



MBAF 509: GLOBAL FINANCIAL MARKETS
UNIT 1: INTRODUCTION

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Introduction: Global Financial Markets

Unit 1

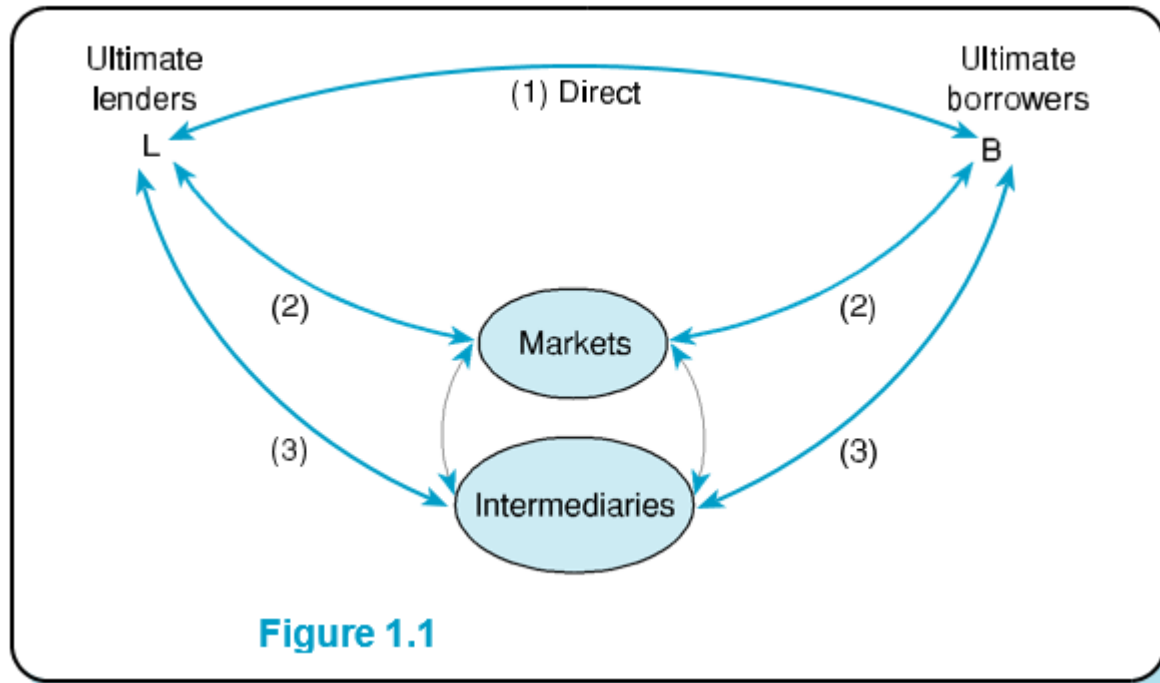
The purpose of this chapter is to provide an introduction to financial markets, the attributes of financial assets, and the link between financial markets and the real economy.

INTRODUCTION

- The allocation of economic resources is the outcome of many private decisions
- Prices are the signals operating in a market economy that direct economic resources to their best use.
- Markets economy can be broadly divided into two types:
 - 1) **Product markets:** the markets for products (manufactured goods and services)
 - 2) **Factor markets:** the market for the factors of production (labor and capital)
- We focus on one part of the factor markets, the market for financial assets, or more simply, the **financial market**.

FINANCIAL SYSTEM

- *Financial system*: a network of institutions, markets, and intermediaries that facilitate the transfer of funds between savers and borrowers.



- Three components: *Financial market*, *Financial institutions*, and *financial market infrastructure*

FINANCIAL SYSTEM

Three components:

- *Financial market*: These are platforms where buyers and sellers come together to exchange financial assets, such as stocks, bonds, currencies, and commodities. One of the three major components of the financial system.
- *Financial institutions*: are the entities that provide financial services to other entities in the financial system.
- *Financial market infrastructure*: is the component of the financial system that involves processing the payments of **financial assets**.

FINANCIAL ASSETS

- An **asset** is an entity that has economic value in an exchange. Assets can be classified as *tangible* or *intangible*.
- A **tangible asset** is one whose value depends on particular physical properties—examples are buildings, land, or machinery.
- **Intangible assets**, by contrast, represent legal claims to some future benefit. Their value bears no relation to the form, physical or otherwise, in which these claims are recorded.
- A **financial asset** is an intangible asset whose value is derived from a contractual claim, such as bank deposits, loans, bonds, and stocks.
 - **Issuer:** the party that has agreed to make future cash payments
 - **Investor:** the owner of the financial asset is referred to as the investor.

