

Chapter

2

Financial Assets, Financial Transactions and Financial Intermediation

Learning Objectives

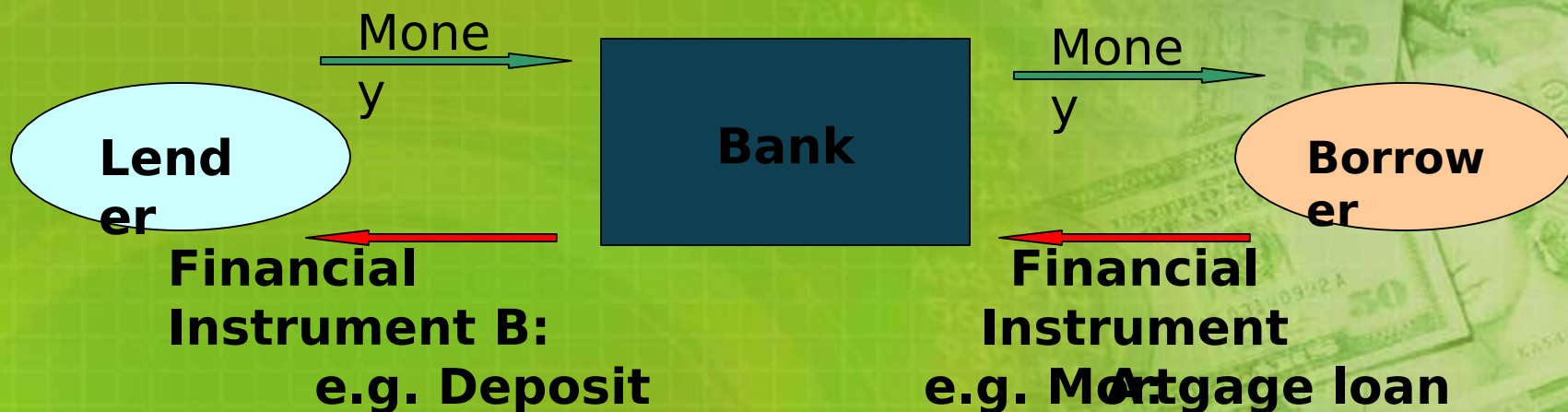
At the completion of the chapter, you should be able to explain:

- The creation of financial assets
- Characteristics of financial assets
- Kinds of financial assets
- Financial assets and the financial system
- Types of financial transactions
- Direct finance
- Semi direct finance
- Financial intermediation (indirect finance)

What is Financial Asset?

- It is a claim against the income or wealth of a firm, household, or business usually represented by money. Example: stocks, bonds, insurance policies and credit held in the bank etc.

- The financial assets are the financial instruments that are traded in the financial markets such as money market and capital market.
- These financial assets constitute the documentary evidence through the funds raise secure money from the investors and savers who have surplus to part with for the use of corporate entities and government.



- Financial instrument A is 'issued' by the borrower and is essentially a claim on borrower's future income or asset.

- Financial instrument B is 'issued' by the Bank and is essentially a claim on Bank's future income or asset.

After financial instrument A is issued and sold to the Bank, it becomes a financial asset of the Bank.

After financial instrument B is issued and sold to the

Financial asset vs. real asset

- Real assets: houses, equipments, human resources, etc.
- Financial assets: claims against real assets.
- Generally, borrowers obtain funds from lenders by selling newly issued claims ("IOU's") against their (borrower's) real assets.
- IOUs are essentially financial assets.

- The assets as products transactions in the financial markets can be denominated in various currencies particularly the local currencies of various economies around the world.
- There are those financial instruments that are traded across international borders especially in highly developed countries like Japan, France, UK and South Africa, just to mention a few.

Characteristics of Financial Assets

- do not provide physical services to owners, instead provide a stream of (expected) CFs
- do not *depreciate* unlike physical goods,
- their physical condition or form is usually not relevant in determining their market value.
- Their cost of transportation and storage is low, such that they have little or no value as a commodity.
- Financial assets are *fungible* – they can easily be changed in form and substituted for other assets.

