CU – MSF

EQUITY ANALYSIS

Susheel Narula

December 2023

SUSHEEL NARULA (สุชีล นารูลา)

EXPERIENCE

ADVISOR / CONSULTANT

- Investment Research to KTX Plc. (since 2020)
- SME Live Exchange Project to the Stock Exchange of Thailand (since 2021)
- Investment Advisor Hunters Investment (2017-2019)

TEACHING INSTRUCTOR

- Chulalongkorn University – MSF, Equity Analysis, English Program (Since 2018)
- Mahidol University (CMMU) – Corporate Finance, Valuation Methods, English Program (Since 2020)
- ABAC – MSc IAM Program, Equity Analysis, English Program (2016-2019) + Advisor to the program

KASIKORNBANK GROUP (2008-2015)

- Investment Consultant to KASIKORNBANK Private Banking (2013-2015)
- Managing Director (Head of Equity Research), Kasikorn Securities (2008-2013)

SIAM COMMERCIAL BANK GROUP (2002-2007)

- Senior Vice President, Head of Strategy - Corporate Banking Group (2007)
- Managing Director (Head of Equity Research), SCB Securities (2002-2005)

FOREIGN BROKERS (1990-2002)

- Equity investment analysis with brokers including Smith New Court (Bank of America Merrill Lynch) and JF Thanakom (JP Morgan)

PROFESSIONAL INTERESTS

- Designed and copyrighted SME Competitive Intelligence (SME CI) tool set to be used in the SET's SME Live Exchange Project.
- Designed and copyrighted Business Scoring that provides a strategic framework for targeted development.
- Published a paper on a free publishing website on the use of forward-looking fundamental-based beta.

ACADEMIC

- MBA: Sasin Business School of Management, Bangkok. Graduated 1990.
- Bachelor of Engineering (Electronics): Punjab Engineering College, Chandigarh, India. Graduated 1987.

COURSE CONTENT

1st understand the company

- Practical knowledge of capital market
  - Linkages between economy, business and capital market

- Business and value drivers
  - Profitability and growth
  - Telling a story through financials

- Modelling financial forecasts
  - Economic and business drivers, business implications

- Valuation
  - Relative valuation
  - Discounted Cash Flows valuation
  - SOTP, Residual, DDM
  - Earnings yields, Required Returns

- Wrap-ups
  - Examples of CFA winning reports
  - Reviews & Problems sharing

ตัวผมอย่างน้อย 3 กลุ่ม

Assignment

- pick large company and analyze

PRACTICAL UNDERSTANDING OF CAPITAL MARKET

stock mkt is global

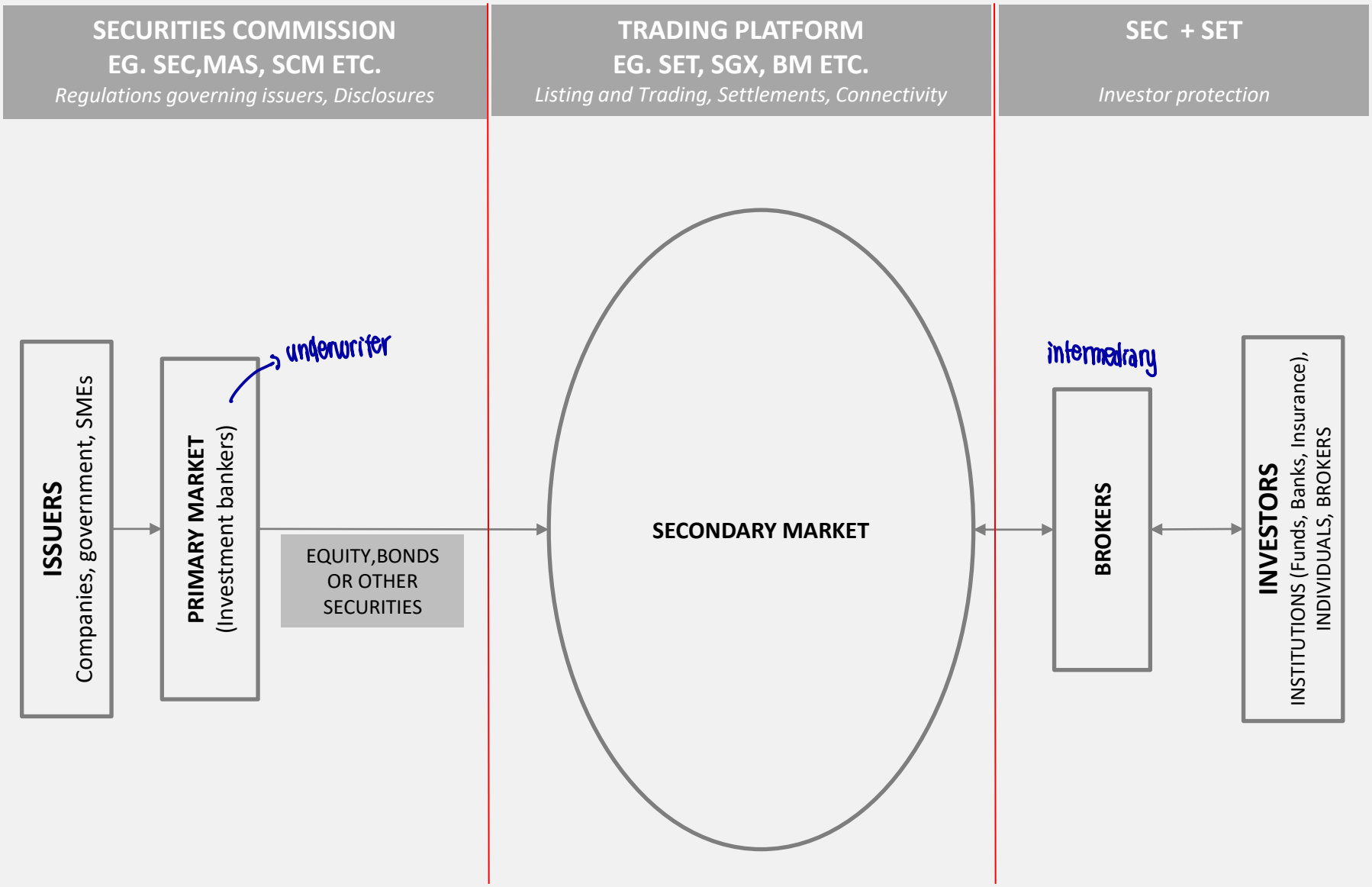
- PARTICIPATE

- RELATE CURRENT EVENTS

MARKS DISTRIBUTION

QUIZ	15%
CLASS PARTICIPATION	25%
GROUP ASSIGNMENT	30%
FINAL EXAM.	30%
TOTAL	**100%**

PLAYERS IN CAPITAL MARKET

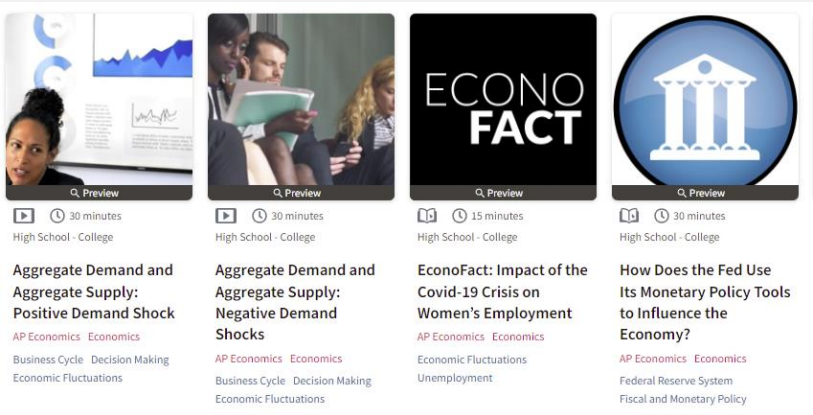


AN EXCHANGE

- A marketplace to exchange financial products
  - Bonds
  - Stocks
  - Commodities
  - Alternatives
  - Derivatives
- 80+ equity exchanges worldwide
- Very fast
- Low and falling transaction costs
- Technology intensive high frequency trader
  ↳ run through algorithm
  ⇓
  e.g. ST arbitrage
- Almost 7 days a week, 24 hours a day

https://ed.ted.com/lessons/how-does-the-stock-market-work-oliver-elfenbaum

https://www.stlouisfed.org/education/tools-for-enhancing-the-stock-market-game-invest-it-forward/episode-1-understanding-capital-markets



https://www.econlowdown.org/resource-gallery

SIZE OUTSTANDING

- Capital Market is heavily dominated by the US and USD
- Major events there have impact globally
- Market participants follow what happen there closely

* Fed → set reference rate
- use USD as medium of exchange across all assets & mkts & commodities
- ↳ affect lending & borrowing rate around the world
- bcs of fund flow, drives (opportunity) → maturity of currency is USD $
  - ↳ bad: short, good: long
  - int rate, size of economy, ex rate, etc.

