

MARKET ORGANIZATION & STRUCTURE



CFA Institute

WHAT ARE THE MAIN FUNCTIONS OF THE FINANCIAL SYSTEM?

- Save money for future use
- Borrow money for current use
- Raise equity capital
- Manage risks
- Exchange assets for immediate and future deliveries
- Trade on information

HOW ARE MARKETS CLASSIFIED?

Category 1

Category 2

Category 3

Category 4

- Public offering: Initial public offering (IPO)
- Public offering: Seasoned offering
- Private placement
- Shelf registration
- DRPS or DRIPS
- Rights offering

HOW DO SECONDARY MARKETS SUPPORT PRIMARY MARKETS?

- **Low transaction costs**
- **Small price concessions**

**SECONDARY
MARKETS**

**PRIMARY
MARKETS**

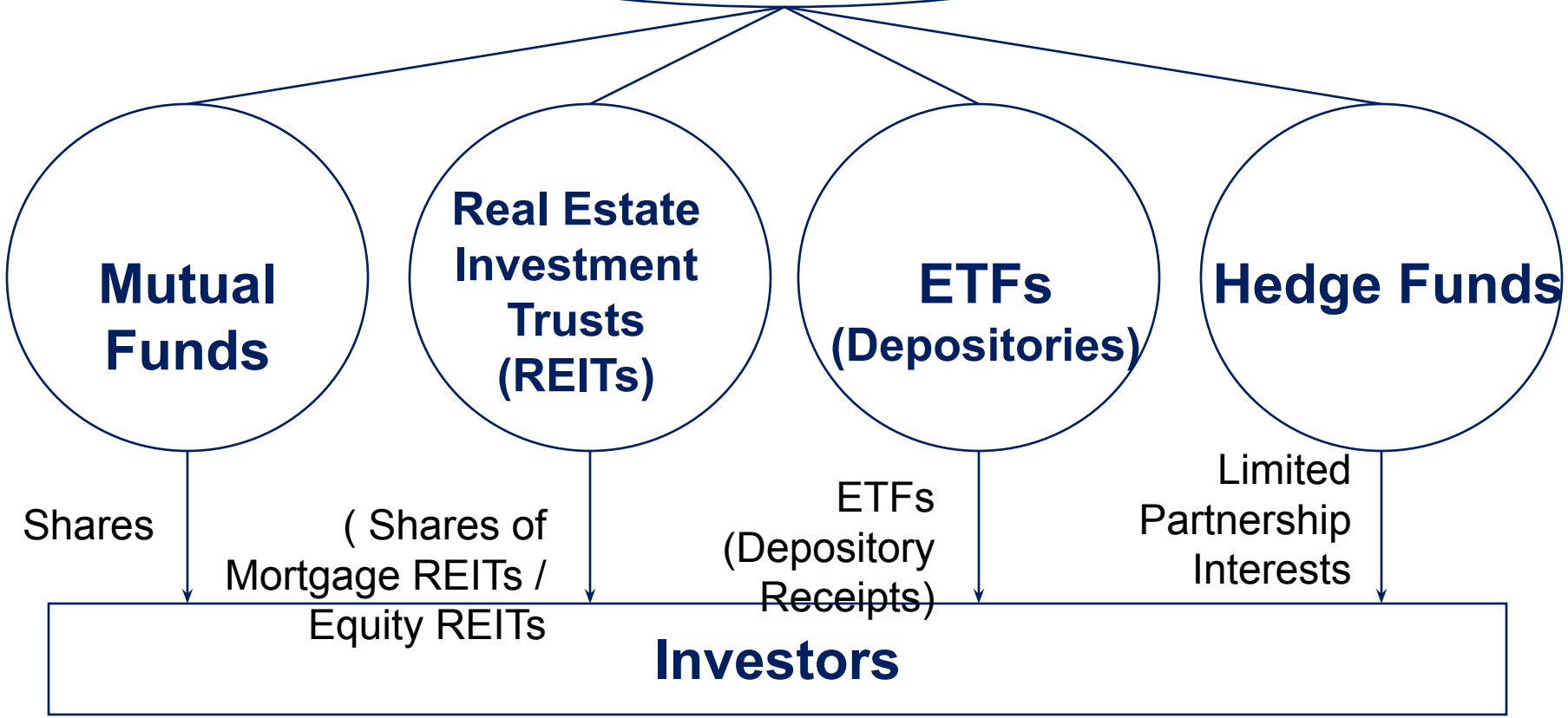


HOW ARE ASSETS CLASSIFIED?