Characteristics of Financial Assets

- Divisibility & Denomination
- Reversibility
- Cash Flow
- Maturity (bankruptcy, reorganization, call provision)
- Convertibility
- Currency
- Liquidity
- Returns & Tax Status

Valuing Financial Instruments:

Money market securities
Money market securities: Most money market securities do not pay interest. Instead, the investor pays less for the security than it will be worth when it matures, and the increase in price provides a return. This is called **discounting** and is common to short-term securities because they often mature before the issuer can mail out interest checks.

e.g. Treasury bills, federal fund, repurchase agreement, commercial certificate of deposits, bankers acceptance

1. TREASURY

BILLS

- They are short-term debt instruments used by the federal government to obtain funds. They are issued in 3-, 6-, and 12 month maturities. They are different from treasury bonds on two basis: **maturity period** and **interest payment**.

- **Maturity period**

- Treasury bills – in less than one year
 - Treasury bonds – in more than one years

- **Interest payment**

- Treasury bills do not pay explicit interest. Instead, interest is earned implicitly i.e., based on the difference between the purchase price and the face value.

- The *discount yield* comes from the investor's *bid value* of the *bill* between the time it was purchased and the time it matures.
- The discount rate % is computed as: $I \text{ discount} = \frac{F - P}{F} \times \frac{365}{N}$
- where *I discount* = annualized discount rate %

P = purchase price

F = face or maturity value

n = number of days until maturity

- You submit a bid in April 2010 to purchase a 28-day \$1,000 Treasury bill, and you find that you are buying the bond for \$999.88722. What are the discount rate % and the investment rate %?
- Solution:
$$I_{dis} = \frac{F - P}{F} \times 365 / N$$
$$= \frac{1000 - 999.88722}{1000} \times 365 / 28$$
$$= 0.147\%$$
- **Risk:** Treasury bills have virtually zero default risk because even if the government ran out of money, it could simply print more to redeem them when they mature.
- The risk of unexpected changes in inflation is also low because of the short term to $\frac{1}{3}$ maturity.

2. REPURCHASE AGREEMENT

- It is an agreement by two parties in which the borrower sells and agrees to buy back a financial instrument such as a government bond, note or T- bills.
- A firm can sell Treasury securities in a repurchase agreement whereby the firm agrees to buy back the securities at a specified future date.
- Most repos have a very short term, the most common being for 3 to 14 days. There is a market, however, for one- to three-month repos.

- **Interest Rate on Repos:** Because repos collateralized with Treasury securities, they are usually low-risk investments and therefore have low interest rates.
- The repurchase price is higher than the initial sale price, and the difference in price constitutes the return to the lender.

The *repo rate* is the difference between borrowed and paid back cash expressed as a percentage.

$$i = (R - P) / P \cdot n; \text{ Where: } R, \text{ resell value; } P,$$

purchase price

Where “n” is the fraction of a year the repo takes to mature

e.g. NBE agrees to a repurchase deal with CBE to buy the bonds for Br1m, agreeing to resell in fourteen days for Br1.002m. **Yield**

3. FEDERAL FUNDS

- Federal funds are short-term funds transferred (loaned or borrowed) between financial institutions, usually for a period of one day.

Purpose of Fed Funds:

- To meet the reserve requirements, banks must keep a certain percentage of their total deposits with the Federal Reserve.
- The main purpose for fed funds is to provide banks with an immediate infusion (mix) of reserves should they be short.
- Banks can borrow directly from the Federal Reserve, but the Fed actively discourages banks from regularly borrowing from it. So ~~alternatively~~ although the interest rate on fed funds is low, it beats the