transaction cost — frictionless mkt: cost of moving money is very low

size of company concept

mkt cap : price × # shares issued by company

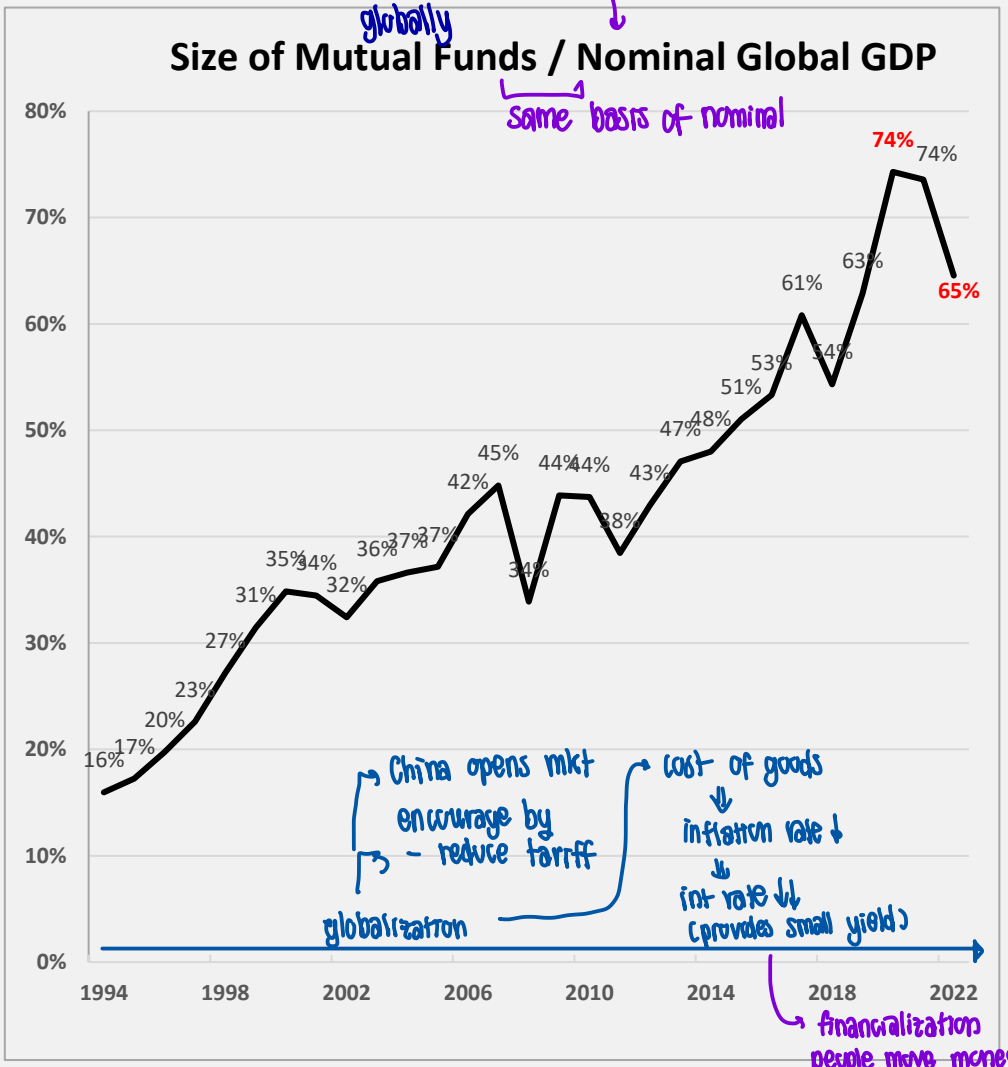
USD Billion (Dec-2022)	EQUITY	BONDS
Global	107,000	133,000
USA almost half	41,000	55,114
Eurozone	6,067	10,626
China	4,701	18,463
% to Global		
Thailand	0.6%	0.3%
Malaysia	0.4%	0.3%
Indonesia	0.6%	0.3%
Singapore	0.6%	0.4%

Source: SIFMA, www.aosef.org

INVESTMENT FUNDS OUTPACING ECONOMIC GROWTH

mkt cap : is nominal concept

globally



shows how large cap mkt

COVID 19

excluded private equity

% CAGR MUTUAL FUNDS	1994-2000	2001-2008	2009-2019	2020-2022	Total 2022 USD Bn
Funds Worldwide	17.7%	9.3%	7.5%	1.3%	64,672
World Nominal GDP	3.3%	9.6%	3.7%	8.7%	
By Geography, at end of period (%)					
USA	59%	47%	47%	48%	**31,293**
EUROPE	28%	38%	34%	30%	**19,597**
ASIA PACIFIC	10%	11%	13%	14%	**9,155**
Crisis	**DOT.COM**	**GFC**	**COVID-19**	-	

Source: ICI.ORG, IMF

Funds above exclude (2022):

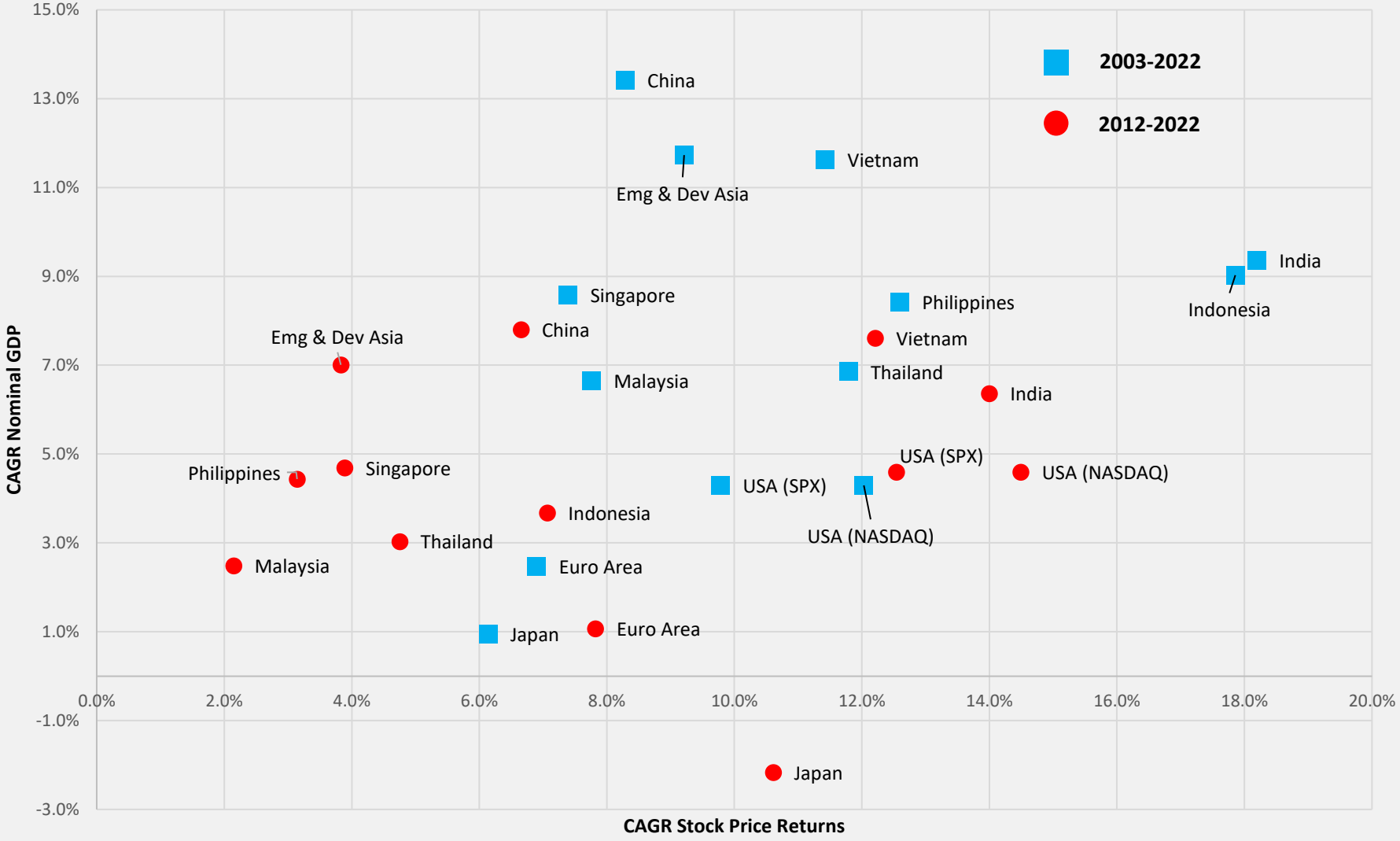
- Private Equity Funds ≈ 12Trn
- Sovereign Funds ≈ 12Trn
- Hedge Funds 3.8Trn
- VC Funds 483Bn

Source: Mckinsey.com, SW Institute, Reuters, Dealroom

① More demand for valuation
② Globalization : barrier to trade goes down

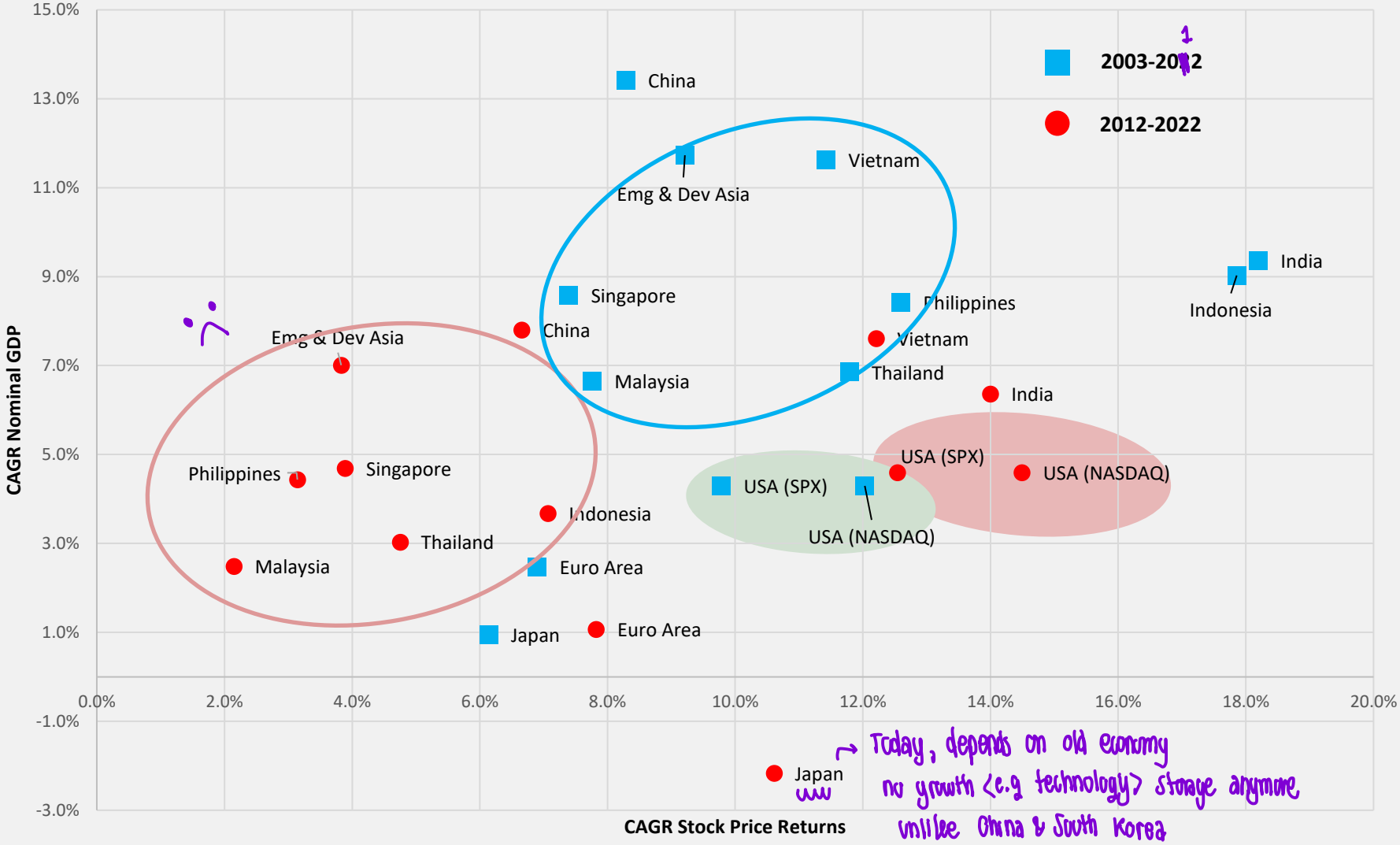
IMPLICATIONS?