- **Assets**
 - **Securities**
 - **Currencies**
 - **Contracts**
 - **Commodities**
 - **Real assets**

- HOW ARE SECURITIES CLASSIFIED?
 - **Fixed income**
 - **Equities**
 - **Pooled investments**
 - **Public**
 - **Private**

POOLED INVESTMENTS



WHAT POSITIONS CAN I TAKE IN AN ASSET?

- Long positions

- Assets or contracts are owned
- Position benefits from price appreciation

- Short positions

- Assets not owned are sold or contracts are sold
- Position benefits from a decrease in price

HOW ARE CONTRACTS CLASSIFIED?

- **Forward contracts**
- **Futures contracts**
- **Swap contracts**
- **Option contracts**
- **Other contracts (REPO)**

HEDGING WITH FORWARD CONTRACTS

Farmer needs TO SELL wheat to the miller at a future date.

- Risk: the price of wheat decreases.
- The farmer is currently long wheat in the spot market (needs to sell it in the future).
- The farmer hedges the spot market position by selling wheat forward.

Miller needs TO BUY wheat from the farmer at a future date to sell to bakers.

- Risk: the price of wheat increases.
- The miller is currently short wheat in the spot market (needs to buy it in the future).
- The miller hedges the spot market position by buying wheat forward.

FUTURES VERSUS FORWARD CONTRACTS

- **FUTURES CONTRACTS**
 - Standardized
 - Clearinghouse guarantees performance
 - Strong secondary markets
- **FORWARD CONTRACTS**
 - Customized
 - Counterparty risk
 - Typically held to maturity

SWAP CONTRACTS

- Swap contracts
 - Interest rate
 - Commodity
 - Currency
 - Equity

OPTION POSITIONS AND THEIR UNDERLYING RISK EXPOSURES

<u>Strategy</u>	<u>Option position</u>	<u>Exposure to underlying risk</u>
Buy call	Long	Long
Sell call	Short	Short
Buy put	Long	Short
Sell put	Short	Long

REPURCHASE AGREEMENTS (REPO)

Direct Repurchase Agreements (Direct REPO): one party sells securities to another with an agreement to repurchase them at a specified date and price

- Essentially a loan backed by securities

- **A reverse REPO** refers to the purchase of securities by one party from another with an agreement to sell them

- Transactions amounts are usually for \$10 million or more
- Common maturities are from 1 day to 15 days and for one, three and six months
- There is no secondary market for repos

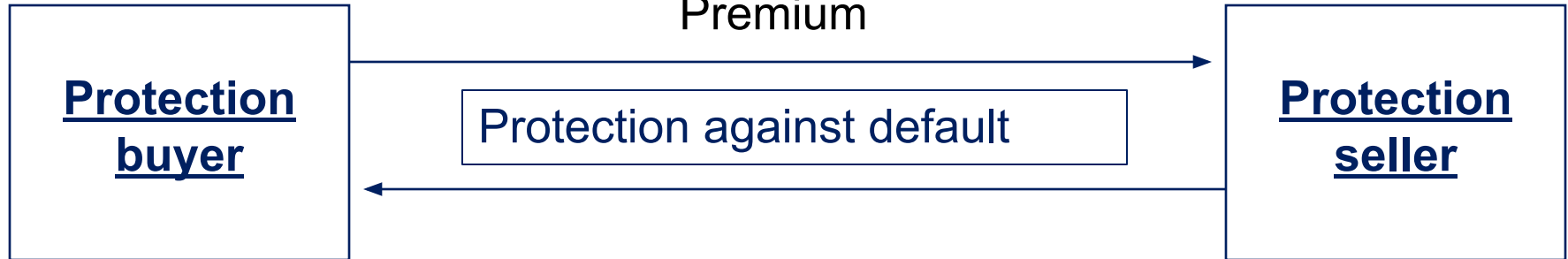
INSURANCE

- Parties willing to bear risk
- Buyers of insurance contracts

CREDIT DEFAULT SWAPS (CDS)

