



Bachelor of Economics
THAMMASAT UNIVERSITY

FN 211 Financial Markets

Class 6: Stock Markets

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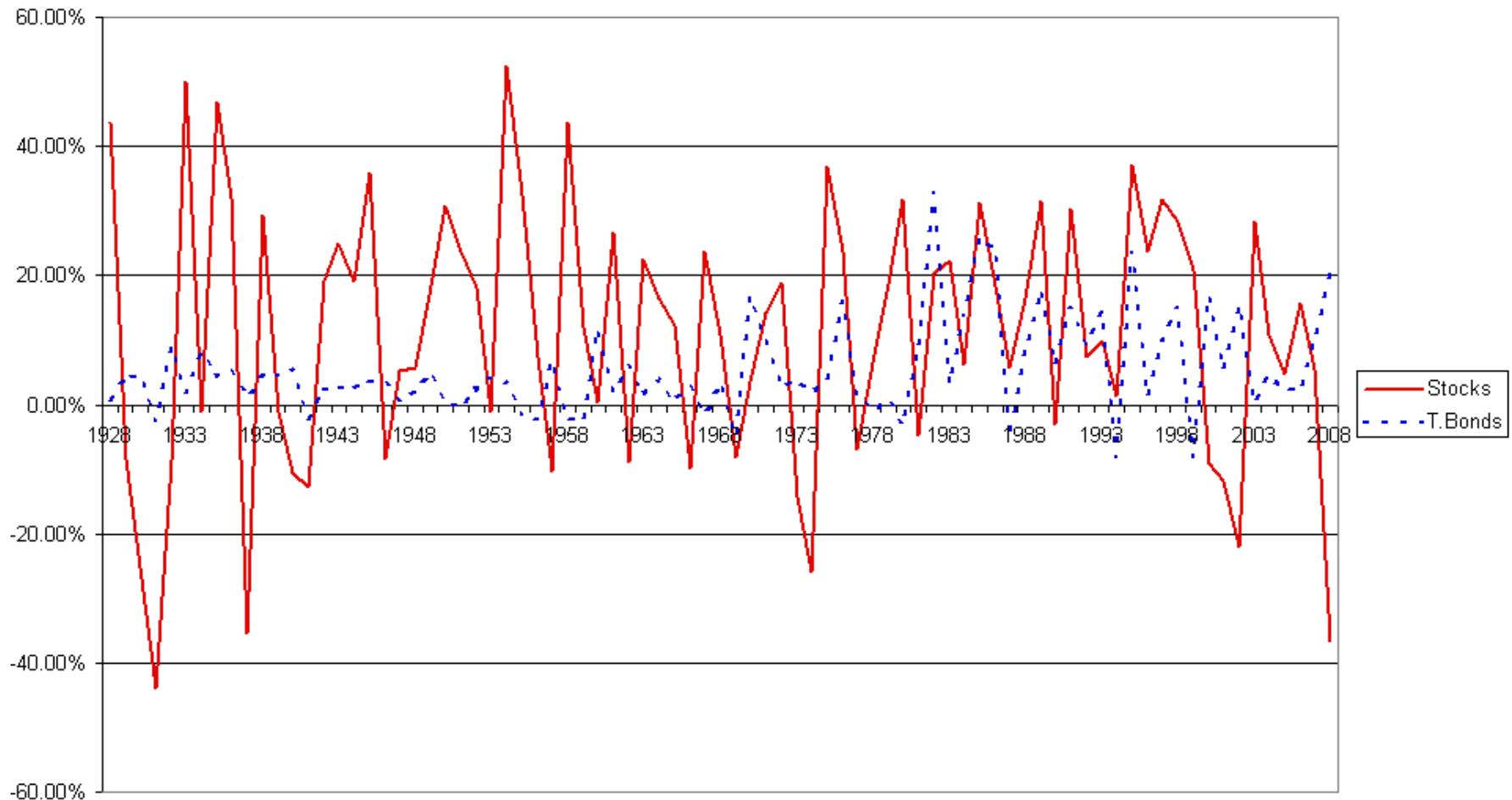
Today's Outline

- ❖ **Introduction**
- ❖ **Primary and Secondary Market**
- ❖ **Organization and Functioning of Security Markets**
- ❖ **Efficient Capital Markets**
- ❖ **Insider Trading**
- ❖ **Stock Market Indexes**
- ❖ **Introduction to SET**

Introduction:

Stock vs. Bond Returns

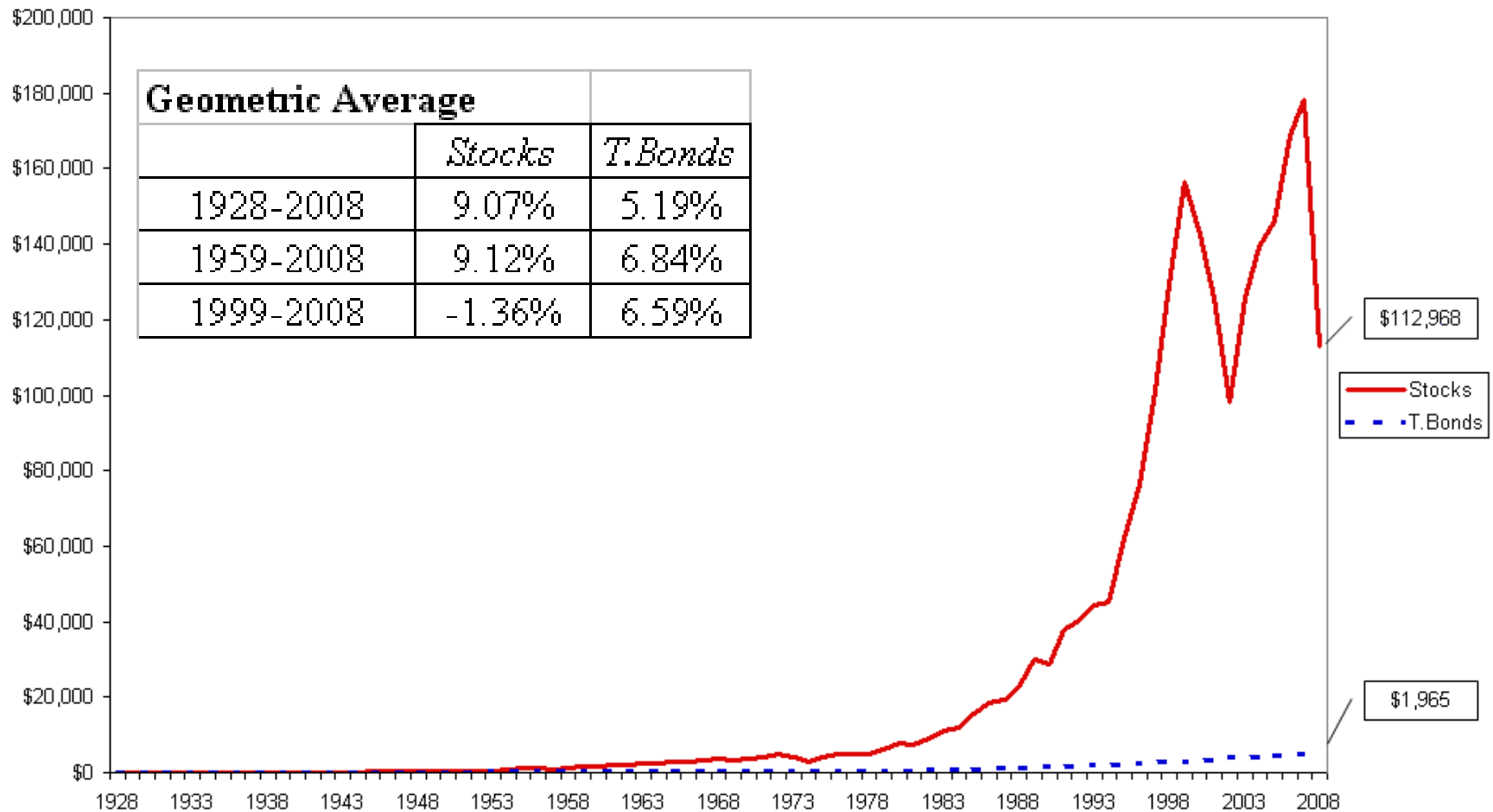
Stocks vs Bonds Returns, US Data 1928 - 2008



Introduction:

Stock vs. Bond Returns

Compounded Value of \$100



SET index return is higher than deposit rate and bond yield during a past couple years.