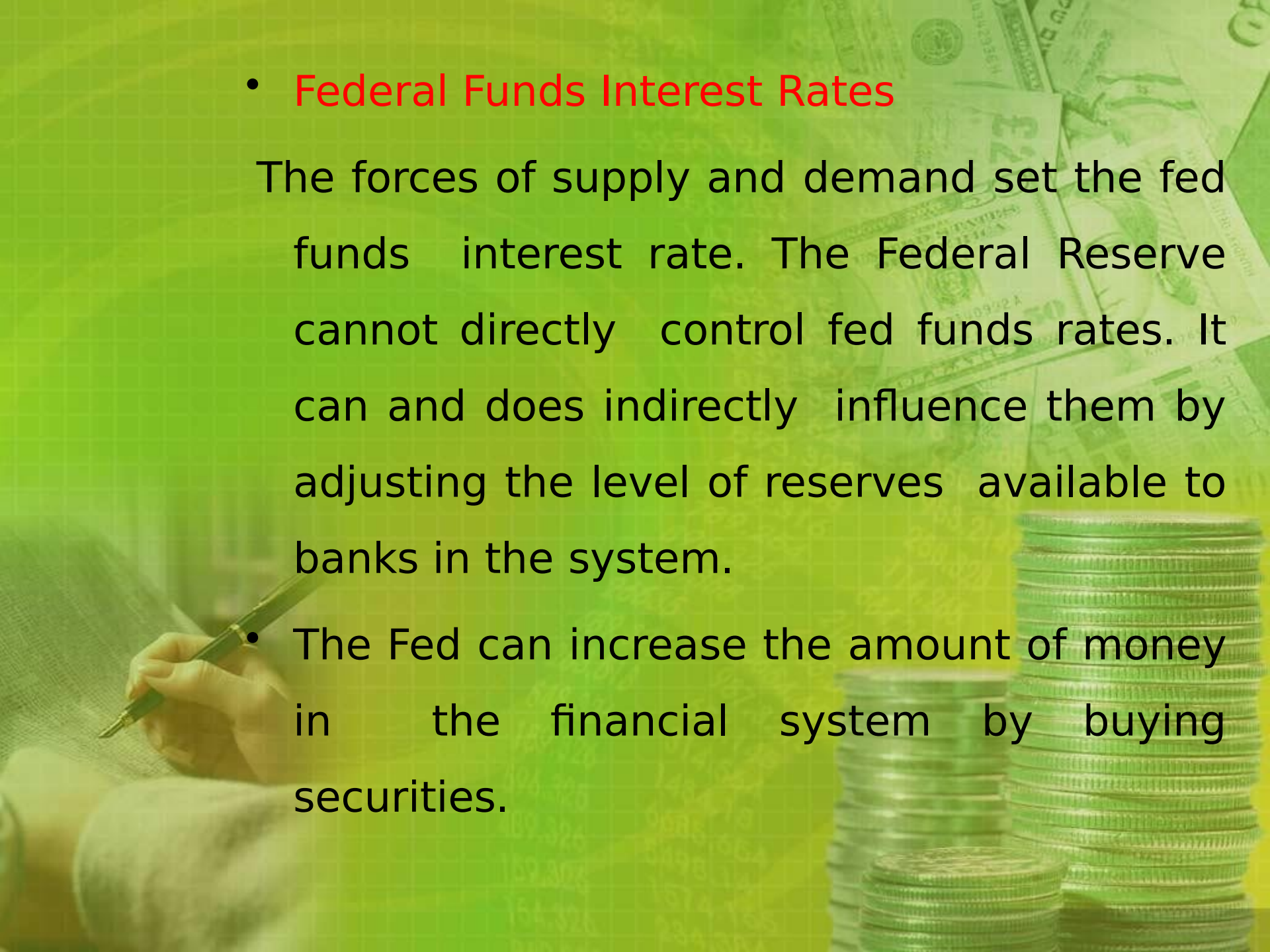
Terms for Fed Funds

- The bank will sell its excess funds to the bank that offers the highest rate. Once an agreement has been reached, the bank with excess funds will communicate to the Federal Reserve bank instructions to take funds out of the seller's account at the Fed and deposit the funds in the borrower's account.
- The next day, the funds are transferred back, and the process begins again.
- Most fed funds borrowings are unsecured. Typically, the entire agreement is established by direct communication between buyer and seller.

- **Federal Funds Interest Rates**

The forces of supply and demand set the fed funds interest rate. The Federal Reserve cannot directly control fed funds rates. It can and does indirectly influence them by adjusting the level of reserves available to banks in the system.

- The Fed can increase the amount of money in the financial system by buying securities.



4. NEGOTIABLE CERTIFICATES OF DEPOSIT

- A negotiable deposit is a security that documents a bank-issued interest rate and the maturity date. Because a maturity date is specified, it is a **term security** as opposed to a **demand deposit**.
- **Term securities** have a specified maturity date; demand deposits can be withdrawn at any time. A negotiable CD is also called a **bearer instrument**. This means that whoever holds the instrument at maturity receives the principal and interest. The CD can be bought and sold until maturity.