WHERE IS THE ASEAN MIRACLE



Source: ICI.ORG, IMF

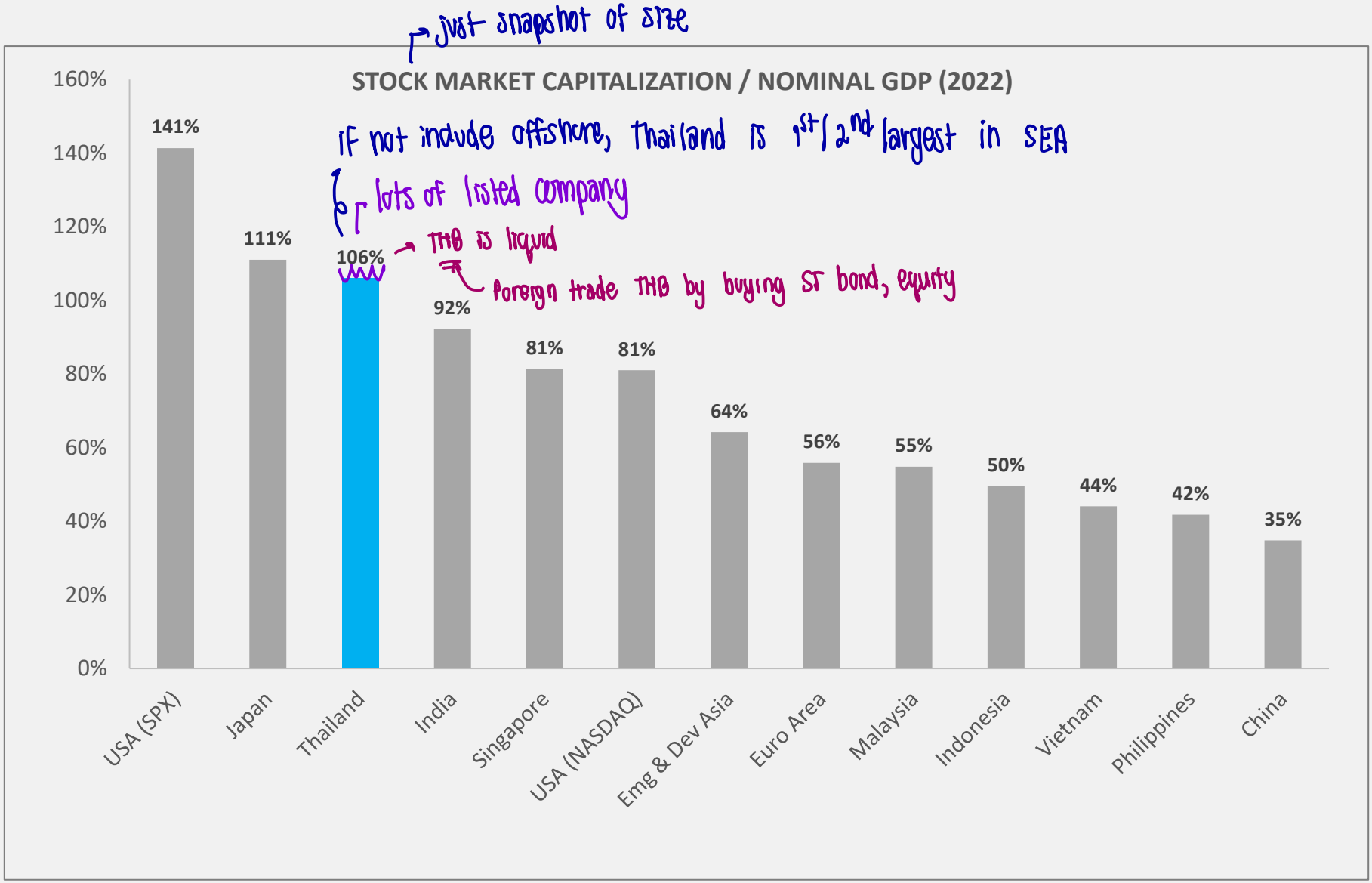
WHERE IS THE ASEAN MIRACLE II



Today, depends on old economy
no growth <e.g technology> storage anymore
unlike China & South Korea

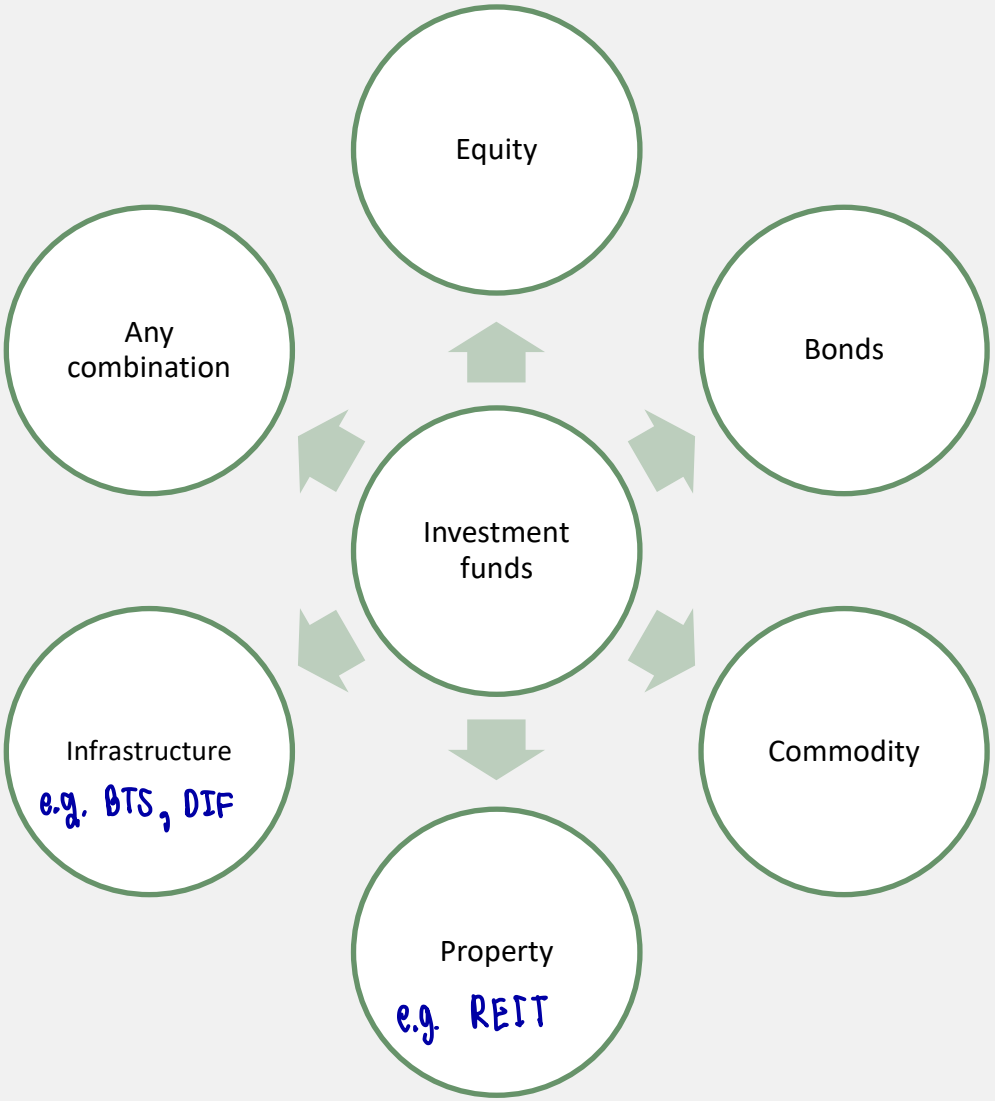
Source: ICI.ORG, IMF

IS THAILAND WELL POSITIONED?