FINANCIAL ASSETS: DEBT VS. EQUITY INSTRUMENTS

- *The claim that the holder of a financial asset has may be either a fixed amount or a varying, or a residual, amount
- **Debt instruments:** such as bonds and mortgages, specify *fixed payments*, including interest, to the investor.
- **Equity instruments:** An equity instrument obligates the issuer to pay the holder an amount based on earnings (*residual claim*). Common stocks are securities that have a claim on the earnings and assets of a corporation (Mishkin 1998).
- Some securities fall into both categories*. For example, **preferred stock, convertible bonds**
- *Why are different types of financial instruments traded in the market?*

PRICE OF A FINANCIAL ASSETS AND RISK

- The value of any asset is simply the present value of all the expected cash flows of the asset over its life.

$$PV = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} + \dots + \frac{CF_n}{(1+r)^n} = \sum_{t=1}^n \frac{CF_t}{(1+r)^t} = I \left[\frac{1 - \frac{1}{(1+r)^n}}{r} \right]$$

- Where,
- PV = Present value of the asset
- CF= Cash flow
- r = discount rate (required rate of return)
- n = time to maturity

- For steady cash flow $PV = I \left[\frac{1 - \frac{1}{(1+r)^n}}{r} \right]$
 $PV = I \times (PVIFA_{r,n})$

I = coupon rate

- Pricing of fixed income securities: Bond

For value of bond $V_0 = I \left[\frac{1 - \frac{1}{(1+r)^n}}{r} \right] + \frac{M}{(1+r)^n}$

M = Maturity value

$$V_0 = I \times (PVIFA_{r,n}) + M \times (PVIF_{r,n})$$

PRICE OF A FINANCIAL ASSETS AND RISK

- **Problem 1:** Assume that a financial asset is expected to generate Rs, 100,000 each year for next 3 years. If the required rate of return (r) is 10%, what should be the value of this investment opportunity? (248805.2)
- **Problem 2:** Suppose, Venus Company (VC) has just issued 10 percent coupon with Rs. 1,000 par value bond. It has 15 years maturity. An investor who wishes to purchase the company's bond has 15 percent required rate of return. What should be the value of bond for the investor? (Rs. 707.64)

Yield to maturity (YTM): represents the rate of return investors earn if they buy the bond at a specific price and hold it until maturity. *In other words, it is the interest rate that makes the present value of a bond's payments equal to its price.*

$$\text{Approximate YTM} = \frac{I + \frac{M-P}{n}}{\frac{M+2P}{3}}$$

Where, I = Coupon interest M = Maturity value
P = Bond Price current
n = Time to maturity

PRICE OF A FINANCIAL ASSETS AND RISK

eg. 1. Calculate the promised interest rate (YTM) for a bond purchased today at a price of \$950 and promising an interest payment of \$100 each over the next three years, when it will be redeemed by the bond's issuer for \$1,000.

Soln:

$$\$950 = \frac{\$100}{(1+YTM)^1} + \frac{\$100}{(1+YTM)^2} + \frac{\$100}{(1+YTM)^3} + \frac{\$1000}{(1+YTM)^3}$$

-Trial method: Price at a lower rate (12%) = \$952.2

-Price at a higher rate (14%) = \$907.20

-Price difference = \$45

-Difference between price at a lower rate and actual price (12%) = \$952.20 - \$950 = \$2.20

-Then, the appropriate YTM for this bond must be: $LR + \frac{PV_{LR} - PV_{TR}}{PV_{LR} - PV_{HR}} (HR - LR)$

-YTM = 12% + (\$2.20/\$45) × 2% = 12.10%

-To reduce the number of trials approximate YTM can be computed;

$$\text{Approximate YTM} = \frac{I + \frac{M-P}{n}}{\frac{M+2P}{3}}$$

Problem 3. Suppose Global Bank has 10 percent coupon bonds on the market with 10 years to maturity with a maturity value of Rs. 1,000. The bonds make annual interest payments and currently sell for 90 percent of the par value. What is the yield to maturity on the bond? (11.76%)