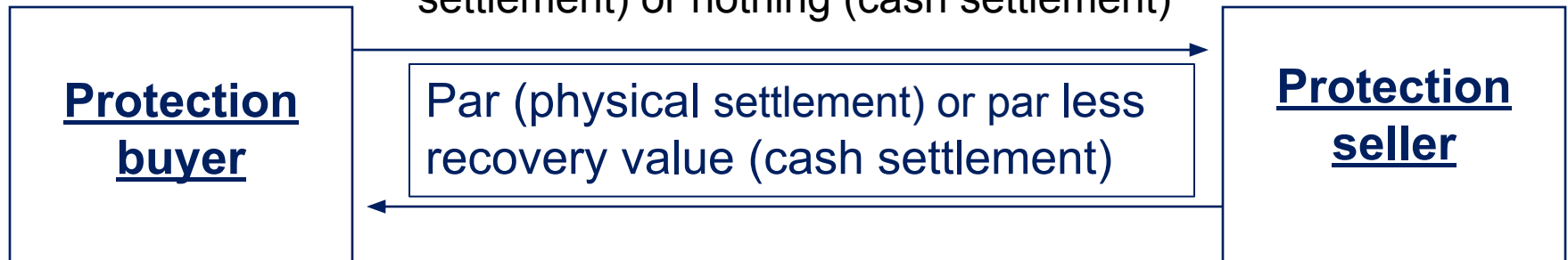
Prior to maturity or default

Premium

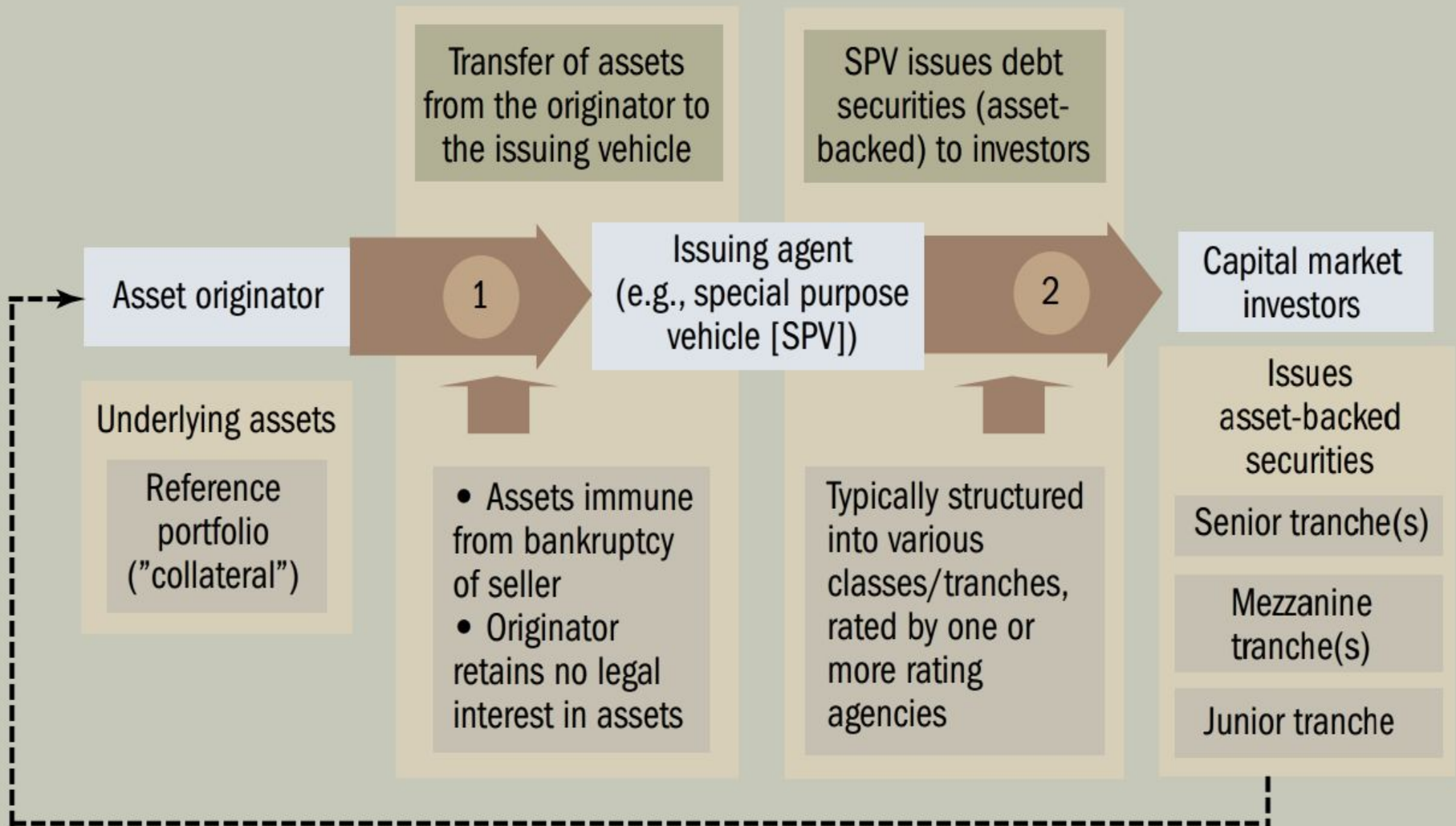


In the event of default

Deliverable obligation (physical settlement) or nothing (cash settlement)