Source: Bloomberg, IMF

MUTUAL FUNDS

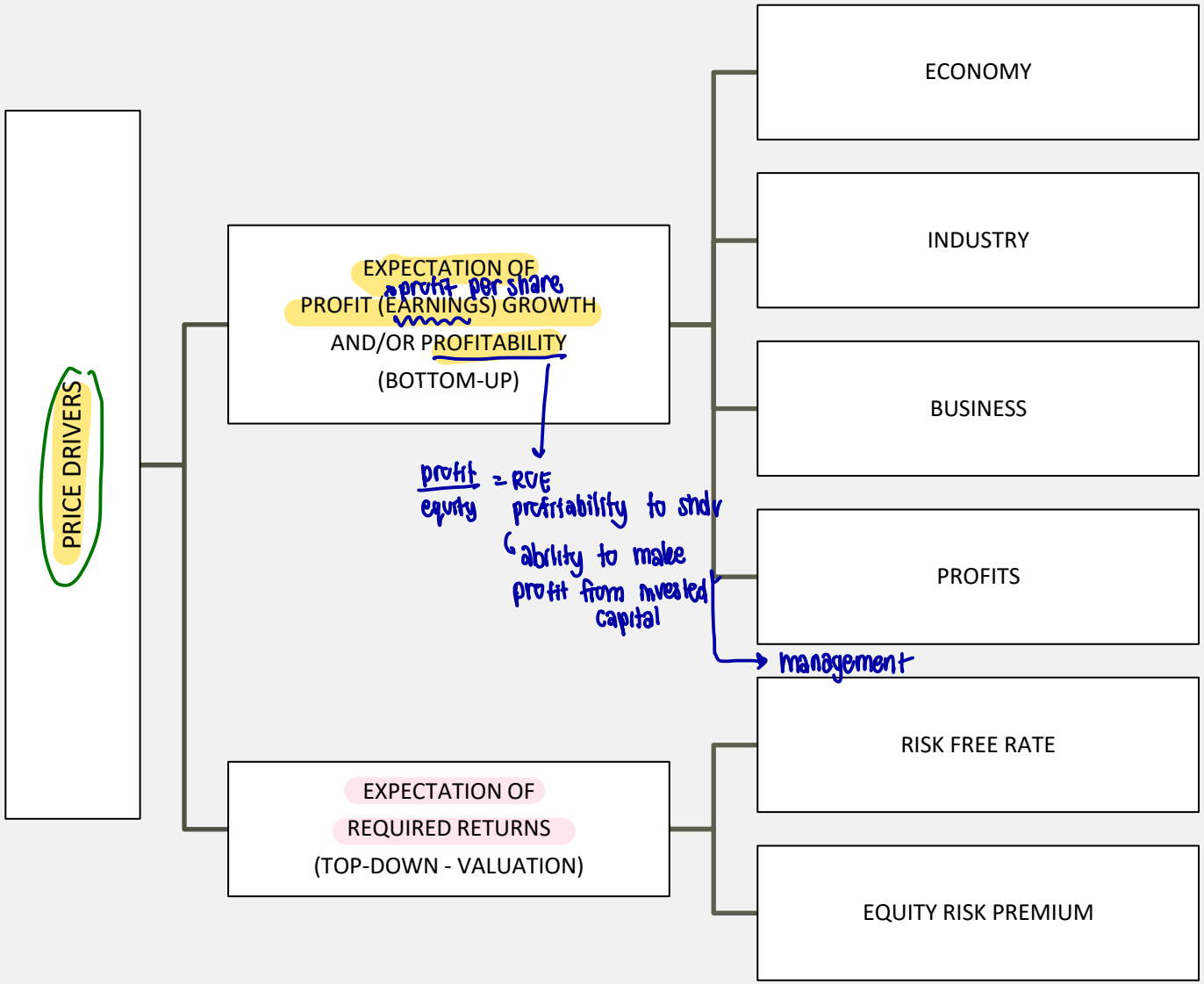


Type
- Open / Closed ended
- Asset class
- Hedged Funds
- Property Funds / REITS

Investment Style
- Growth
- Big Cap
- Index ETF (exchange traded fund)
- Small Cap very large
- Industry
- Value
- High Yields
- Smart Beta
- Factor Investing

Features
- Locked-up
- Entry / Exit fees
- Management fees
- Trigger / Conditional Maturity

EQUITY PRICE DRIVERS



SOURCES OF RETURNS

largest index in the world

Period		SP500 INDEX			SET INDEX		
		annualized Total returns	Change from Earnings	Implied Change from Valuation	Total	Change from Earnings	Implied Change from Valuation
			drives EPS				
LAST 20Y	2002-2022	7.6%	8.4%	-0.8%	8.0%	6.0%	2.0%
LAST 10Y	2012-2022	10.4%	8.0%	2.4%	1.8%	2.2%	-0.4%
LAST 5Y	2017-2022	7.5%	11.6%	-4.1%	-1.0%	-0.5%	-0.5%
LAST 3Y	2019-2022	5.9%	10.8%	-4.8%	1.8%	4.8%	-2.9%

Source: Bloomberg

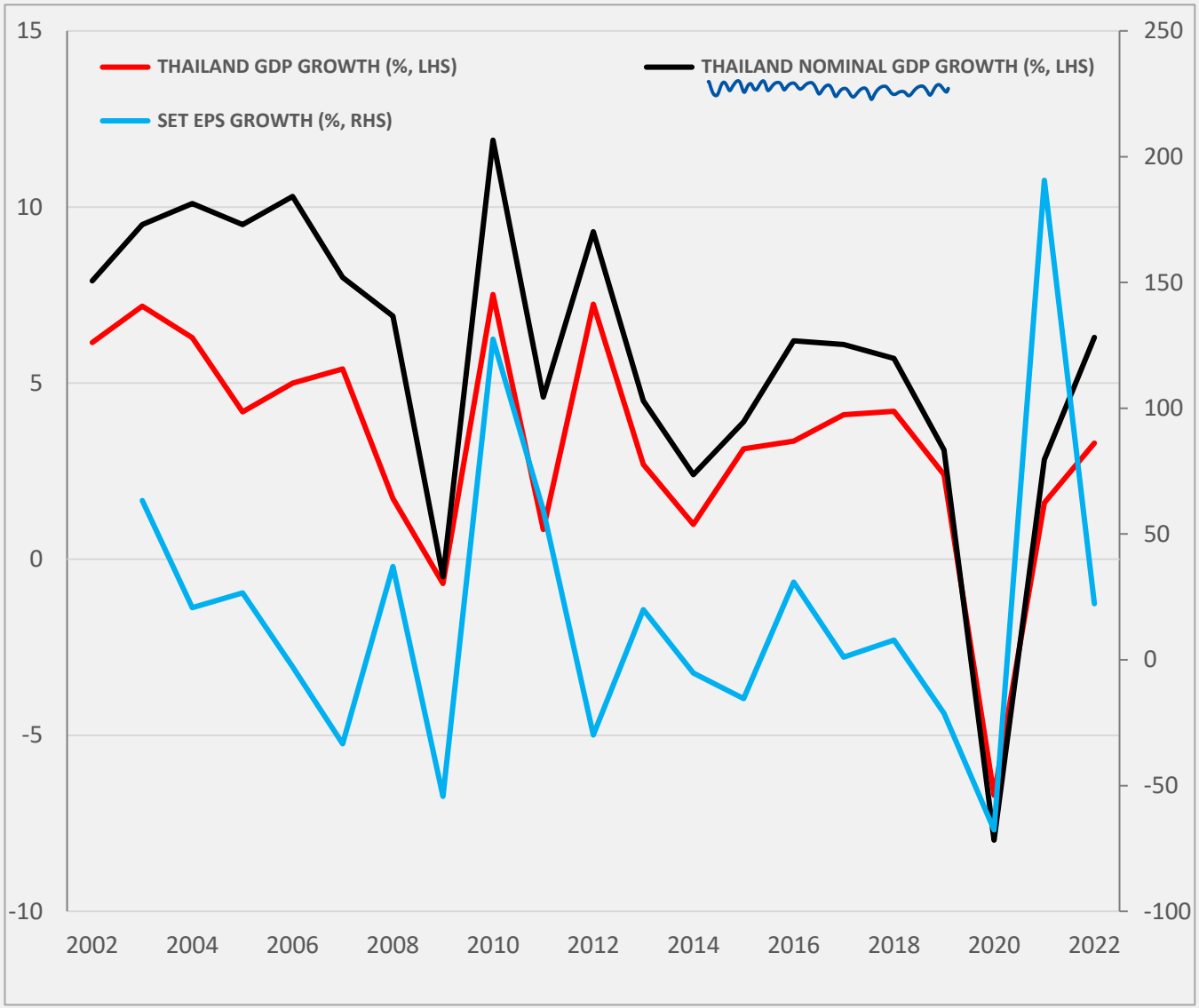
⇓

Came from
- bottom-up

or
- top-down (expected required return)

If required return ↓ ⇒ discount rate ↓ ⇒ valuation ↑

EARNINGS AND ECONOMIC GROWTH



comes from nominal price

CORRELATION	
EPS Change with	
Nominal GDP Growth	= 36%
Real GDP Growth	= 30%

Source: BOT, SET

BUSINESS OPERATES WITHIN ECONOMY

Economy: Government

Regulations, Infrastructure, Security, Consistency, Transparency, Leadership

Consumption

Investment

Export - Import

Politics

Industry: Competitiveness

Size, Comparative Advantage, Capital

LT direction
Strategic Direction
(may be top-down)
directed by govt
e.g. Taiwan

▸ mature : restrict growth
Industry Life-Cycle
▸ growth industry → can capture more growth (high room to grow)

foreign competitors
International Competitiveness +
shows export / import <monthly basis>

https://www.trademap.org/Index.aspx

Business: Management

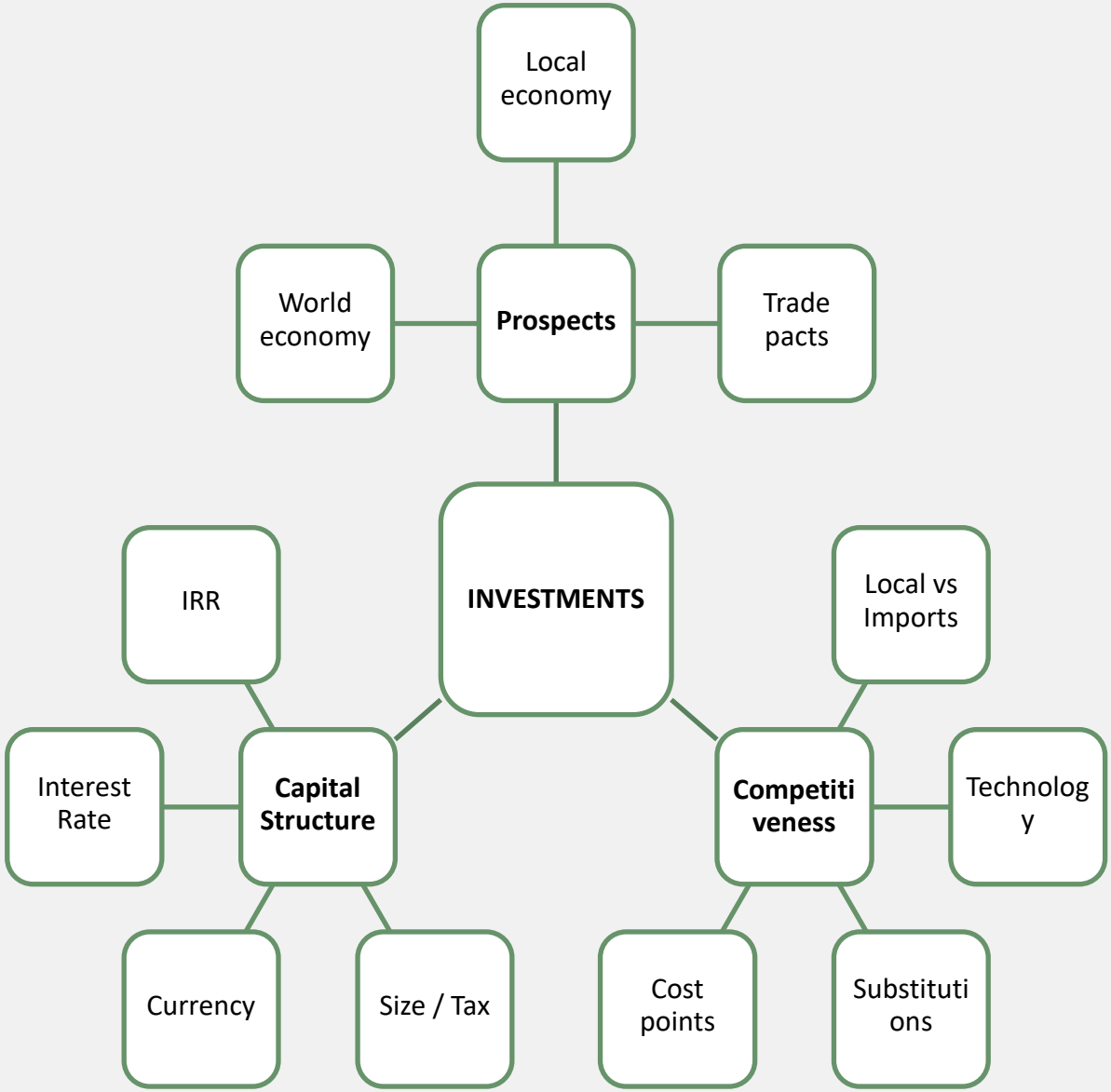
Business Model, Entrepreneurship, Capital Structure