Returns across several asset classes as of September 30, 2011

Returns (%)	Past 1 year	Past 2 Years	Past 3 years
1. Equity			
SET index	-6.06	27.77	53.59
SET50 index	-5.65	24.32	52.51
mai index	-1.67	22.60	13.61
2. Bank deposit*			
Saving deposit	0.88	1.61	3.26
Time deposit			
6 months	2.10	3.17	6.14
12 months	2.43	3.58	6.63
24 months	2.73	4.91	8.19
3. Bond			
Short-term government bond	2.24	3.59	6.00
Composite bond index	-0.05	8.57	16.11
4. Commodities			
Gold	24.12	76.68	77.12
Oil	-0.96	12.17	-21.30

Remark: **The bank deposit is an average rate of all commercial banks*

Introduction:

Common vs. Preferred Stocks

- Stockholders** are the legal owners of a corporation
- they have a **residual claim** to all earnings and assets after debt and tax claims are satisfied
 - voting rights (e.g., to elect board of directors)
 - shareholders do not exercise control regularly (they elect a board, who chooses a CEO, etc.)

Common stock - the fundamental ownership claim in a public corporation

Preferred stock - a hybrid security that has characteristics of both bonds and common stock

Introduction:

Characteristics of Common Stocks

- **Dividends** - payment and size of dividends is determined by the board of directors of the issuing firm
- **Residual Claim** - in the event of liquidation, common stockholders have the lowest priority in terms of any cash distribution.
 - *If a company is liquidated, assets are used first to pay debts; second, preferred stockholders receive their contractual share; and lastly, common stockholders receive only a pro rata basis of any residual funds.*
- **Limited Liability** - common stockholders losses are limited to the amount of their original investment in the firm
- **Voting Rights** – typically, common stock shareholders receive **one vote per share** to elect the company's board of directors

Introduction:

Characteristics of Common Stocks

Common Stock	Corporate Bond
represents an ownership interest in the corporation, conferring on the holder a number of rights (voting) as well as risks	represents IOUs of the corporation
dividends are not obligatory, and are not a tax-deductible expense	interest payments and principal repayments are legally required, and interest payments are tax-deductible
represents a residual claim on the corporation	represents a prior claim on the corporation
yield comes from dividends and capital gains (or losses)	yield comes from interest payments (and price difference if not held for the full term), yield is fixed if held to maturity
generally, has potential for giving higher returns, but is more risky	generally, does not have potential for giving much higher returns, but is less risky
has no stated maturity	has a stated maturity

Introduction:

Characteristics of Preferred Stocks

- Similar to common stock in that it represents an ownership interest but, like bonds, pays a fixed (amount or percent) periodic dividend
- Senior to common stock but junior to bonds
- Generally do not have voting rights

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Primary vs. Secondary Market

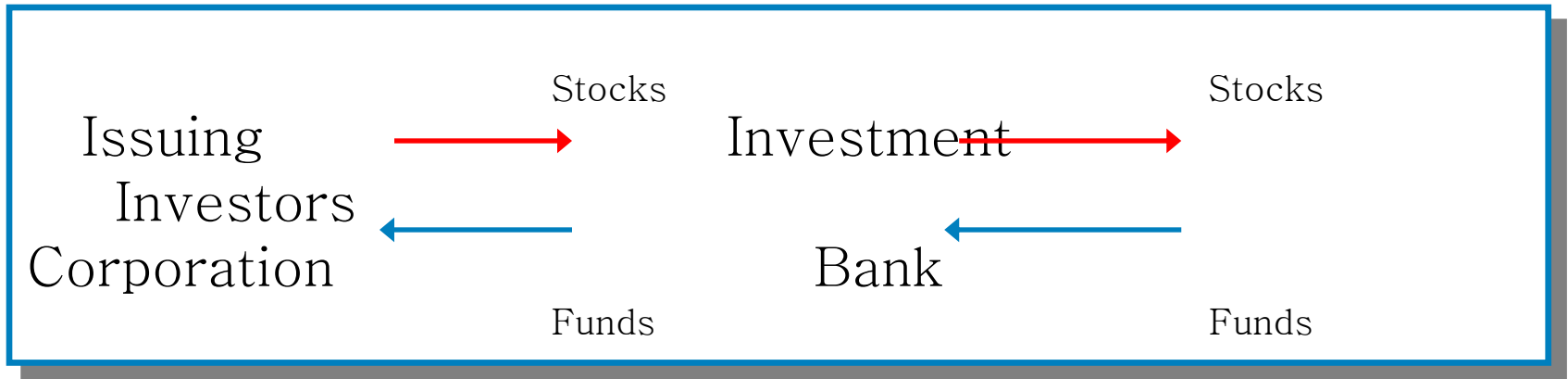
Primary Market

- firms can raise equity capital in its initial public offering (IPO)
- proceeds from issuing and offering common stock will be used as per business plan or for financial restructuring to adjust debt to equity ratio
- firms can raise equity capital in a subsequent seasoned equity offering

Secondary Market

- trading of shares among investors

The Primary Market: Introduction



Investment bank conducts primary market sale of stock using

- **firm commitment underwriting** - guarantees corporation a fixed price for newly issued securities or
- **best efforts underwriting** - no guarantee to issuer and acts more as a placing or distribution agent

The Primary Market:

The Case of IVL

Issuer: Indorama Ventures Public Company Limited

Sector: Industrials/Petrochemical

Symbol: IVL

Registered: 5,082 million shares

Offered: 400 million shares

- 218 million for institutional investors
- 130 million for foreign investors
- 42 million to the general public
- 10 million to company's patron

Par Value: 1 Baht

IPO Price: 10.20 Baht

First Day Trading: 5 Feb 2010

Lead Underwriter: Bualuang Securities Plc.

The Primary Market: The Case of IVL

This is polyesters – products indispensable to everyday life
Everyday – Everywhere

Beverage Containers



Home Textiles



Food Packaging



Non Wovens



Apparels



Technical Textiles



INDORAMA

The Primary Market: The Case of IVL



The Secondary Market:

Introduction

- Secondary markets **provide liquidity** to investors who purchased the securities initially sold in the primary markets.
 - Thus, secondary markets allow investors to sell the securities quickly.
 - Without an active secondary market: Investors will be reluctant to buy securities in the primary market.
- Secondary markets **determine the prevailing market price** of securities.
 - New issues in the primary market are based on the prices in the secondary market.

The Secondary Market: Trading System

Trading System at the Stock Exchange of Thailand

Trading Units - Each trading unit, also known as "Board Lot"

- If a stock price is ≤ 500 THB/share, 1 board lot = 100 units
- Otherwise, 1 board lot = 50 units

Floor & Ceiling Limits - the current limits allow prices of a stock to fluctuate within a range of 30 per cent of the previous closing price on the main board;

Circuit Breaker can be implemented to ease any unusual volatility in the market that may cause investor panic.

- *First stage: If the SET index falls by 10% from the previous day's close, all trading in listed securities will be halted for 30 minutes.*
- *Second stage: If the SET index falls by 20% from the previous day's close (i.e., another 10%), trading in all listed securities will be halted for one hour.*

How many times did SET have a circuit breaker during past 10 years ?

