period of time
- An **interest rate** is the cost of borrowing
 - or the price paid for the rental of funds

The Stock Market

- **Common stock** represents a share of ownership in a corporation.
- A **share of stock** is a claim on the residual earnings and assets of the corporation.

Background on Stocks

- **A stock is a certificate representing partial ownership in a corporation**
- **Stock is issued by firms to obtain long-term funds**
- **Owners of stock:**
 - Can benefit from the growth in the value of the firm
 - Are susceptible to large losses
- **Individuals and financial institutions are common purchasers of stock**
- **Private Equity**
- **Public Equity**

Factors impacting the Price of Common Stock

- GDP
- CPI
- Currency exchange rates
- Interest (risk free) rates

Computing the Price of Common Stock

- Valuing common stock
 - Similar to valuing debt securities
 - **determine future cash flows & discount**
 - at an appropriate discount rate
- Price Earnings Method
- Dividend Discount Model
- Free Cash Flow Model

Money and Interest Rates

- Interest rates are the price of money
- Prior to 1980, the rate of money growth and the interest rate on long-term Treasury bonds were closely tied
- Since then, the relationship is less clear, but the rate of money growth is still an important determinant of interest rates

Money, Business Cycles, and Inflation

- Evidence suggests that money plays an important role in generating business cycles.
- The rate of money growth has declined before almost every recession, indicating that changes in money might be a driving force behind business cycle fluctuations

Money, Business Cycles, and Inflation

- The aggregate price level is the average price of goods and services in an economy
- A continual rise in the price level (inflation) affects all economic players
- Data show a connection between the money supply and the price level

Inflation

- Is inflation good or bad?
- Producer and consumer price indexes
 - The **PPI** measures prices at the wholesale level
 - The **CPI** measures prices on the retail level
 - Both indexes are used to forecast inflation
 - Agricultural and housing price indexes also exist
- Other indicators
 - Wages, oil prices, transportation costs, the price of gold, indicators of economic growth

The Foreign Exchange Market

- The **foreign exchange market**: where funds are converted from one currency into another
- The **foreign exchange rate** is the price of one currency in terms of another currency.
- The foreign exchange market determines the foreign exchange rate.

WEEK THREE

GLOBAL FINANCIAL SYSTEM

Markets

- Capital markets distinct from product markets
- Capital markets
 - Provides introductions for savers and borrowers
 - Channel funds from surplus to deficit
 - Said to provide liquidity
 - Exist in many forms
 - That may overlap

GLOBAL FINANCIAL SYSTEM

Flow of funds

- Via markets money move from surplus to deficit
- Private sector *produces*
- Public sector *consumes*
- Transfer of money can take multiple forms
 - Not always cash
 - Can be near cash equivalents

GLOBAL FINANCIAL SYSTEM

Participants

- Individuals
 - Provides money
 - Institutional investors
 - Pension funds, insurance companies, hedge funds
- Organisations
 - Governments
 - Private

VARIOUS MARKETS

Money markets

- Source short / medium term finance
- Overnight to seven years
- Where? Central banks, Clearing banks

Foreign Exchange markets

- Currency conversion / time transformation functions
- Spot to long term
- Where? OTC, some derivatives on exchanges

VARIOUS MARKETS

Debt markets

- Source short to long medium term finance
- One month to thirty plus years
- Where? OTC, some exchange

Equity markets

- Source of long term finance
- Undated
- Where? Mostly exchange traded, some OTC

VARIOUS MARKETS

Credit markets

- Don't directly provide finance
- Risk transference function
- Where? OTC

Volatility markets

- Again, finance is NOT directly provided
- Speculation & risk transference
- Where? Exchange traded

FOREIGN EXCHANGE MARKETS

- WHAT IS FX TRADING
- Trading in currency pairs
- OTC
- Typically done 24x7
- Mostly by banks in financial centres
- Largest, most liquid market in world

FOREIGN EXCHANGE MARKETS

- Spot
 - settles in two business days
- Forwards
 - OTC, O/N to about ten years, highly customised
- Futures
 - standardised products
- Options
 - either on spot or futures
- Swaps
 - OTC, O/N to decades
- ETF

FOREIGN EXCHANGE MARKETS

CHARACTERISTICS OF THE MARKET

- Decentralised
- Counterparty to counterparty
- Still physical location counts (2007)
 - London - 34% of global
 - New York - 16%
 - Tokyo - 6.0%
- Overall about \$2T derivative trading

FOREIGN EXCHANGE MARKETS

PARTICIPANTS IN THE MARKET

- Interbank
 - Commercial & Investment banks
- Central Banks
 - Try as they might ...
- Commercial Companies
 - *Relatively* small but important component of order flow
- Hedge Funds
 - Drift in and out – big impact
- Others
 - Investment Managers, Retail FX Brokers, Money xfer

FOREIGN EXCHANGE MARKETS

HOW ARE EXCHAGNE RATES DETERMINED?

- Exchange rates frequently deviate
- Two methods are actively used to forecast exchange rates:
 - economic analysis
 - technical analysis
- Central banks are active in this market

FOREIGN EXCHANGE MARKETS

KEY FACTORS IMPACTING RATES

- Interest rates (spot & forward)
- Inflation expectations
- Balance of payments
- Economic Policy
- Local Political factors
 - market psychology

FIXED INCOME MARKETS

What is Fixed Income?

Investments with known returns over a specific period of time

- A way for entities to raise money
- At *relatively low* rates of interest
- Promise to pay
- Best viewed as a package of cash flows

FIXED INCOME MARKETS

WHO IS ACTIVE IN THIS MARKET?

- Best to understand their needs
 - low risk
 - predictable returns
- Retirees
- Institutional investors
 - pension funds
 - insurance companies
- Others?
 - Banks
 - Hedge funds

FIXED INCOME MARKETS

WHO ISSUES FIXED INCOME ASSETS?

Two distinct groups

- Governments
 - important source of funding
 - said to be "risk free"
- Businesses
 - both listed and private
 - relatively low cost of funds
 - offer tax shields [not R_d but $R_d(1-T_c)$]
 - impacts gearing of firm

FIXED INCOME MARKETS

MATURITY OF GOVERNMENT SECURITIES (US)

- T-bills – 1W to 12M
- notes - over 12M to 10Y
- bonds - 30Y
- Others
 - Zeroes - zero coupon bonds
 - TIPS - US Treasury Inflation Protected Securities

FIXED INCOME MARKETS

CORPORATES (US)

- commercial paper - less than 1Y
- otherwise lots of different issues
 - maturities out to 100 years
 - unsecured - backed by faith of issuer
 - secured - tied to collateral
 - convertibles - allows holder to convert to equity
 - too many variants to list

WEEK FOUR

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

Characteristics of debt securities that cause their prices to vary

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

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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