Competitive Advantage

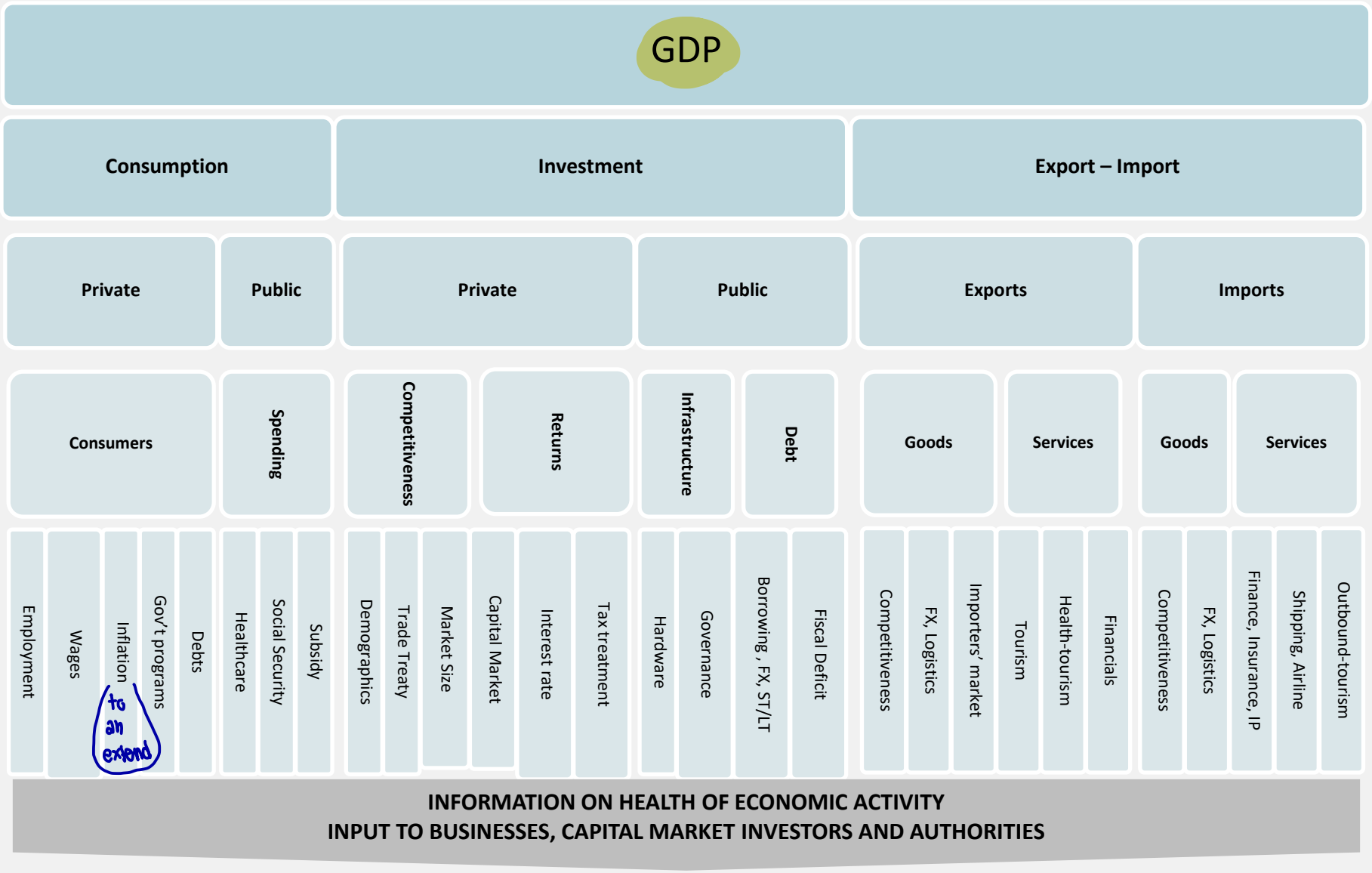
Technology

Market Positioning +

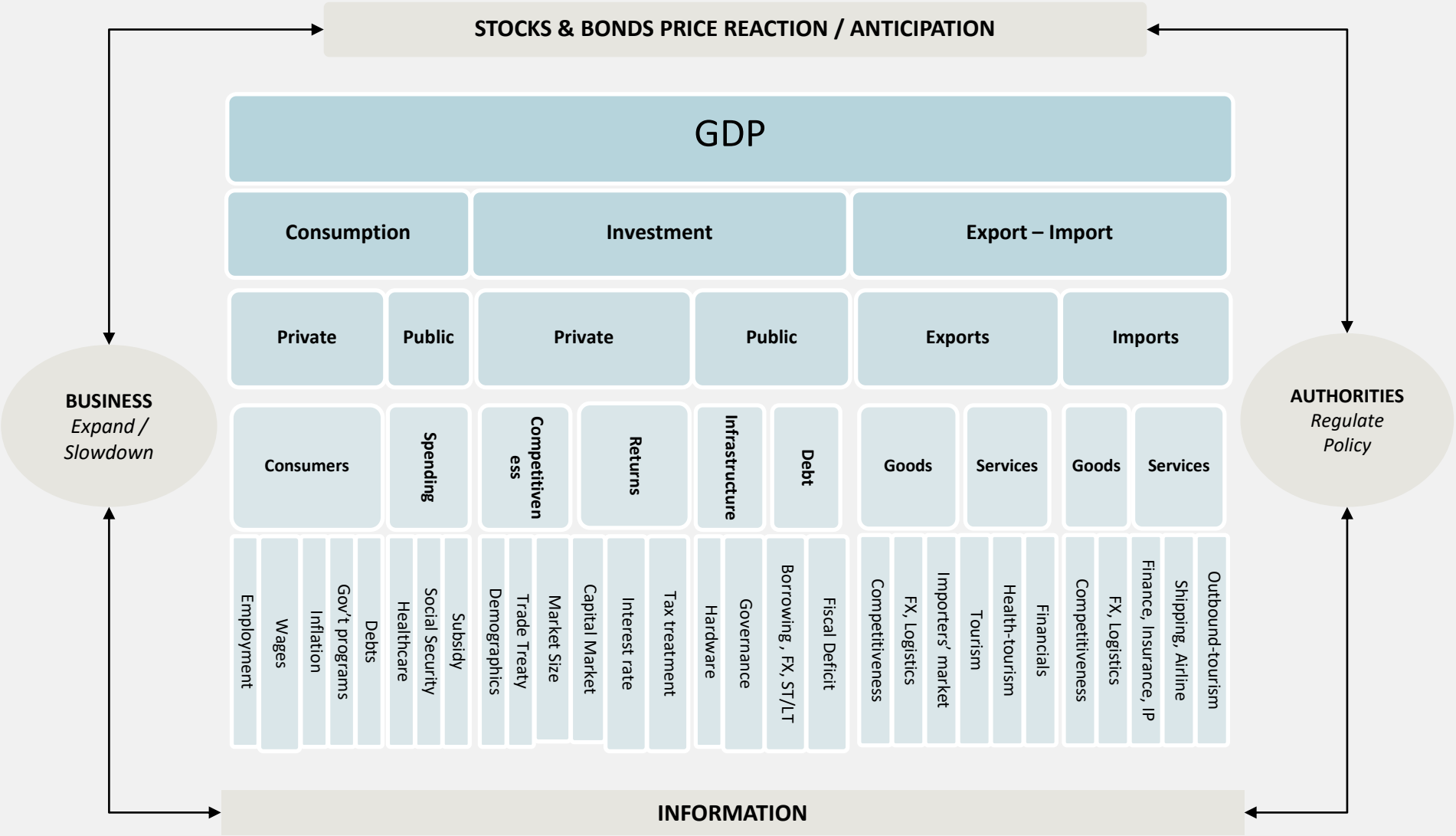
BUSINESS DECISIONS ARE COMPLEX



ECONOMY SENDS OUT A LOT OF SIGNALS



CAPITAL MARKET IS FORWARD LOOKING



ECONOMIC SIGNAL CALENDAR

- Paid subscription contains more analysis including Bloomberg, Wall Street Journal and Financial Times
- Brokers research

- The Bank of Thailand website a 'go to' for Thailand
- Most economic data is released monthly