PRICE OF A FINANCIAL ASSETS AND RISK

- Examples of financial assets:
 - a loan by Bank of America (investor) to an individual (borrower) to purchase a car
 - a bond issued by the U.S. Dept. of the Treasury
 - a bond issued by AT&T (non govt. corporation)
 - a bond issued by the City of New York (municipal government)
 - a bond issued by the German government
 - a share of common stock issued by Apple Inc.
 - a share of common stock issued by Honda Motor Company
- *Financial assets are exposed to various types of risks, mainly:*
 - **Inflation risk** or *purchasing power risk* (eg. U.S. Treasury bonds)
 - **Credit risk** or *default risk* (a loan of Bank of America, ...)
 - **Foreign exchange risk** or *currency risk* (cash flows not denominated in US dollars)

FINANCIAL ASSETS VS. TANGIBLE ASSETS

- Financial assets and tangible assets can be differentiated from the following features:
 - **Purpose:** Real assets produce goods and services whereas financial assets define the allocation of income or wealth among investors.
 - **Presence in the Balance sheet:** Real assets always appear on the asset side of the balance sheet, while financial assets may appear on both sides of the balance sheet.
 - **Depreciation:** The financial assets do not depreciate because they do not wear out like physical goods.
 - **Low transportation and storage cost:** Fin. assets are generally represented by a piece of paper or by information stored in a computer file, they have little or no value as a commodity.
 - **Divisibility:** The financial assets are easily divisible.

FINANCIAL ASSETS VS. TANGIBLE ASSETS

- **Marketability:** Marketability or liquidity reflects the feasibility of converting an asset into cash swiftly and without significant impact on the price.
- **Convertibility:** Fin. assets could be converted within one class (eg. When a bond is converted into another bond)
- **Reversibility:** It refers to the cost of investing on financial assets and then getting out of it and back into cash again (eg. Bank deposit)
- **The holding period:** When investors buy a real asset, normally they plan to hold it for a relatively long period. The holding period of financial assets could be much shorter than other real assets.
- **Information availability:** Information regarding financial assets is easily available.

FINANCIAL ASSETS VS. TANGIBLE ASSETS

- Financial assets and tangible assets are linked.
- Common characteristic: Both are expected to generate future cash flow for their owner.
- For eg., suppose a U.S. airline purchases a fleet of aircraft for \$500 million (financed by a debt instrument). With its purchase of the aircraft, the airline expects to realize cash flow from passenger travel, which will be used to service the payments on the debt instrument.

THE ROLE OF FINANCIAL ASSETS

- The principal economic functions of financial assets are:
 - 1) **Resource mobilization** – to transfer funds from surplus to deficit to invest in tangible assets (eg. Mortgage lending to home buyers);
 - 2) **Risk management**- to transfer funds in such a way as to redistribute the unavoidable risk associated with the cash flow generated by tangible assets
- Illustrated eg. of Richie ($\$1.2m = 2+8+2$), Amanda, Hasan, pp.8

FINANCIAL MARKETS

- A financial market is a market where financial assets are exchanged or traded.
- It refers to a mechanism that brings together buyers and sellers of financial assets in order to facilitate trading.
 - **spot market** or cash market: If the delivery of the actual asset occurs immediately
 - **future market** or forward market: if the delivery occurs in the future

Classification of Financial Markets

- Characterization depends on the properties of the financial claims being traded and the needs of the different market participants.

CLASSIFICATION OF FINANCIAL MARKETS

Classification by nature of claim:

- Debt market
- Equity market

Classification by maturity of claim:

- Money market
- Capital market

Classification by seasoning of claim:

- Primary market
- Secondary market

Classification by immediate delivery or future delivery:

- Cash (spot) market
- Derivatives market

Classification by organizational structure:

- Auction market
- Over-the-counter market
- Intermediated market

THE ROLE OF FINANCIAL MARKETS

- Financial markets provide the following economic functions:
 - 1. Price discovery process:** The interactions of buyers and sellers in a financial market determine the price of the traded asset. This helps to determine the required return on a FA that signals how the funds in the economy should be allocated among financial assets.
 - 2. Liquidity:** Financial markets provide an opportunity to convert a FA into cash at close to the real value of the asset.
 - 3. Reduced transaction costs:** There are two costs associated with transacting:
 - a) Search costs:** represent *explicit* costs, such as the money spent to advertise..., and *implicit* costs, such as the value of time spent in locating a counterparty.
 - b) Information costs:** are costs associated with assessing the investment merits of a FA.
- The presence of well developed and organized financial market reduces such costs.