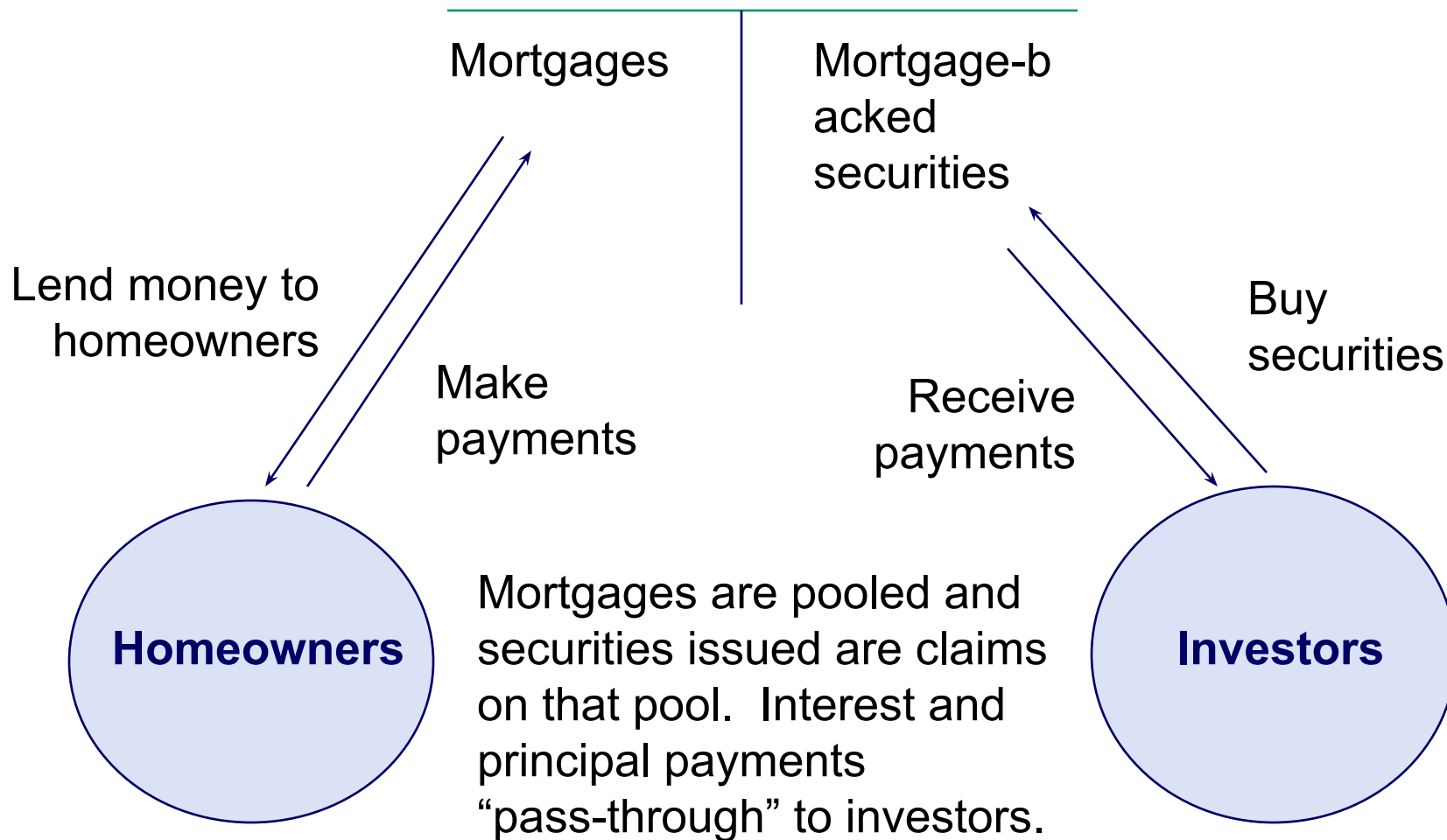


How securitization works

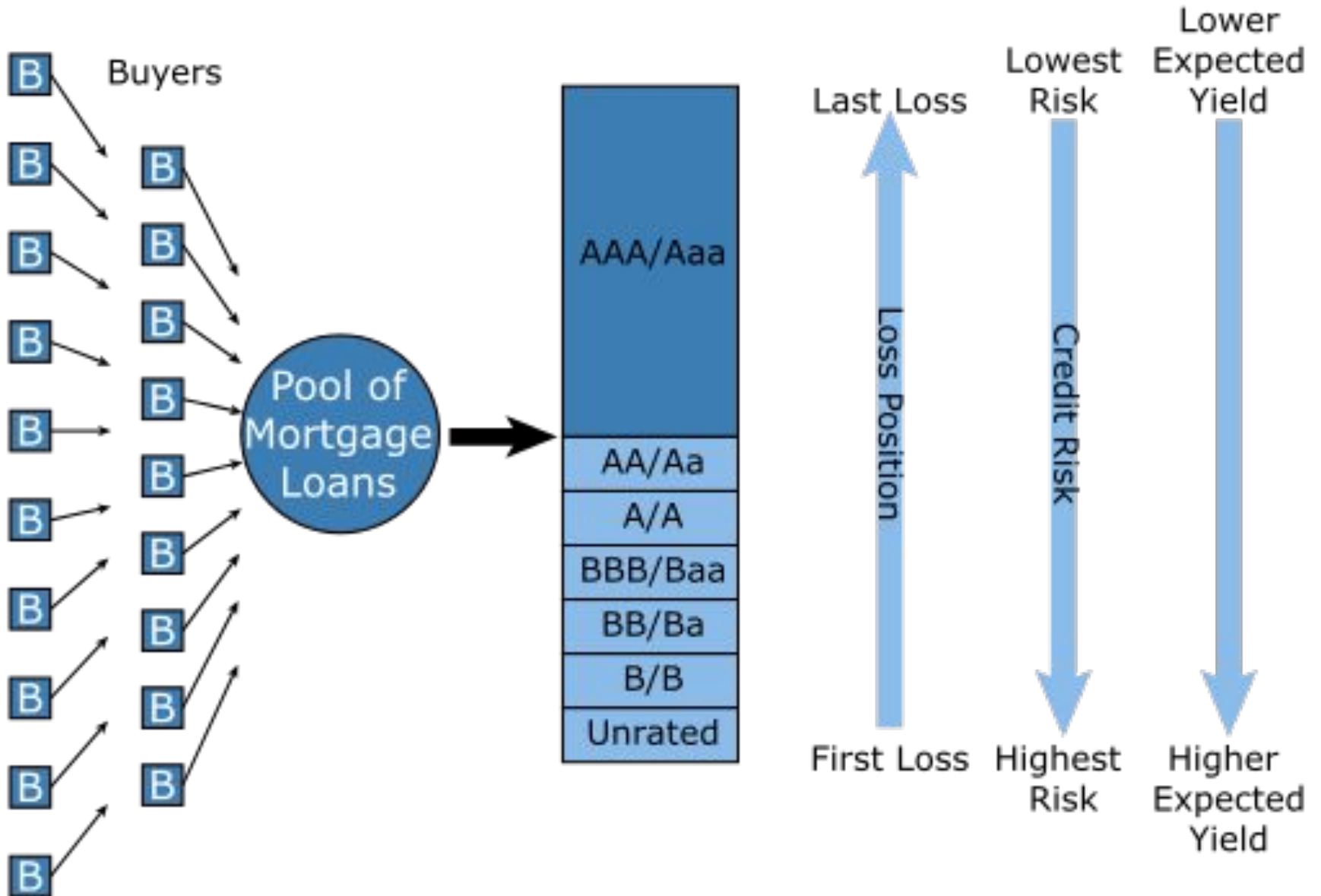


EXAMPLE OF SECURITIZATION

Mortgage Bank Balance Sheet



Different Risk and Return for Different Investors



TERMINOLOGY FOR LEVERED POSITIONS

- Buying on margin
- Margin loan
- Call money rate
- Initial margin requirement
- Maintenance margin requirement
- Margin call
- Leverage ratio

EXAMPLE: COMPUTING TOTAL RETURN TO A LEVERAGED STOCK PURCHASE

A buyer buys stock on margin and holds the position for exactly one year, during which time the stock pays a dividend. For simplicity, assume that the interest on the loan and the dividend are both paid at the end of the year.