- They are different from savings accounts in that the CD has a specific, fixed term (often three months, six months, or one to five years), and, usually, a fixed interest rate.
- It is intended that the CD be held until maturity, at which time the money may be withdrawn together with the accrued interest.
- $R = D \times (1 + c \cdot n)$; where: R , redemption value; D , initial deposit; c , coupon rate; n , term to maturity (fraction of a year)
- $P = R \div (1 + i \cdot n)$; where: P , price; R , redemption value; i , short-term rate

**Exercise: Assume a three-month
Br50,000**

CD, paying 10%

(a) Calculate its *redemption
value*.

Br51,250

(b) Find its price if it has 36 days to
maturity and short-term interest rates
are 10%.

Br50,749

(c) Find the price of this same CD if short-
term interest rates fall to 8%.

Br50,848

5. COMMERCIAL PAPER

- Commercial paper securities are unsecured promissory notes, issued by corporations, that mature in no more than 270 days. Because these securities are unsecured, only the largest and most creditworthy corporations issue commercial paper. .
- It is generally not used to finance long-term investments but rather to purchase inventory or to manage working capital.
- usually sold at a discount from face value and the return is thus calculated in exactly the same way as for treasury bills

6. BANKER'S ACCEPTANCES

- A banker's acceptance is an order to pay a specified amount of money to the bearer on a given date. Banker's acceptances have been in use since the 12th century.
- However, they were not major money market securities until the volume of international trade ballooned in the 1960s. They are used to finance goods that have not yet been transferred from the seller to the buyer.

- For example, suppose that **sun-shine** Construction Company wants to buy a bulldozer from **Komatsu** in Japan. Komatsu does not want to ship the bulldozer without being paid because Komatsu has never heard of **sun-shine** and realizes that it would be difficult to collect if payment were not forthcoming.
- Similarly, **sun-shine** is reluctant to send money to Japan before receiving the equipment.
- A bank's acceptance of a bill is a bank officially issuing a substitute for the creditworthiness of the bank for that of the creditworthiness of the bank.
- Because banker's acceptances are payable to the purchaser, they can be bought and sold until they mature. They are sold on a discounted basis like commercial bills.

Financial Assets and the Financial System

Every financial asset in existence represents the lending or investing of funds transferred from one economic unit to the other. The sum of all financial assets created must always equal the amount of all liabilities outstanding, and the amount of lending in the financial system must always equal the amount of borrowing going on.

In effect the financial assets and liabilities cancel each other out across the whole financial system; which can be illustrated below in reference to any unit in the economy – business firm, household or government.

Total Assets = Total Liabilities + Net Worth Then, because all assets may be classified as either real or financial assets, it follows that

**Real Assets + Financial Assets =
Total Liabilities + Net Worth**

Financial Assets and the Financial System

Because the volume of financial assets outstanding must always equal the volume of liabilities in existence, it follows that the aggregate volume of the economy must equal to the total amount of net worth. Therefore, the economy and the financial system as a whole:

Total Financial Assets = Total Liabilities

Total Real Assets = Net worth (i.e. accumulated savings)

This means that the value of all buildings, machinery and other real assets in existence matches the total amount of savings carried out by all businesses, households and government unit.

Types of Financial Transactions

Financial transactions are many in their type.

We can classify them based on the market in which they are traded, the involvement of intermediary, time span and many other criteria as needed.

But we always have to notice the following:

- Short-term assets should be funded with short-term liabilities
 - Inventory funded by overdraft
- Longer-term assets should be funded with equity or longer term liabilities

Primary & Secondary Market Transactions

- Primary market transaction
 - The issue of a new financial instrument to raise funds to purchase goods, services or assets by
 - Businesses
 - Company shares or debentures
 - Governments
 - Treasury notes or bonds
 - Individuals
 - Mortgage