Date	Daily return	Rank
20/12/2006	10.58%	1
3/11/2008	7.55%	2
5/1/2009	6.19%	3
30/10/2008	6.10%	4
6/10/2011	5.75%	5
19/5/2004	5.43%	6
12/1/2001	5.34%	7
20/4/2010	5.29%	8
13/10/2008	5.25%	9
2/3/2000	5.20%	10

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1st Circuit breaker 19 Dec 2006
 2nd Circuit breaker 10 Oct 2008
 3rd Circuit breaker 27 Oct 2008

6/10/2008	-6.70%	2870
14/9/2001	-6.73%	2871
5/1/2000	-6.77%	2872
13/9/2001	-6.96%	2873
8/10/2008	-7.13%	2874
24/10/2008	-7.21%	2875
22/2/2000	-7.35%	2876
10/10/2008	-10.10%	2877
27/10/2008	-11.09%	2878
19/12/2006	-16.06%	2879

What happened?

The Secondary Market:

Trading System: Advance Resilience Matching System (ARMS)

1. **Automatic Order Matching (AOM) Trading** - after brokerage houses electronically send buy or sell orders from their offices to the SET mainframe computer, the system implements an order queuing process and arranges the orders according to a *price-then-time priority*
 - **Call Market Matching** is utilized in calculating the opening and closing prices of a security at the opening and closing of the trading hours. This method allows brokers to enter their orders to be queued for matching at a specified time at a single price that generates the greatest trading volumes for that particular stock.
 - **Continuous Order Matching** procedures operate during the regular trading sessions. The system continuously matches the first buy and sell orders in the queue, and at the same time, confirms each executed transaction via the member's (broker's) terminal.
2. **Put Through (PT) Trading** – allows brokers to advertise their buy or sell interests by announcing bid or offer prices

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- ❖ Stock Market Indexes

Organization and Functioning of Security Markets: Characteristics of a Well-functioning Market

- **Timely and accurate information** on the volume and price of past transactions and current outstanding bids and offers.
- **Liquidity** covers three aspects:
 - **Marketability**: The ability to buy or sell an asset quickly.
 - **Price continuity**: Prices do not change much between transactions, assuming no new information is available.
 - **Depth**: Numerous buyers and sellers are willing to trade at prices above or below the current price.
- **Internal efficiency**: minimal transaction cost
- **Informational (or external) efficiency**: Prices rapidly adjust to new information so that the prevailing market price reflects all available information about the asset.

Organization and Functioning of Security Markets: Call vs. Continuous Markets

- In **call markets**, stocks are traded at specific times. All bids and asks for the stock are gathered together, and then a single price is set to clear most of the orders. This method is used in:
 - Small exchanges with only a few stocks and a few traders.
Examples: Fiji
 - Large exchanges to set the opening price when there is an overnight buildup of buy and sell orders.
- In **continuous markets**, stocks are traded at any time the market is open.
 - Many stock markets including *NYSE, Tokyo, and SET*, are continuous markets.

Organization and Functioning of Security Markets: Call vs. Continuous Markets



*Example of **Call Market** is the **South Pacific Stock Exchange (SPSE)** in Fiji where trading is paper-based, conducted by a "call market" on a physical trading floor at 10:30am each weekday.*

Each listed company name is called out and orders are submitted by brokers and dealers.

The market caller then matches orders on a price and time priority basis.

Unmatched orders at the end of the session are carried forward to the next day.

Organization and Functioning of Security Markets:

OTC Markets

- **Over-the-counter (OTC) market** is where investors trade stocks not listed in any exchanges.
 - Unlike securities exchanges, the OTC market is not a formal organization with membership requirements or stock listing requirements.
 - Example is *NASDAQ* which is referred to an automatic electronic quotation system for the US OTC market.
- **Third Market** refers to shares listed on an exchange which are traded on the OTC market.
- **Fourth Market** refers to the direct trading of securities between two institutional investors without involvement of a broker intermediary. The main purpose is to avoid transaction fees charged by brokers.

Organization and Functioning of Security Markets: Auction vs. Dealer Markets

- **Auction Market** – Orders submitted by buyers and sellers are routed to a central location where **Brokers** match these transactions.
 - Pure Auction markets are **price driven** markets.
 - Examples: *NYSE, Tokyo and SET*
- **Dealer Market** – Buyers and sellers submit their orders to **Dealers**. Unlike Brokers, dealers buy for their inventory and sell from their inventory.
 - Dealer market is an **order driven** market.
 - Examples: *London, NASDAQ*

Organization and Functioning of Security Markets:

Types of Order

- **Market orders:** buy or sell a stock at the current price.
- **Limit orders:** buy or sell a stock at the specified price.
 - A limit buy order is placed below the current price.
 - A limit sell order is placed above the current price
 - The outstanding period of a limit order must be specified.
- **Stop orders:**
 - A stop loss order specifies the price at which the stock must be sold if the price drops to this level.

Organization and Functioning of Security Markets:

Price spread

Market price level (baht)	Spread (baht) (effective from March 30, 2009 onwards)
Less than 2	0.01
2 up to less than 5	0.02
5 up to less than 10	0.05
10 up to less than 25	0.10
25 up to less than 100	0.25
100 up to less than 200	0.50
200 up to less than 400	1.00
400 up	2.00

Organization and Functioning of Security Markets: Order screen

KTB Buy 51.06% 48.94% Sell

Avg./Close	Last	Ceiling/Floor	Chg/%Chg	High/Low	Vol/Val(K)
12.50 10.00	12.50	13.00 7.00	+2.50 +25.00	+12.80 +12.20	65,148,600 814,377
Vol	Bid	Offer	Vol		
987,700	12.40	12.50	3,454,800	B	2,000 12.50
1,919,600	12.30	12.60	5,412,400	S	5,000 12.40
3,285,000	12.20	12.70	5,639,200	S	64,500 12.40
2,660,700	12.10	12.80	2,394,300	S	1,000 12.40
6,526,800	12.00	12.90	1,667,100	S	34,500 12.40

0631321 (Equity) • Credit: 10,000,000.00 • Line: 151.75 • Cash: 151.75

Buy Sell NVDR Vol: Price: ATD/ATC MP Cond. PIN: Submit Clear

Order No	Symbol	Time	Side	Price	Volume	Matched	Balance	Cancelled	Status
75456379	JAS	18:24:35	B	0.46	100	0	100		Pending(OF)

Organization and Functioning of Security Markets:

Portfolio summary

Portfolio
Deal Summary
Main

Symbol	Available Volume	Actual Volume	Average Cost	Market Price	Amount (Price)	Market Value	Unrealized P/L	% Unrealized P/L	Realized P/L
CEN	75,000	75,000	2.49	2.62	186,750.00	196,500.00	+9,750.00	+5.22	0.00
MPIC	70,000	70,000	1.50	1.29	105,000.00	90,300.00	-14,700.00	-14.00	0.00
SF	25,000	25,000	3.20	3.30	80,000.00	82,500.00	+2,500.00	+3.12	0.00
TCAP	5,000	5,000	21.74	25.50	108,700.00	127,500.00	+18,800.00	+17.30	0.00
THL	100,000	100,000	1.32	0.76	132,000.00	76,000.00	-56,000.00	-42.42	0.00
UNIQ-W1	100,000	100,000	2.71	1.96	271,000.00	196,000.00	-75,000.00	-27.68	0.00