Purchase price \$20/share Sale price \$15/share

Shares purchased 1,000 Leverage ratio 2.5

Call money rate 5% Dividend \$0.10/share

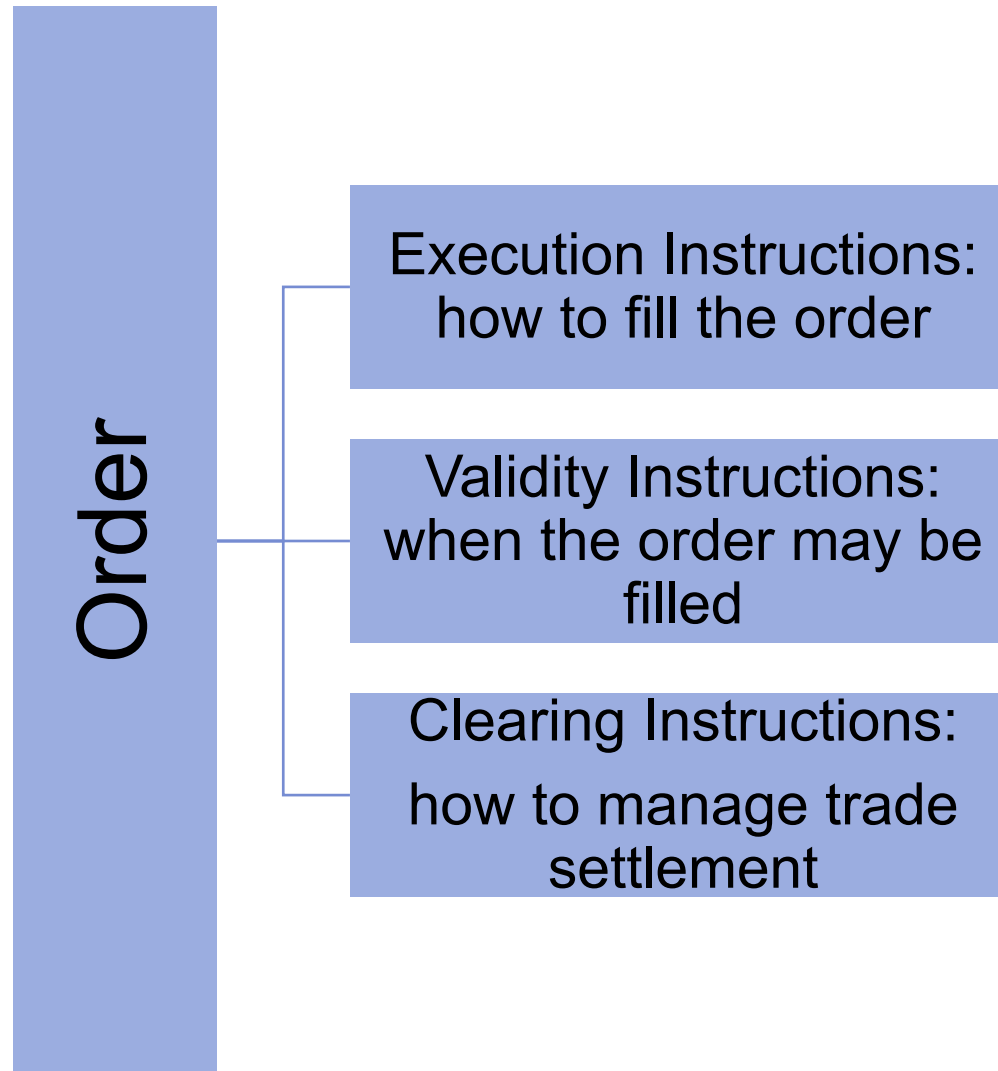
Commission \$0.01/share

1. What is the total return on this investment?
2. Why is the loss greater than the 25 percent decrease in the market price?

EXAMPLE: MARGIN CALL PRICE

A trader buys stock on margin posting 40 percent of the initial stock price of \$20 as equity. The maintenance margin requirement for the position is 25 percent. Below what price will a margin call occur?

COMPARE AND CONTRAST EXECUTION, VALIDITY, AND CLEARING INSTRUCTIONS



EXECUTION INSTRUCTIONS

- **Execution instructions** specify how to trade
- **A MARKET ORDER** instructs the broker to execute the trade immediately
- **A LIMIT ORDER** places a **minimum execution price on sell orders** and a maximum execution price on buy orders
- Execution instructions about *volume of trade*: **all-or-nothing orders**: execute only if the whole order can be filled. Orders can specify the minimum size of the trade
- *Trade visibility* can also be specified. **Hidden orders** are those for which only the broker or exchange knows the trade size
- Trades can also specify *displace size*, where some of the trade is visible to the market, but the rest is not (**Iceberg orders**)

LIMIT ORDER BOOK: "26 BID, OFFERED AT 28"

Order Prices

Bids Offers
 (Asks)

33

32

31

30

29

28

26

25

24

23

22

21

The least aggressively priced sell orders are far from the market.

These sell orders are *behind the market*. We also say that they are *away from the market*.

The *best offer* is at the market.

The space between the current best bid and offer is *inside the market*. If a new limit order arrives here, it *makes a new market*.

The *best bid* is at the market.

These buy orders are *behind the market*. We also say that they are *away from the market*.

The least aggressively priced buy orders are *far from the market*.

The best bid and best offer make *the market*.

VALIDITY INSTRUCTIONS

Day order

Good-till-cancelled order

(GTC)
Immediate-or-cancel order

(IOC)
Good-on-close order

Stop orders
(Good-on-open order)