HOME | RATES & CHARTS | NEWS | ANALYSIS | ECONOMIC CALENDAR | CRYPTOS | VIDEO | EDUCATION | BROKERS | SIGNALS

Recent & Next | Today | Tomorrow | This week | Impact | Country | Category

My Filters | Defaults | Advanced Filters | GMT+7:00

TIME	EVENT	IMPACT	ACTUAL	DEV	CONSENSUS	PREVIOUS
	MONDAY, APRIL 6					
28'	GBP Markit Construction PMI (Mar)				44	52.6
28'	EUR Sentix Investor Confidence (Apr)				-30.3	-17.1
21:30	CAD Bank of Canada Business Outlook Survey				REPORT	
22:30	USD 3-Month Bill Auction					0.085 %
22:30	USD 6-Month Bill Auction					0.1 %
	TUESDAY, APRIL 7					
05:00	NZD NZIER Business Confidence (QoQ) (Q1)					-21 %
05:30	AUD AiG Performance of Services Index (Mar)					47
06:30	JPY Labor Cash Earnings (YoY) (Feb)				2.1 %	1.5 %
06:30	JPY Overall Household Spending (YoY) (Feb)				-3.9 %	-3.9 %
06:50	JPY JP Foreign Reserves (Mar)					$1359 B
07:00	EUR Eurogroup Meeting				ALL DAY	
08:30	AUD Imports (Feb)					-3 %
08:30	AUD Exports (Feb)					-3 %
08:30	AUD ANZ Job Advertisements (Mar)				-2.9 %	0.7 %
08:30	AUD Trade Balance (Feb)					5210 M
11:30	AUD RBA Interest Rate Decision					0.25 %
11:30	AUD RBA Rate Statement				REPORT	
12:00	JPY Coincident Index (Feb) PREL				95.1	95.2
12:00	JPY Leading Economic Index (Feb) PREL				90.4	90.5
13:00	EUR Industrial Production s.a. (MoM) (Feb)				-1 %	3 %
13:00	EUR Industrial Production n.s.a. w.d.a. (YoY) (Feb)				-3.9 %	-1.3 %
13:45	EUR Exports, EUR (Feb)					€40.343 B

https://www.fxstreet.com/economic-calendar
https://www.tradingview.com/markets/currencies/economic-calendar/
https://www.investing.com/economic-calendar/https://www.marketwatch.com/tools/calendars/economic

BANK OF THAILAND

About BOT | Monetary Policy | Financial Institutions | Financial Markets | Payment Systems | Research and Conferences | Statistics

Home > Statistics > Economic and Financial

Statistics
- Financial Markets
- Economic and Financial
  - Economic Indices and Indicators
  - Money and Banking
  - Public Finance
  - External Sector
  - Real Sector
  - Others
- Financial Institutions
- Payment Systems
- Regional Economic and Financial

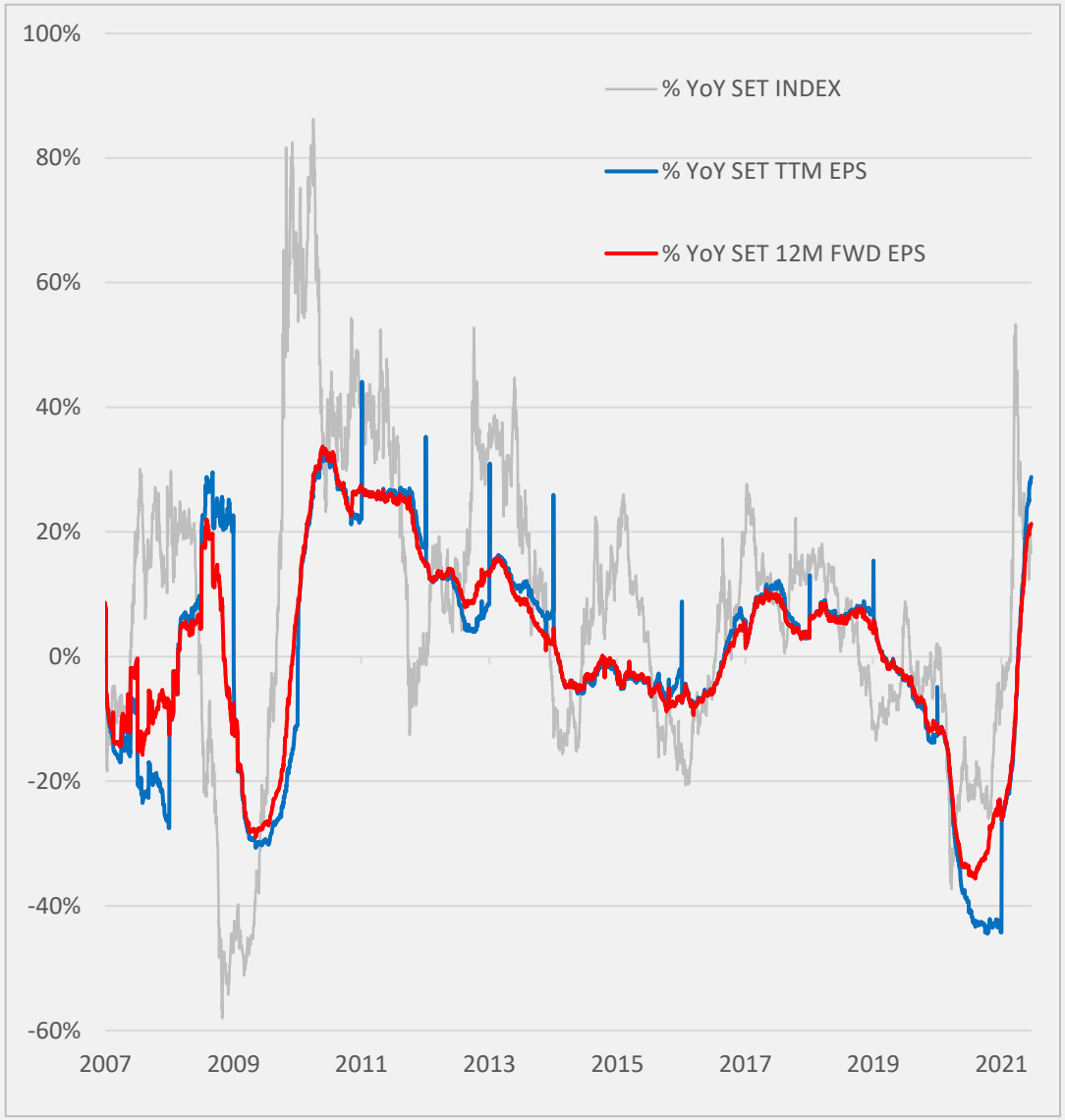
Real Sector Indices

39_S2 and adjusted the indicators in each activity in order to give the better reflection of the current economy and also be in line with

Report ID	Report Name	Metadata	Last Updated
EC_EI_015	Private Consumption Indicators (2000 - Jun 2015)		10 May 2019
EC_EI_015_S2	Private Consumption Indicators (2000 - Feb 2018)		10 May 2019
EC_EI_016	Private Investment Indicators (2000 - Jun 2015)		10 May 2019
EC_EI_016_S2	Private Investment Indicators (2000 - Feb 2018)		10 May 2019
EC_EI_018	Employment Indicators		31 Mar 2020
EC_EI_028	Tourism Indicators (1997 - Aug 2016)		10 May 2019
EC_EI_028_S2	Tourism Indicators		31 Mar 2020

https://www.bot.or.th/English/Statistics/EconomicAndFinancial/Pages/StatRealsectorIndices.aspx

EXPECTATION OF EARNINGS GROWTH



Source: Bloomberg

% YoY SET Index	Correlation
% YoY 12M TRAILING (TTM) EPS	44%
% YoY 12M FORWARD EPS (FWD) ESTIMATE	61%

what happen in the past

forecast

what is forward looking

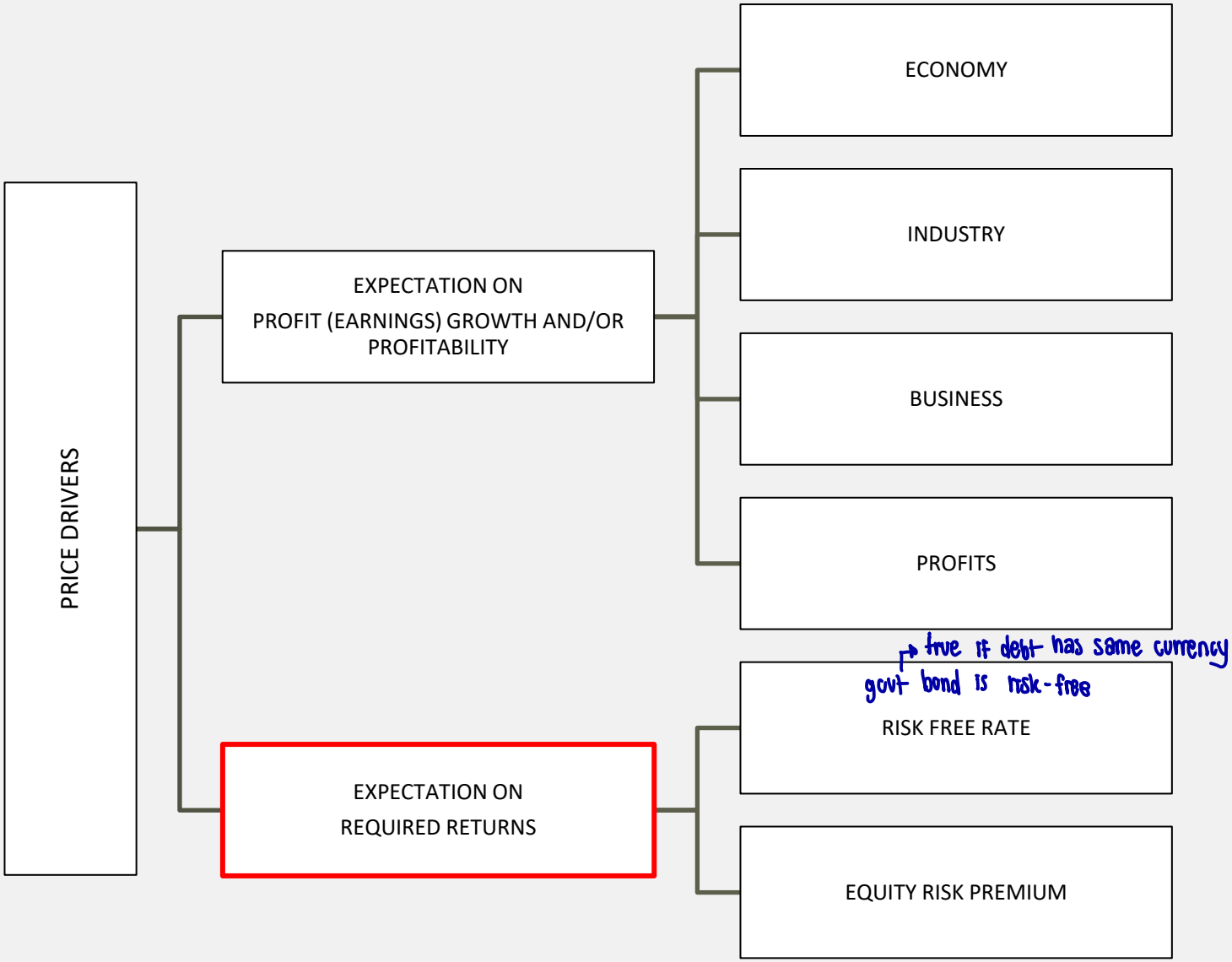
12M FORWARD (FWD) EPS:

- Aggregated earnings of companies (that make up the SET index) expected to make in 12 months from now. This is a commonly adopted approach to achieve a consistent forward-looking time horizon. Aggregates are weighted by market capitalization.