Primary & Secondary Market Transactions

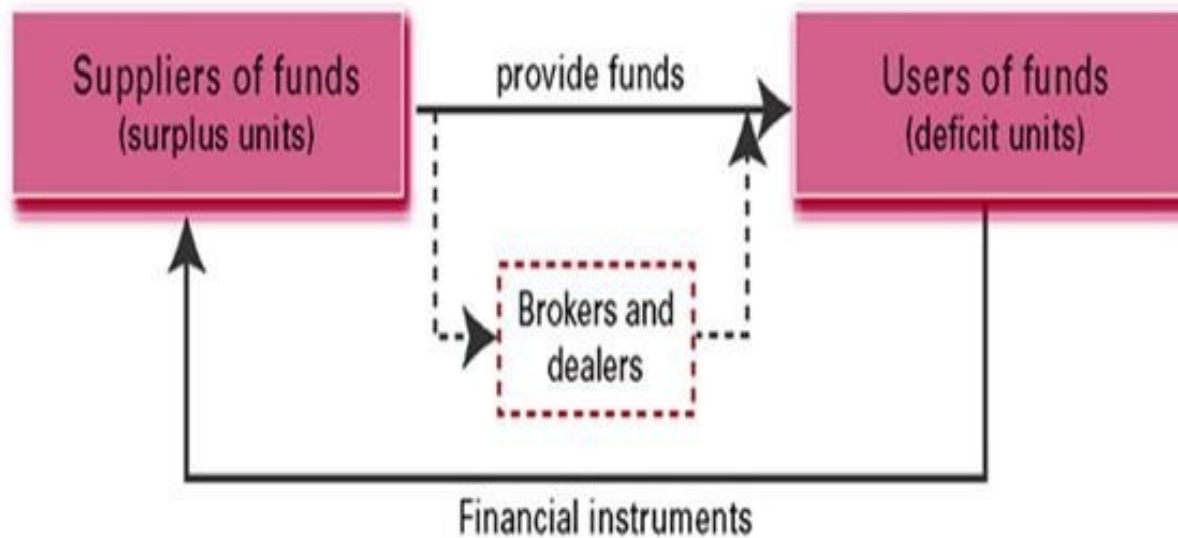
- Secondary market transaction
 - The buying and selling of existing financial instruments
 - No direct impact on original issuer of security
 - Transfer of ownership from one saver to another saver
 - Provides liquidity which facilitates restructuring of portfolios of security owners

Direct and intermediated financial transactions

- Direct flow markets
 - Users of funds obtain finance directly from savers
 - Advantages
 - Avoids costs of intermediation
 - Increases range of securities and markets
 - Disadvantages
 - Matching of preferences
 - Liquidity and marketability of a security
 - Search and transaction costs
 - Assessment of risk, especially default

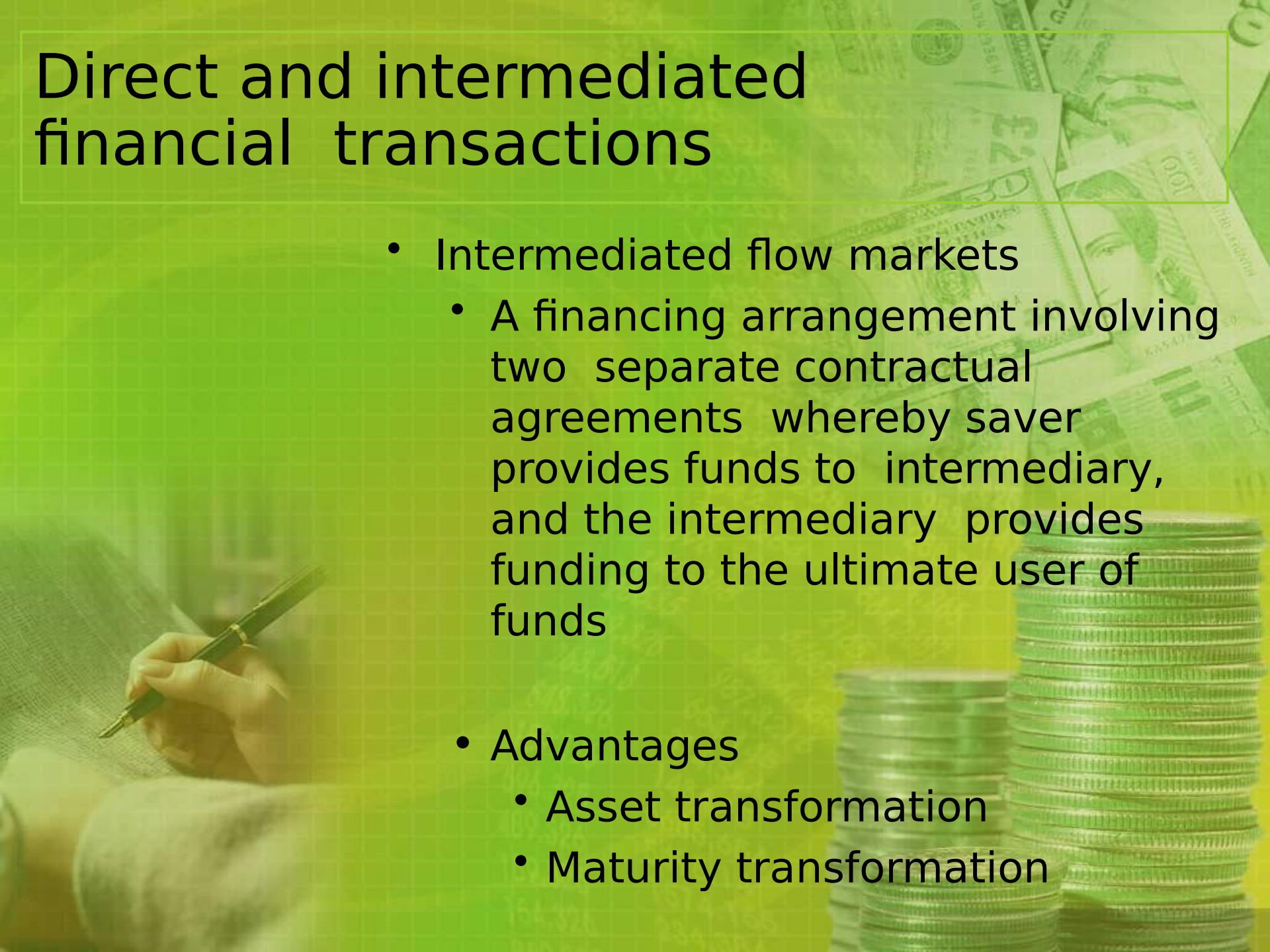
Direct and intermediated financial transactions