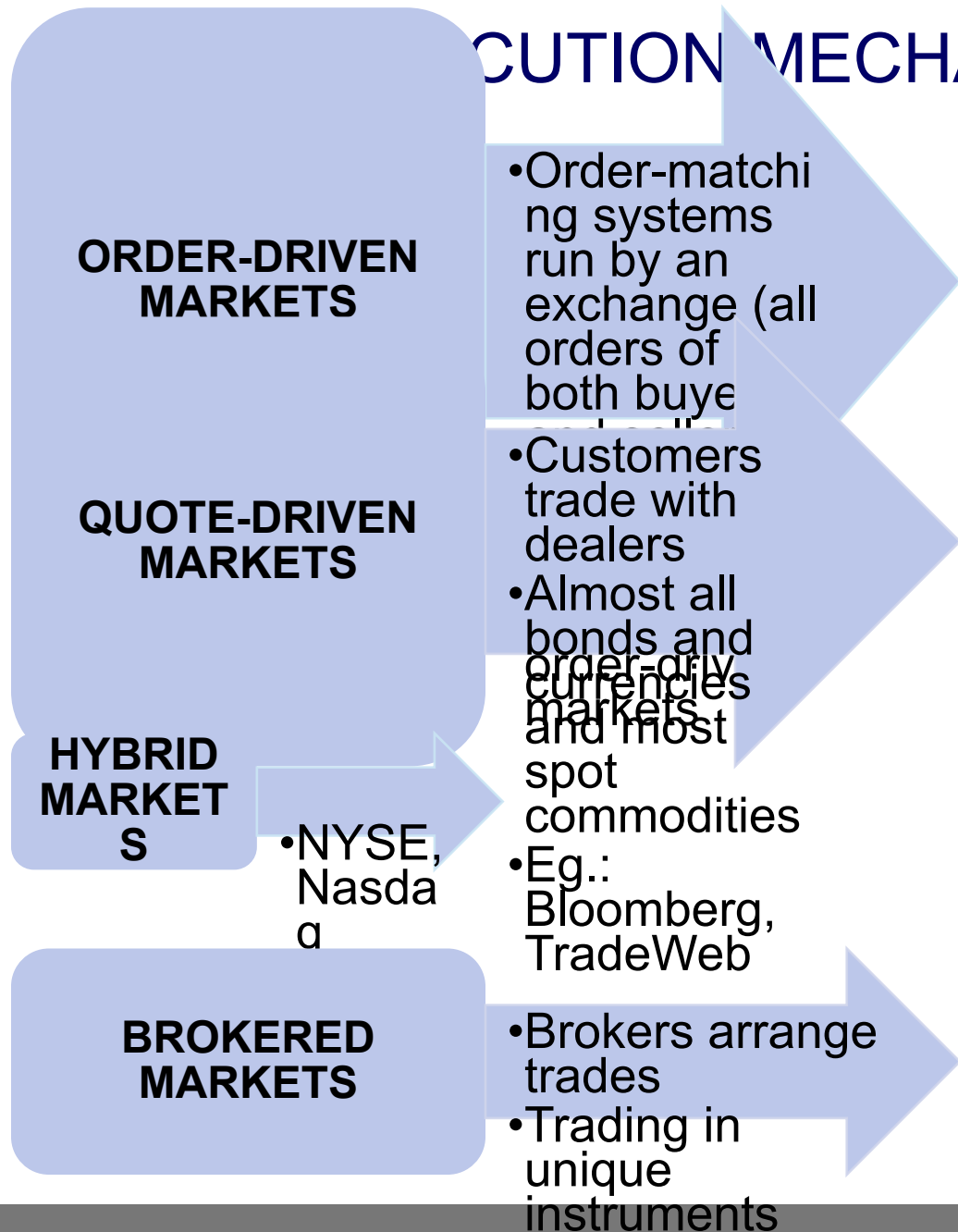
(stop-loss orders):
stop-sell orders and
stop-buy orders

STOP ORDERS (STOP-LOSS ORDERS)



**STOP-SELL
ORDER:
Sell at \$30**

EXECUTION MECHANISMS



ORDER-DRIVEN MARKETS

- ORDER PRECEDENCE HIERARCHY
 - Price priority
 - Secondary precedence rules

WHAT ARE THE CHARACTERISTICS OF WELL-FUNCTIONING FINANCIAL SYSTEM?

- **Well-functioning financial system**
 - Completeness
 - Operationally efficient
 - Informationally efficient

WHAT ARE THE OBJECTIVES OF MARKET REGULATION?

Control fraud

Control

agency

problems

Promote

fairness

Set mutually

beneficial

standards

Prevent

exploitation

Insure

liabilities are

funded

SUMMARY

- Main functions of the financial system
- Classifications of assets and markets
- Financial intermediaries
- Long and short positions
- Leveraged positions
- Execution, validity, and clearing instructions
- Market and limit orders
- Primary and secondary markets
- Quote-driven, order-driven, and brokered markets
- Characteristics of a well-functioning market
- Objectives of market regulation