12M TRAILING (TTM) EPS:

- Aggregated reported earnings for the last 4 quarters. Aggregates are weighted by market capitalization.

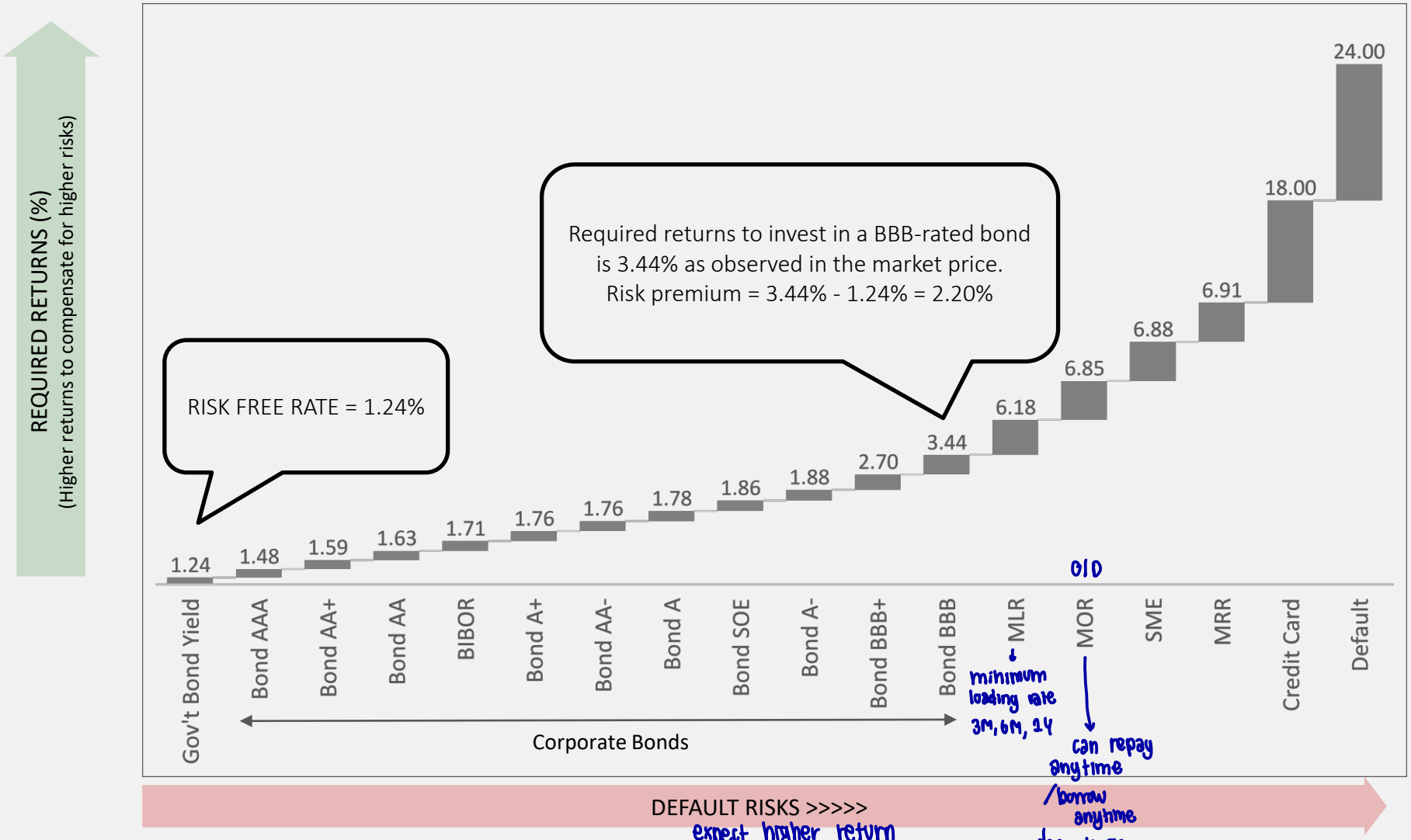
EXPECTATION OF REQUIRED RETURNS



REQUIRED RETURNS = RISK FREE + RISK PREMIUM

Thai BIMA

Thai policy rate Oct 2023 : 2.5%



expect higher return

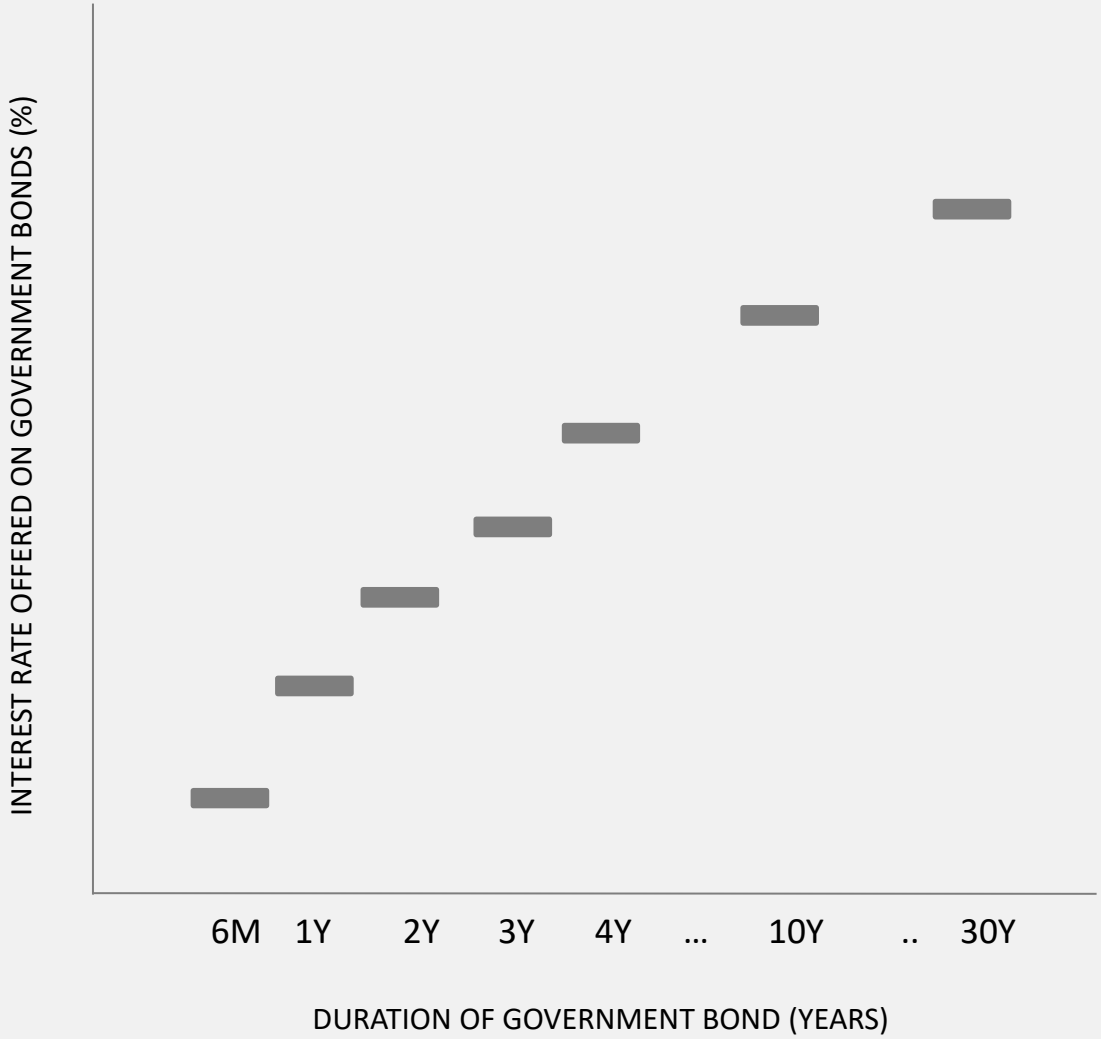
① Higher risk → higher return

② Risk premium = return - risk free rate

Source: Bank of Thailand, a historical date for illustration
All rates based on 1Year maturity where applicable

RISK FREE RATE IS ALSO DURATION DEPENDENT

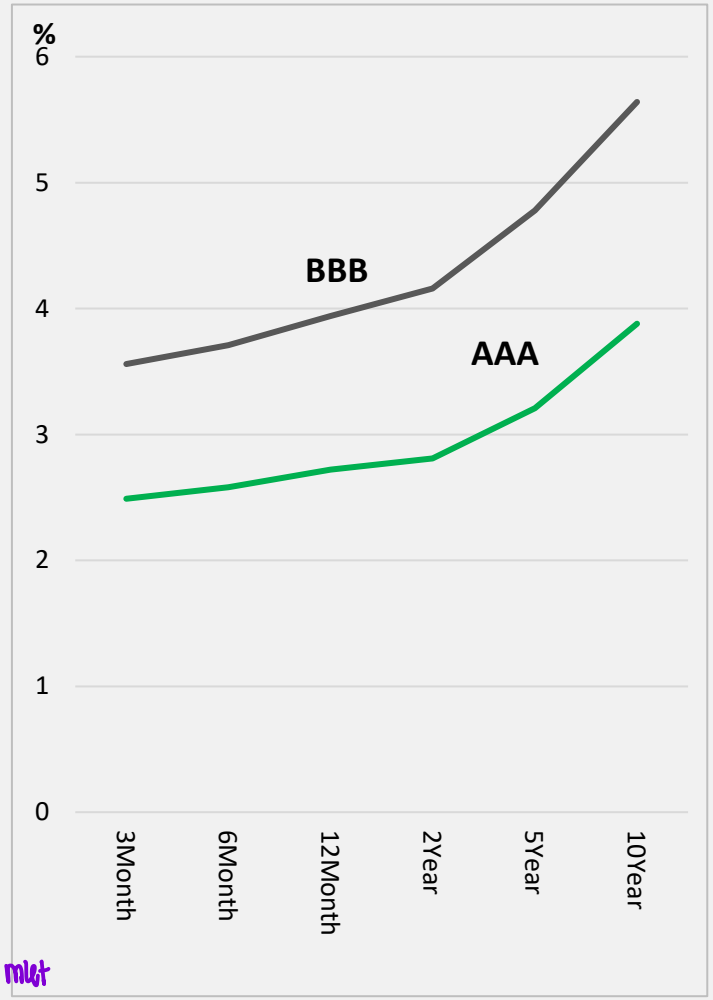
Except recession < inverted yield curve >
expect it will be better in LT