Account No. : 88310374 Total>> 883,450.00 768,800.00 -114,650.00 -12.98 0.00


A/C Balance

Credit Limit: 500,000.00

Line Avail.: 391,267.81

Cash Balance: 0.00

Market Value Chart



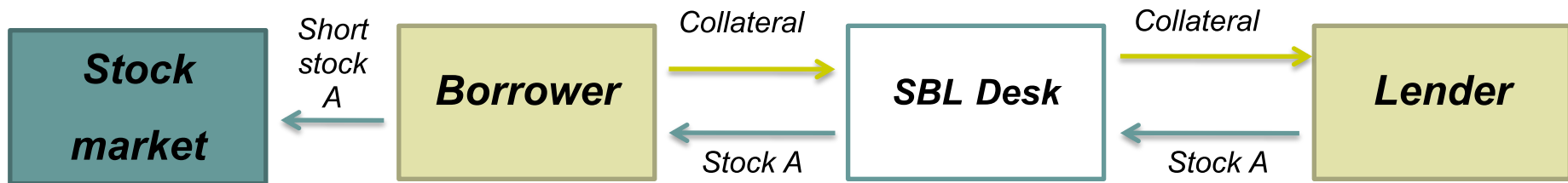
% Unrealized Profit and Loss Chart



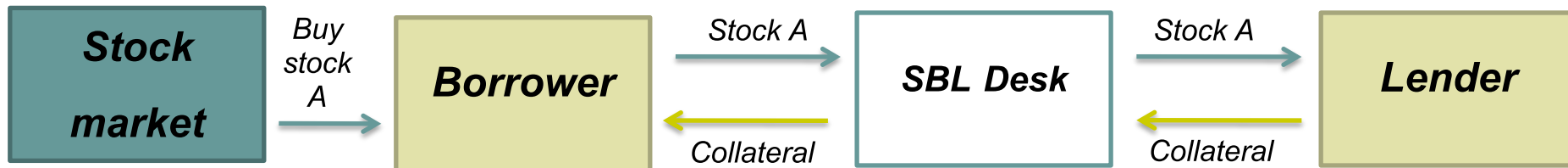
Organization and Functioning of Security Markets: Short Sale

- If an investor believes that a stock is overpriced and expect to profit from a decline in price, he can sell the stock short.
- The process of short sale is as follows:

Borrow transaction



Return transaction



Today's Outline

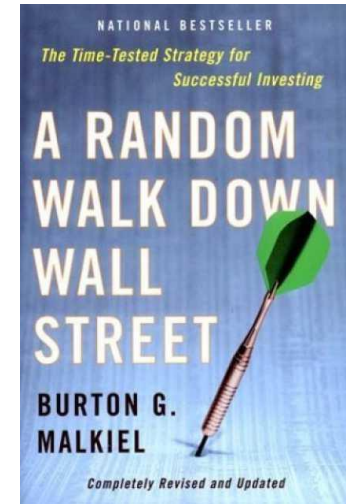
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Efficient Capital Markets: The Random Walk Theory

- One popular modern theory regarding the valuation of stocks is the *random walk* theory.
- According to the theory, successive changes in the price of a stock are random fluctuations around that stock's intrinsic value, and these changes are independent of the sequence of price changes that occurred in the past.
- But of course, many analysts still subscribe to *technical analysis*, believing that past price movement can help predict future stock price.

Efficient Capital Markets: The Random Walk Theory

- **Burton Malkiel**, professor of economics at Princeton, is a leading proponent of the efficient market hypothesis.
- He contends that prices of publicly traded assets reflect all publicly available information.
 - *In other words, a "blindfolded monkey" would have as much luck selecting a portfolio as a pro.*
- Since stock prices cannot be predicted in the short term, investors are better off buying and holding onto index funds than meddling with securities or actively managing mutual funds.



Efficient Capital Markets: The Random Walk Theory

- The random walk notion is supplemented by the broader *efficient markets hypothesis*.
- In a perfectly efficient securities market, existing stock prices fully reflect the latest information available on the profitability and risk of business firms.
- Most researchers agree that financial markets are efficient, though they may disagree on the *degree* of efficiency.



Eugene Fama is currently a Professor of Finance at the University of Chicago. He is most often thought of as **the father of efficient market hypothesis**, beginning with his Ph.D. thesis

Efficient Capital Markets: The Weak Form

- **Meaning:** current stock prices reflect all **available security market information**, including historical prices, returns and trading volume.
- **Implication:** Investors cannot make abnormal returns consistently by using past market data or trends to predict future stock prices. **Technical analysis** has no value
- **Empirical research** generally confirms that markets are weak form efficient; successive price changes are generally random and that the correlation between stock prices from one day to the next is virtually zero.

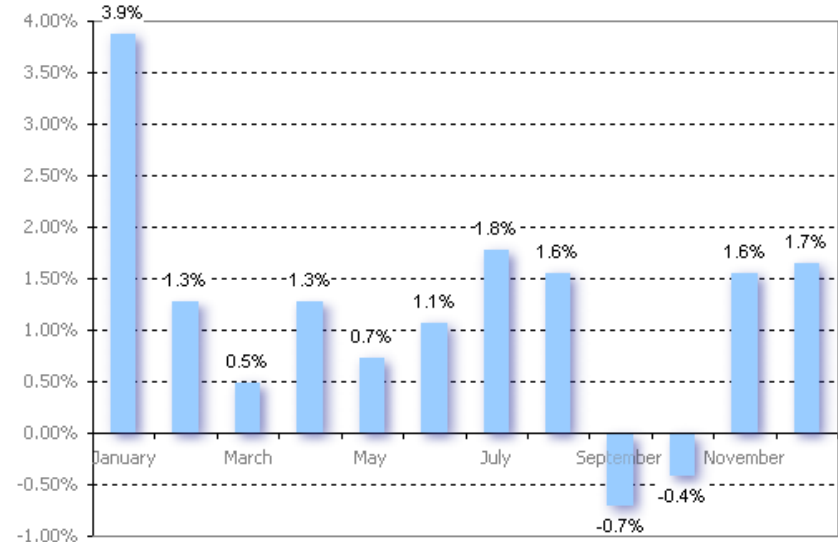
Efficient Capital Markets: The Semistrong Form

- **Meaning:** stock prices fully reflect **all public information**, including earnings and dividend news, P/E ratios, economic and political news, etc.
- **Implications:** Investors who base their decisions on public information should not earn abnormal return consistently because the security prices already reflects all such new public information. So, **fundamental analysis** has no value.
- **Empirical research:** evidence is mixed.
 - Studies found that investors *do* make abnormal returns from earnings surprises, January Effect, P/E ratios, and small, neglected firms – against semistrong EMH
 - Studies found that investors *don't* make returns from economic and political news, corporate events such as M&A – support semistrong EMH

Efficient Capital Markets: The Semistrong Form

- *The January effect is a calendar effect wherein stocks, especially small-cap stocks, have historically tended to rise markedly in price during the period starting on the last day of December and ending on the fifth trading day of January.*
- *This effect is owed to year-end selling to create **tax losses**, recognize capital gains, effect portfolio window dressing, or raise holiday cash.*