GLOBALIZATION OF FINANCIAL MARKETS

- Globalization means the integration of financial markets throughout the world. It facilitates the entities to raise the needed funds even outside of the domestic market. The factors that have led to the integration of financial markets are:
 1. Deregulation or liberalization
 2. Technological advancement
 3. Increased institutionalization

CLASSIFICATION OF GLOBAL FINANCIAL MARKETS

- Global financial markets can be classified as internal or external.
- **Internal:** The internal market is also called the national market. It is composed of two parts: the *domestic market* and the *foreign market*.

GLOBALIZATION OF FINANCIAL MARKETS

- The domestic market, is the market where the issuers domiciled in a country issue the securities and are traded subsequently.
- The foreign market is the market where the issuers not domiciled in the country issue the securities and are sold and traded. In this case, the rules and regulations regarding the issuance and trading of such securities will be as imposed by the regulatory authority where the security is issued.
- The nicknames used for various foreign markets are:
 - United States - Yankee market
 - Japan- Samurai market
 - Spain- Matador market
 - United Kingdom (UK)- Bulldog market
 - Netherlands- Rembrandt market

GLOBALIZATION OF FINANCIAL MARKETS

- **External:** the market, also referred to as the international market, where a non-domiciled entity issues securities *outside the jurisdiction of any country*.
 - The basic feature of this market is; at issuance, securities are offered simultaneously to investors in a number of countries.
 - The external market is also known as the offshore market or the Euromarket.

Developed, Emerging and Frontier Markets

- Classification is based on the development of their:
 1. Economies: per capita income & potential growth
 2. Capital markets: the size of market capitalization, level of liquidity, and the development of their supporting regulatory and legal bodies.
- Developed markets: have higher levels of per capita income but lower potential growth. eg. countries mostly in North America, Western Europe, and Australasia, including the U.S.A., Canada, Germany, the U.K., Australia, New Zealand, & Japan.
- Emerging (developing) markets: have some of the characteristics of a developed market but not all of them. eg. Brazil, Russia, India, and China (as a group, popularly referred to as BRIC); Portugal, Ireland, Italy, Greece, Spain (PIIGS); and other countries.
- Frontier or pre-emerging markets: are too small and undeveloped to be considered emerging markets.

Financial Markets and The Real Economy

- Financial markets: critical role in the efficient allocation of capital.
- Market economy: (1) the real economy & (2) the paper economy
 - 1) real economy refers to markets where products and services are produced and their prices are determined.
 - 2) paper economy refers to markets where financial assets are traded (i.e., financial markets), and the prices of these assets are determined.
- Linkage:
 - Enables capital formation.
 - Interest, inflation, and FX rates affect economic growth, employment, and pricing.
 - Financial regulations and policies can also affect investors and FIs, influencing the allocation of resources in the real economy.

Financial Markets and The Real Economy

- Financial markets can act as indicators of the real economy's health. eg.
 - Great Depression (1929-1939): Black Monday (29 Oct. 1929), 'The stock market crashed' leads to the great depression.
 - DJIA fell by 25% in two days and 30% in a week
 - Reduced consumption forced businesses to reduce operations
 - Unemployment reached 20%, GDP fell by 30%, Production (↓ 47%), & CPI (↓33%) (deflation)
 - In the 1920s average of 600 banks failed each year.
 - Global Financial Crisis (2008): In summer 2007, the market collapsed for certain financial Instruments (MBS: CDOs) leading to GFC.
 - Pricing bubbles due to spillover to the real estate market via sub-prime mortgage
 - Bankruptcy of Lehman Brothers, a major investment bank
- After the crisis, fin. markets have been increasingly integrated into macroeconomic models*

Global Financial Crisis and Ethical Issues

- Causes:
 - Lax regulations
 - irresponsible lending and borrowing, and
 - excessive risk-taking by financial institutions.
- Ethical Issues:
 - lack of transparency and accountability in the financial industry.
 - unequal distribution of its impacts.
 - importance of ethical leadership in the financial industry

Global Features of Nepal's Financial Markets

- Nepal's financial markets:
 - Banking sector
 - Stock market
 - Insurance industry
 - Foreign investment
 - Digital payments
 - Microfinance
- Some of the global features of Nepal's financial markets:
 - Limited Financial Market Integration
 - Dominance of the Banking Sector
 - Limited Access to Finance
 - Foreign Investment Restrictions
 - Limited Financial Inclusion
 - Limited Market Liquidity