Direct financial flows



Direct and intermediated financial transactions

- Intermediated flow markets
 - A financing arrangement involving two separate contractual agreements whereby saver provides funds to intermediary, and the intermediary provides funding to the ultimate user of funds
- Advantages
 - Asset transformation
 - Maturity transformation

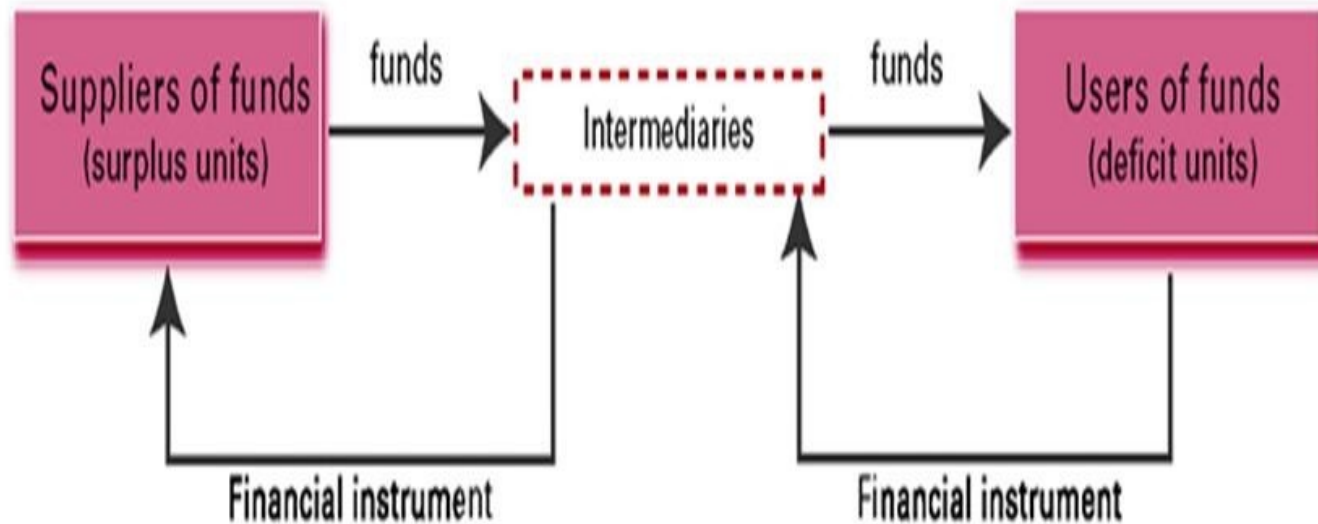


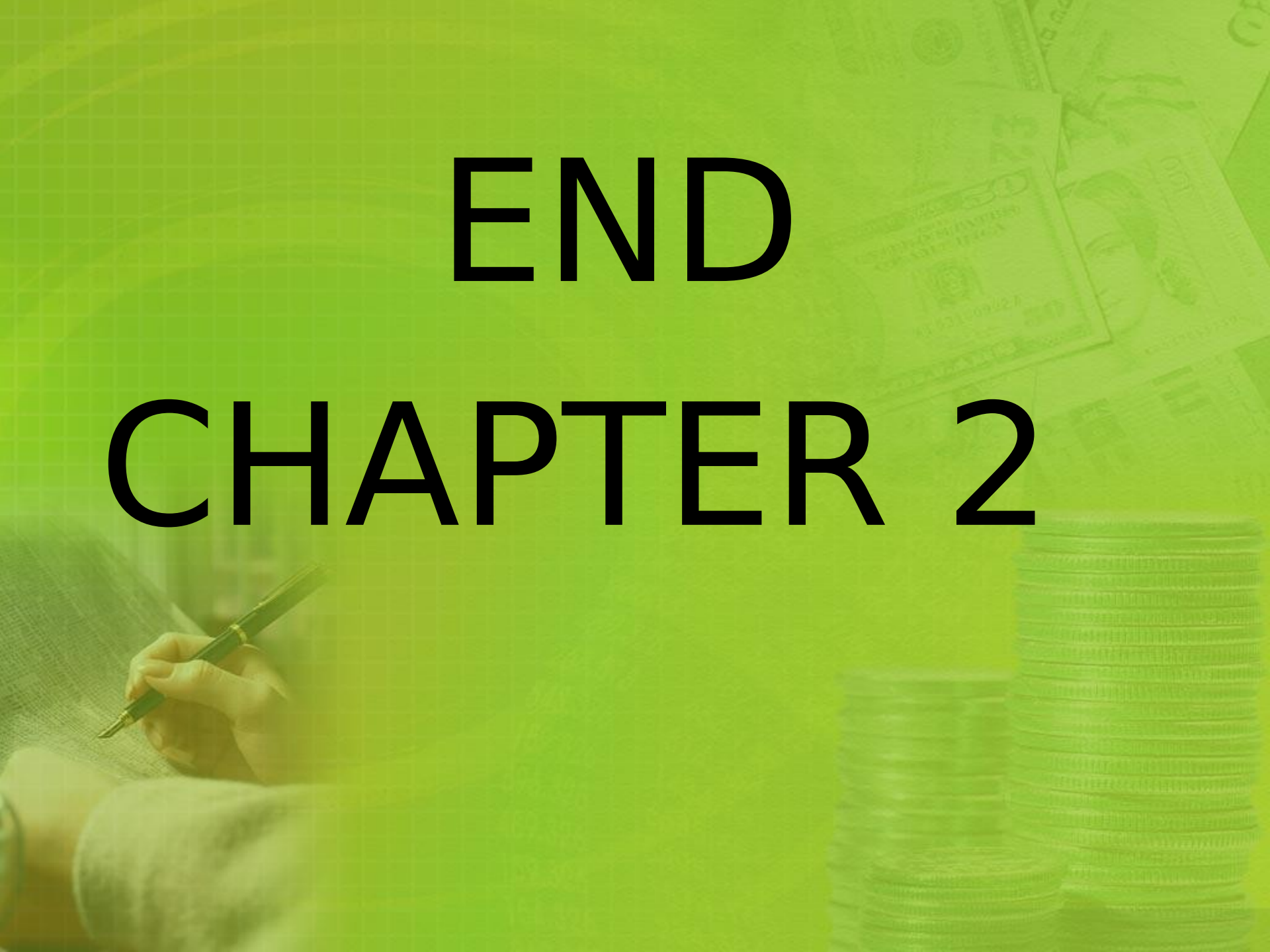
Direct and intermediated financial transactions

- Advantages (cont.)
 - Credit risk diversification and transformation
 - Liquidity transformation
 - Economies of scale
- Sectorial flow of funds
 - The flow of funds between business, financial institutions, government and household sectors and the rest of the world
 - Influenced by fiscal and monetary policy

Direct and intermediated financial transactions

Indirect (intermediated) financial flows





END

CHAPTER 2