Returns by Month of the year - 1927 - 2001



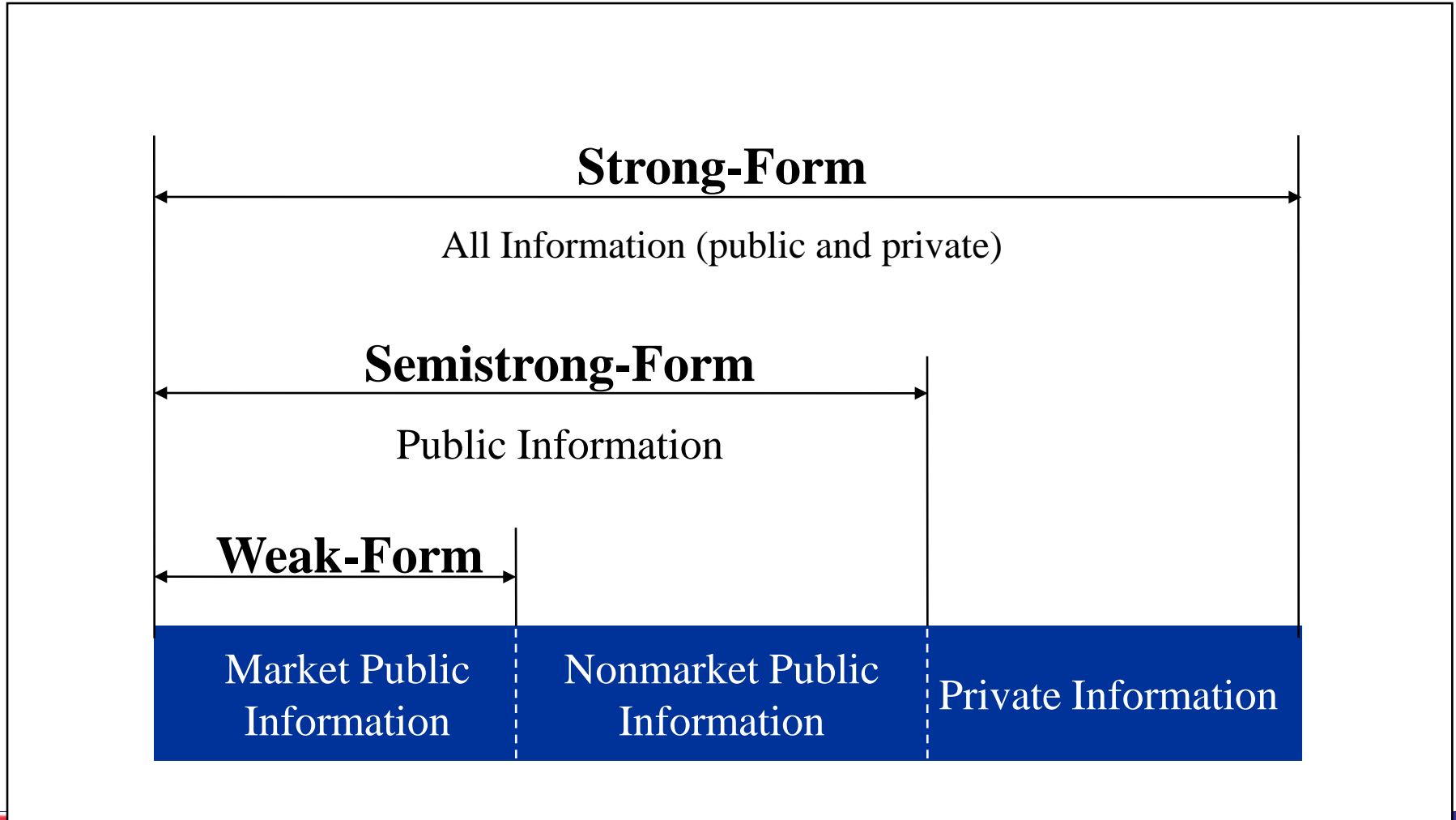
Source: Haugen, R. and J. Lakonishok, *The Incredible January Effect*



Efficient Capital Markets: The Strong Form

- **Meaning:** Current stock prices fully reflect all information about the firm, **both public and private**.
- **Implication:** Investors cannot make abnormal returns consistently by trading on **inside information**.
- **Empirical research:**
 - Studies found that insiders (directors, officers, etc.) *do* earn abnormal returns from trading – **against** strong EMH
 - Studies found that fund managers *don't* make abnormal returns consistently. They cannot outperform a buy-and-hold strategy - **support** strong EMH.

Efficient Capital Markets: Summary



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Insider Trading

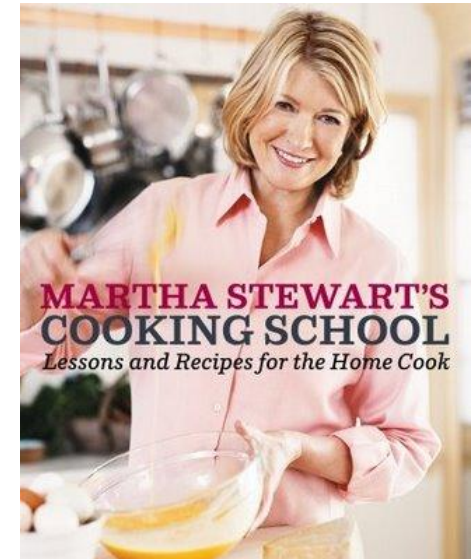
- Inside Information** is defined as information about a company that is both material and nonpublic.
- **Material** means the information has a substantial impact on the prices of securities.
 - Examples: *takeovers, forthcoming press coverage, earnings surprises, issuance or denial of patents, substantial mineral finds, approvals of a product*
 - **Nonpublic** means it has not been generally disclosed to the marketplace.

Insider Trading: Famous Cases



- **Raj Rajaratnam** was the founder of the once mighty hedge fund firm **Galleon Group**. The firm fell apart after Rajaratnam was arrested in 2009 for conspiring to trade using insider information. The scheme could have brought in profits of some \$20 million, according to the U.S. Government.

- Style guru and media magnate **Martha Stewart** was convicted of selling ImClone stock after finding out regulators had rejected an application for the company's new cancer drug, Erbitux. She was sentenced to 10 months, split between prison and home confinement, and fined \$30,000. Her stock broker, Peter Bacanovic, was also convicted.



Insider Trading: A Case Study

- On a Saturday afternoon, **Bruce Winslow**, a fund manager of Kramer Asset Management, is walking back home when he comes across a briefcase on the sidewalk.
- The street is deserted. He picks up the briefcase, takes it home with him, opens it, and finds that the owner is **Tom Harcourt**, his former classmate and rival at business school.
- Tom is now a senior analyst at Lamont, a major investment banking firm.

Insider Trading: A Case Study

- Bruce also finds flash drive. He connects it with his home computer and starts looking through files.
- He finds spreadsheets of various financial statements and scenarios for a **takeover** of VitaLife by Paramex Medical. He copies all these files into his computer.
- On Monday morning, Bruce returns Harcourt's briefcase, wrapped in plain brown paper, without any indication of where the parcel has come from.

Insider Trading: A Case Study

- Bruce then puts in orders to buy shares of VitaLife for the accounts of his wife and his mother-in-law.
- A week later, Paramex announces a takeover of VitaLife, and the share price of VitaLife increases by 30% in one day.

Solutions:

- This is clearly a use of inside information because it is both material and nonpublic.
- Bruce used it with the intention of self-gain. That is not only unethical, but can also be illegal in most countries.

Insider Trading: A Thai Case Study



- *The Securities and Exchange Commission on December 23, 2010, fined Sinsathien Aimpoolsub and Somphit Phuphiewngern for **use of inside information** for the trading on Professional Waste Technology (1999) Co Ltd.*
- *The SEC said Sinsathien, managing director and CEO of the company, bought PRO's shares through Somphit's account during January 11 - 31, 2007 while the company was under a joint venture negotiation with EnviroHub Holding. Sinsathien represented PRO in the negotiation, which was then not yet disclosed to the public.*
- *The watchdog viewed that Sinsathien violated the Securities and Exchange Act's Article 241, while Somphit was fined as an accomplice. Both agreed to the penalty: Bt500,000 imposed on Sinsathien and Bt333,333 on Somphit.*

Insider Trading: A Thai Case Study



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Stock Market Indexes:

Introduction

- **Security Market Indices** – are intended to measure the values of different target markets (security markets, market segments, or asset classes)
 - *DJIA measures values of 30 US blue-chip stocks*
- **Purposes of Indices**
 - Gauges of market sentiment
 - Proxies for measuring and modeling returns, beta, and risk-adjusted performance.
 - Proxies for asset classes in asset allocation models
 - Benchmark for actively managed portfolios
 - Model portfolios for investment products such as index funds and ETFs
- **Return Calculations**
 - **Price Return** – reflects only the prices
 - **Total Return** – reflects prices + reinvestment income

Stock Market Indexes: Index Calculations

- **Price Weighting** : the weight on each constituent security is determined by dividing its price by the sum of all the prices.
 - *DJIA*
- **Value (or Market Cap) Weighting** : the weight on each constituent security is determined by dividing its market capitalization by the total market capitalization of all the securities in the index.
 - *S&P 500, SET Index*
- **Equal Weighting** : assign an equal weight to each constituent security at inception.
 - *Russell 2000 Equal Weight*
- **Fundamental Weighting** – weighted by other measures (book value, earnings, etc.) that are independent of security price.
 - *Russell Fundamental Global Index*
- **Float-adjusted** – exclude shares held by controlling shareholders.

Stock Market Indexes: Index Calculations

- Information about three stocks is as follows:

Stock	30/12/2009 (The Base Period)			30/12/2010		
	Price (\$) (1)	# of Shares (2)	Market Value (3) = (1)×(2)	Price (\$) (1)	# of Shares (2)	Market Value (3) = (1)×(2)
A	10	10,000	100,000	20	10,000	200,000
B	100	100	10,000	1	100	100
C	2	20,000	40,000	30	20,000	600,000
Total	112	30,100	150,000	51	30,100	800,100

Stock Market Indexes: Price-weighted Index

- Price-weighted index:

$$\text{Price-weighted}_{09} = \frac{10 + 100 + 2}{3} = 37.33$$

$$\text{Price-weighted}_{10} = \frac{20 + 1 + 30}{3} = 17$$

$$\text{Index}_{09} = 100$$

$$\text{Index}_{10} = \frac{100}{37.33} \times 17 = 45.54$$

$$\text{Index Return} = \frac{45.54 - 100}{100} \times 100 = -54.46\%$$

Stock Market Indexes: Value-weighted Index

- **Value-weighted index**, assuming the base value is 100:
 - **As of 30/12/2009:**
 - Market Value = 150,000
 - **As of 30/12/2010:**
 - Market Value = 800,100

$$Index_{09} = 100$$

$$Index_{10} = \frac{100}{150,000} \times 800,100 = 533.4$$

$$\text{Index Return} = \frac{533.4 - 100}{100} \times 100 = 433.4\%$$

Stock Market Indexes: Equal-weighted Index

- **Equal-weighted index**, assuming the base value is 100:
 - Assuming on 30/12/2009 an equal amounts of \$100 were invested in each of the stocks A, B and C.
 - Thus, the information about the investment is as follows:

Stock	30/12/2009 (The Base Period)			30/12/2010			Holding Period Return (7) = (4)/(1) -1
	Price (\$) (1)	# of Shares (2)	Market Value (3) = (1)×(2)	Price (\$) (4)	# of Shares (5)	Market Value (6) = (4)×(5)	
A	10	10	100	20	10	200	100%
B	100	1	100	1	1	1	-99%
C	2	50	100	30	50	1,500	1400%

Stock Market Indexes: Equal-weighted Index

Equal - weighted index, using **Arithmetic Mean**:

- **As of 30/12/2009:**

- Market Value = 300

- **As of 30/12/2010:**

- Market Value = 1,701

$$Index_{09} = 100$$

$$Index_{10} = \frac{100}{300} \times 1,701 = 567$$

$$Index\ Return = \frac{567 - 100}{100} \times 100 = 467\%$$

$$= \frac{100\% + (-99\%) + 1,400\%}{3} = 467\%$$

Stock Market Indexes: Summary

- The rate of returns measured by the three predominant weighting schemes are summarized below:

	Priced-weighted	Value-weighted	Equal-weighted
Return	-54.46%	+433.4%	+567%

Stock Market Indexes: The Case of Stock Split

- Suppose Stock C has **2-for-1 split** in 2010

Stock	30/12/2009 (The Base Period)			30/12/2010		
	Price (\$) (1)	# of Shares (2)	Market Value (3) = (1)×(2)	Price (\$) (1)	# of Shares (2)	Market Value (3) = (1)×(2)
A	10	10,000	100,000	20	10,000	200,000
B	100	100	10,000	1	100	100
C	2	20,000	40,000	15	40,000	600,000
Total	112	30,100	150,000	51	30,100	800,100

Stock Market Indexes: The Case of Stock Split

- Price-weighted index:

$$\text{Price-weighted}_{09} = \frac{10+100+2}{3} = 37.33$$

$$\text{Price-weighted}_{10} = \frac{20+1+30}{3} = 17$$

$$\text{Price-weighted}_{\text{split}} = \frac{20+1+15}{x} = 17$$

$$x = 2.18$$

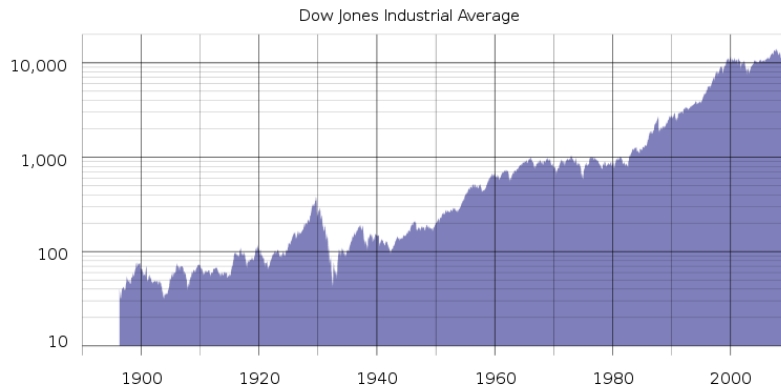
The divisor must be adjusted after a stock split

$$\text{Index}_{09} = 100$$

$$\text{Index}_{10} = \frac{100}{37.33} \times 17 = 45.54$$

Stock Market Indexes:

Dow Jones Industrial Average



- The Dow Jones Industrial Average was founded by Charles Dow in 1896, and represented the dollar average of 12 stocks from leading American industries. The components were increased to 30 stocks in 1928.
- Today, DJIA is a **price-weighted index** that is calculated by dividing the sum of the prices of the 30 component by a number called the DJIA Divisor. The index divisor is updated periodically and adjusted to offset the effect of stock splits. The current value of **the Dow Divisor** is **0.132129493**.

Stock Market Indexes: Summary

- **Price Weighting**

- **Pro:** simple calculation
- **Con:** high-priced stocks have greater impact
- **Con:** the **divisor** must be adjusted when a stock splits.

- **Value Weighting**

- **Pro:** securities are held in proportion to their value.
- **Con:** securities whose prices have risen have a greater weight in the index, and also greater impact

- **Equal Weighting**

- **Pro:** simple calculation
- **Con:** large securities are underrepresented and small securities are overrepresented
- **Con:** need frequent **rebalancing** to maintain equal weights

Today's Outline

- ❖ Introduction
- ❖ Primary and Secondary Market
- ❖ Organization and Functioning of Security Markets
- ❖ Efficient Capital Markets
- ❖ Insider Trading
- ❖ Stock Market Indexes
- ❖ Introduction to SET

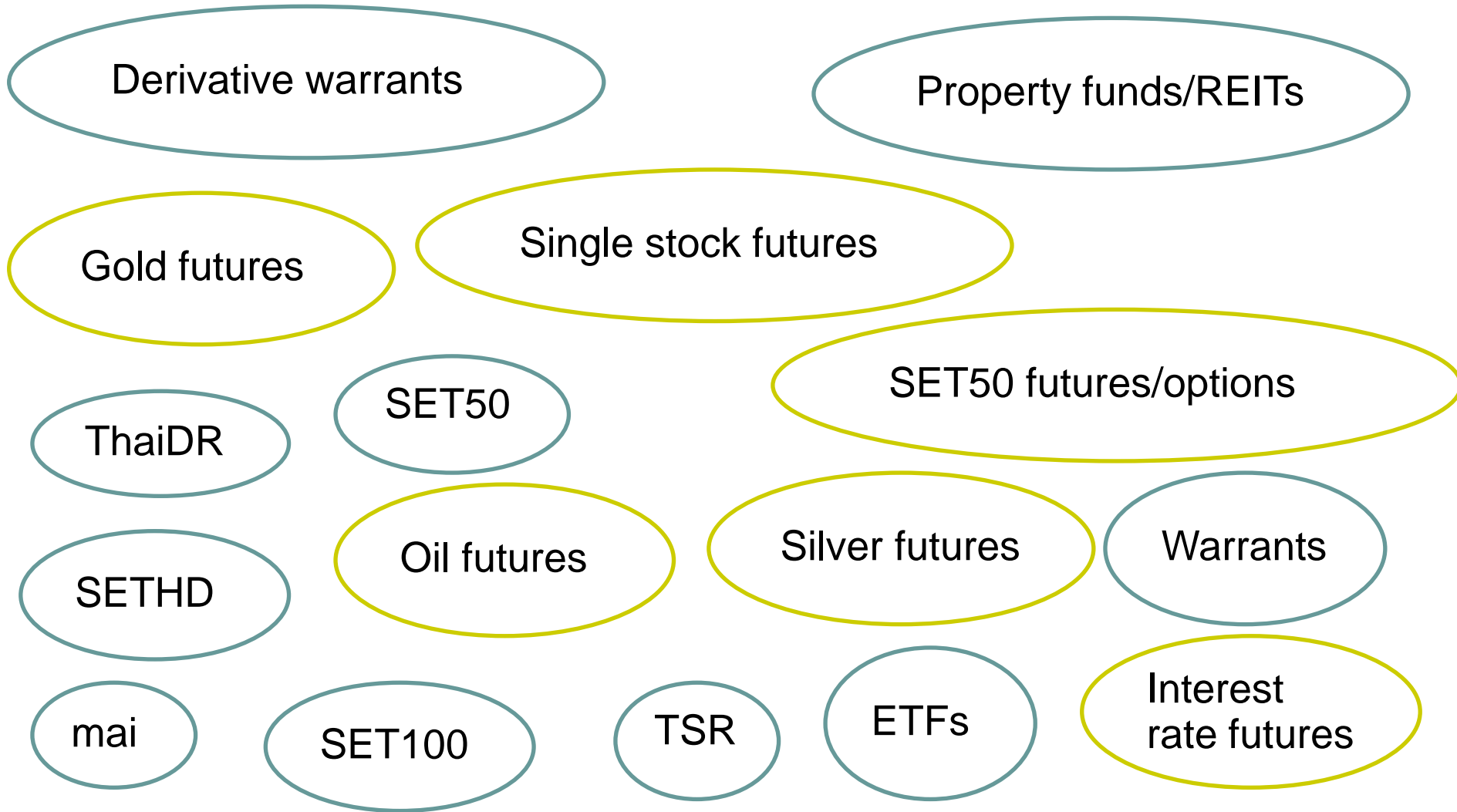
Introduction to SET:

Trading hours

Trading session		Trading method	Remark
Pre-opening I	9:30 – T1	Call market	T1 is the random opening time between 9:55 – 10:00 for calculating the opening price for the morning trading session.
Morning Trading session	T1 – 12:30	AOM, PT	-
Intermission	12:30 – 14:00	-	-
Pre-opening II	14.00 – T2	Call market	T2 is the random opening time between 14:25 – 14:30 for calculating the opening price for the afternoon trading session.
Afternoon trading session	T2 – 16:30	AOM, PT	The trading system stops matching all orders at 16:30 hrs.; however orders may still be sent for queuing until the market closes (T3).
	16:30 – T3	Call market, PT	T3 is the random closing time between 16:35 – 16:40 for calculating the closing price of each day.
Off-hour trading	T3 – 17:00	PT	The trading system allows only PT transactions to be recorded.

Source: SET

Introduction to SET: Equity VS Derivatives market



Introduction to SET:

Product overview >> Index

Index	Index type	Scope	Calculation methodology
SET index	Composite	All common stocks trading on SET	Market capitalization-weighted price index
SET50/ SET100 index	Composite	Top 50/100 listed companies on SET in term of large market capitalization, high liquidity, and compliance with requirements regarding the distribution of shares to minor shareholders	
SET high dividend 30 Index	Strategy	30 listed companies in term of large market capitalization, consistently traded with high liquidity, and constantly paid high dividend yields	Market capitalization and dividend yield weighted price index
mai Index	Composite	All common stocks trading on the Market for Alternative Investment (mai)	Market capitalization-weighted price index

Source: SET

Introduction to SET:

Product overview >> equities

As of Nov 21, 11	 ตลาดหลักทรัพย์แห่งประเทศไทย The Stock Exchange of Thailand	
Number of listed co'	473	70
Number of listed securities	768	92
Current market capitalization (billions of THB)	7,911.8	72.3

Source: SETSMART

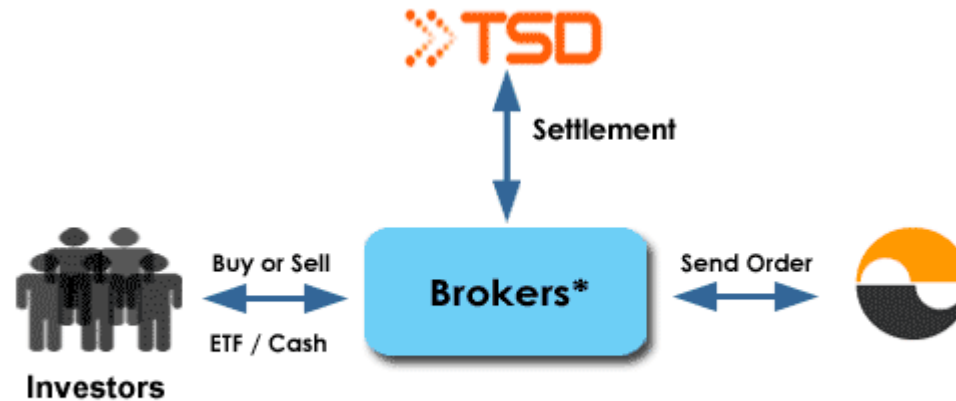
Type of equities

- Ordinary shares
- Preferred shares
- Warrants
- Unit trusts
- Non-Voting Depository Receipt (NVDR)
- Depository Receipt (DR)

Introduction to SET: Product overview >> ETFs (1/2)

ETF – Exchange-traded fund

- ETF is an open-ended mutual fund that is traded on a stock exchange.
- ETF enables investors to instantaneously buy or sell via a securities broker, at anytime during the trading hours at the prevailing price when the order is executed.
- Real-time NAV is provided.
- ETF has a designated market maker or a liquidity provider quoting bid and offer to ensure that investors can buy or sell ETF at the market price at anytime.



* Investors can submit an order, buy or sell, through all SET member's brokers

Source: SET

Introduction to SET:

Product overview >> ETFs (2/2)

Topic	ETF	Stock	Open-ended fund
An exchange traded product	✓	✓	✗
Diversification	✓	✗	✓
Market maker	✓	✗	✗
Trading channels	A securities broker		An asset management (a fund issuer)
Trading hours	During exchange trading hours		Specified by a fund issuer
Trading price	Real-time market price		End-of-day price

Source: SET

Introduction to SET:








Product overview >> derivatives (1/3)

- **Derivative** is a financial instrument whose price is dependent upon or derived from one or more underlying assets. The derivative itself is merely a contract between two or more parties. Its value is fluctuations in the underlying asset.
- **Type of derivatives**
 1. **Futures** – a standardized contract between two parties to exchange a specified asset of standardized quantity and quality for a price agreed today with delivery occurring at a specified future date.
 2. **Options** – a contract between two parties for a future transaction on an asset at a reference price. The buyer of the option gains the right while the seller incurs the corresponding obligation to fulfill the transaction.
- **Advantage of future trading**
 - High leverage
 - Make profit no matter the market conditions

Source: TFEX

Introduction to SET:

Product overview >> derivatives (2/3)

Type of derivatives products	Underlying asset	First trading day
 futures	SET50 index	April 28, 2006
 options	SET50 index	October 29, 2007
 futures	Single stocks	November 24, 2008
 futures	Gold 50 baht	February 2, 2009
	Gold 10 baht	August 2, 2010
 futures	BIBOR	November 29, 2010
 futures	Silver	June 20, 2011
 futures	Brent crude oil	October 17, 2011

- **What will come next?**
- **Which product is the most popular?**

Source: TFEX

Introduction to SET:

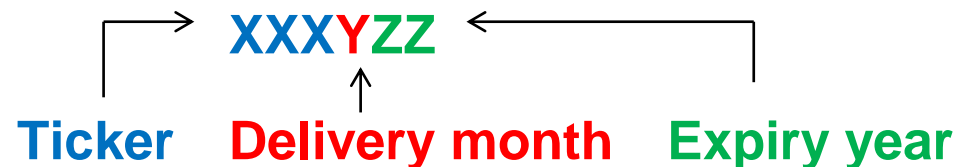
Product overview >> derivatives (3/3)

Ticker symbol

Products	Ticker
SET50 index futures	S50
SET50 index option: call options	S50C
SET50 index option: put options	S50P
Stock futures	Stock symbol
Gold futures: 50 baht	GF
Gold futures: 10 baht	GF10
Silver futures	SV
Oil futures	BR
5Y gov bond futures	TGB5

Delivery months

F	January	N	July
G	February	Q	August
H	March	U	September
J	April	V	October
K	May	X	November
M	June	Z	December



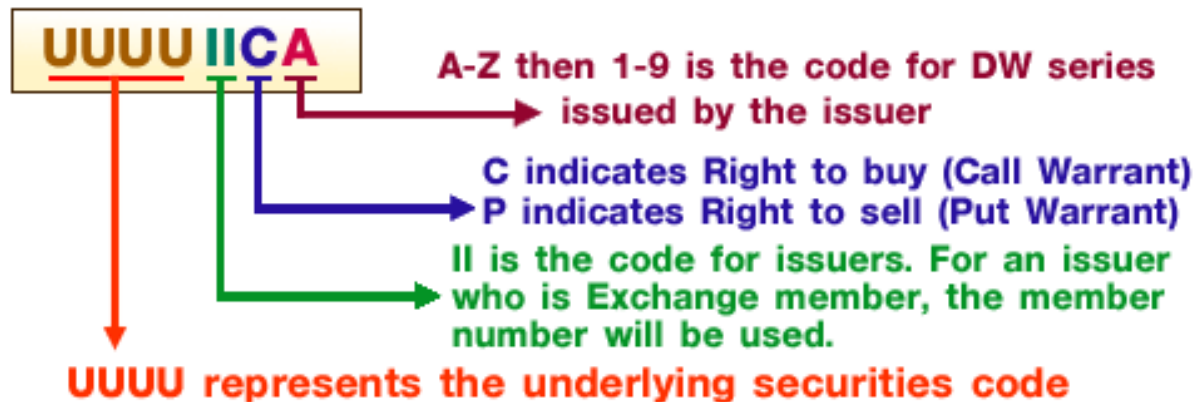
Example: S50Z12
 S50Z12C620
 GFM12
 SVV12

Source: TFEX

Introduction to SET:

Product overview >> derivative warrants (1/2)

- **Derivative warrants (DW)** are financial instruments that the issuers give rights to the buyers to buy the underlying securities in the futures at pre-determined price, quantity, and period as specified by the issuer.
- A DW issuer is a third party, which is not related to the listed company issuing the underlying securities.
- DW issuers are required by SET to have liquidity providers (market makers) to provide continuous quotes so that investors will be able to trade DW.



Source: SET

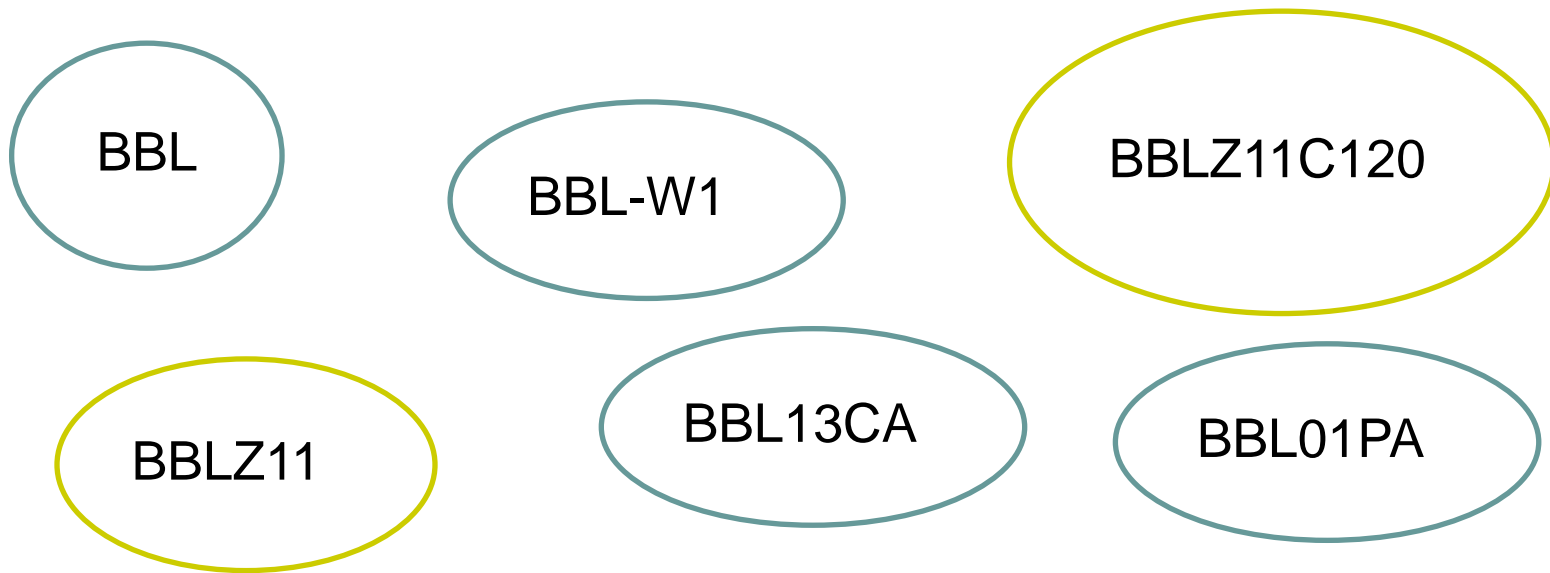
Introduction to SET:

Product overview >> derivative warrants (2/2)

Items	Warrants	Derivative warrants
Issuer	The issuer of the underlying securities	Third party independent of the issuer of the underlying securities.
Issue specification	Specified by the listed company	Specified by the issuer
Expiration date		
Type of rights	Right to buy new shares issued by listed company	Right to buy (call warrant) or sell (put warrant) the underlying securities as specified in DW
Exercise of rights	Total number of outstanding shares of the underlying securities increases because the listed company issues new shares corresponding to the right exercised	No effect to the number of outstanding shares of the underlying securities

Source: SET

Introduction to SET: Product overview >> recap



- **Given that we have 5 products which have same the underlying asset, BBL. What's difference?**
 - Type of products
 - Type of markets
 - Type of exposure
 - Degree of leverage
- **Why do we need a variety of products which based on the same underlying asset?**