- Longer maturity, higher risks
  - Inflation risk
  - Reinvestment risk
  - Liquidity risk

LONGER TERM + POORER CREDIT = HIGHER CREDIT RISK PREMIUM

% Dec 2019	Savings	3Month	6Month	12Month	2Year	5Year	10Year
DEPOSIT RATE	0.30	0.65	0.90	1.05	1.20	-	-
Thai Gov't Bond Yield (1)	-	1.21	1.22	1.24	1.23	1.33	1.56
AAA Bond Yield (2)	-	2.49	2.58	2.72	2.81	3.21	3.88
AAA Credit Spread (2-1)	-	1.28	1.36	1.48	1.58	1.88	2.32
BBB Bond Yield (3)	-	3.56	3.71	3.94	4.16	4.78	5.64
BBB Credit Spread (3-1)	-	2.35	2.49	2.7	2.93	3.45	4.08
Equity Risk Premium		-	-	-	-	-	4-9 % for equity mkt



Source: Bank of Thailand, TBMA

EARNINGS YIELD

P/E ratio

Ex Price = 10
EPS = 1
P/E = 10 x
↳ take 10 years to break-even
the more P/E, the more expensive

E/P = 10% → If mkt is efficient
↳ this E/P is required rate of return
(earning yield)
(observed (mkt yield))

- Assuming we receive an annual income of Bt1 from an asset forever
- The value of this asset would depend on prevailing required returns (fair interest rate levels)

Required Returns	Value of the Asset	PE Ratio (x)	Earnings Yield
10%	1 Baht/10% = 10 Baht	10 Baht / 1 Baht = 10x	1 Baht / 10 Baht = 10%
5%	1 Baht/5% = 20 Baht	20 / 1 = 20x	1 / 20 = 5%
1%	1 Baht/1% = 100 Baht	100 / 1 =100x	1 / 100 = 1%

risk-free equity risk premium

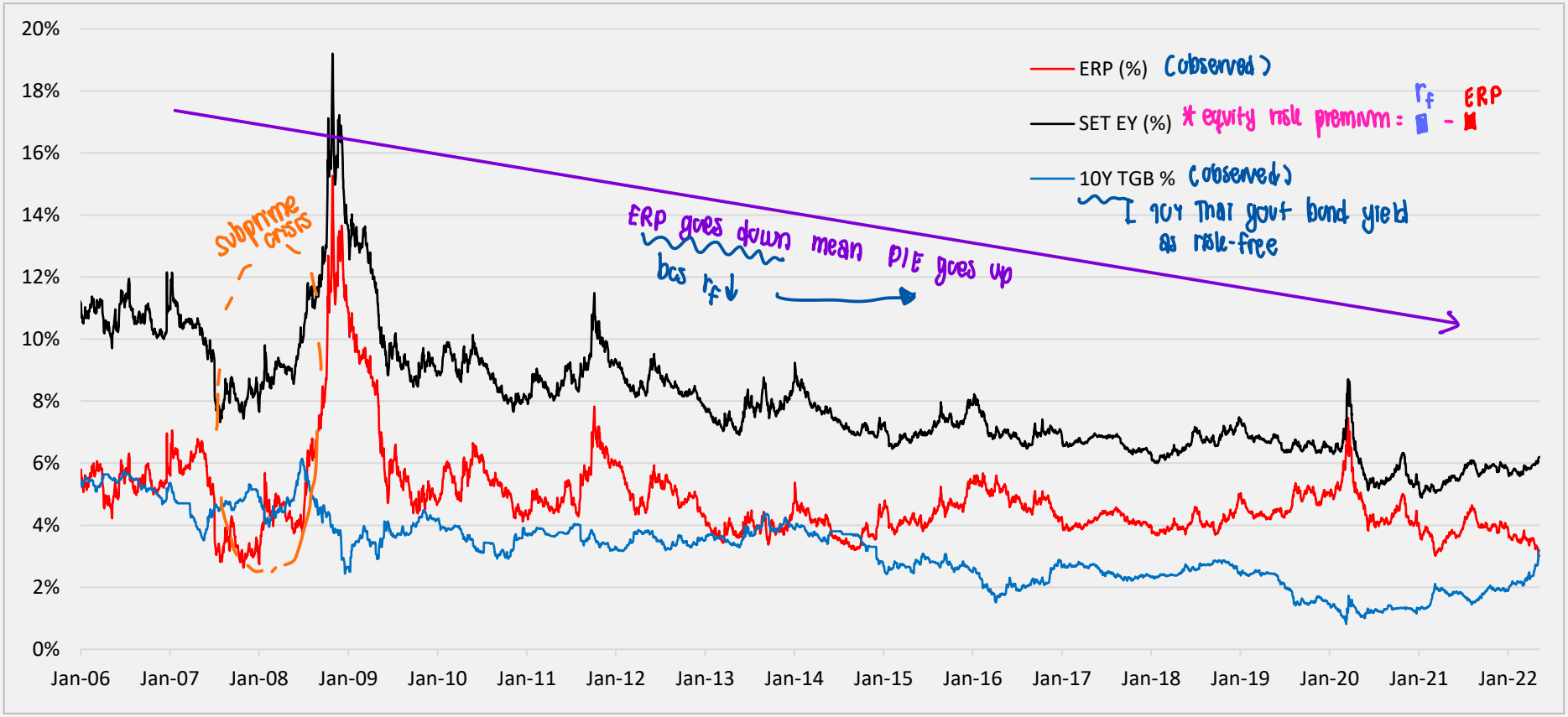
EARNINGS YIELDS CAN BE SPLIT INTO SEPARATE COMPONENTS

= RISK FREE RATE + EQUITY RISK PREMIUM

= RISK FREE RATE +(MARKET RISK PREMIUM * STOCK BETA)

EQUITY RISK PREMIUM

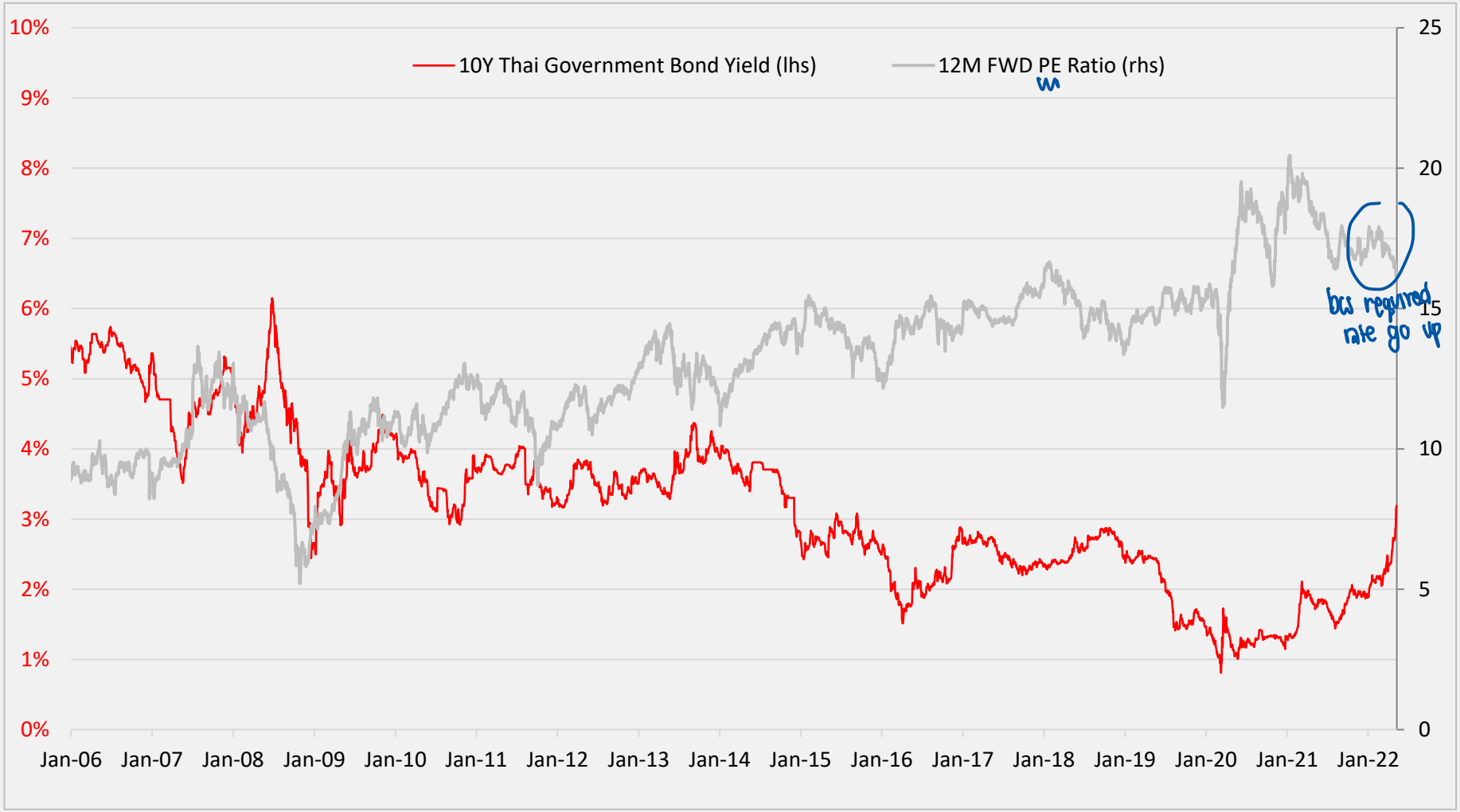
PERIOD	LAST 20 YEARS 2002-2021	LAST 10 YEARS 2012-2021	LAST 5 YEARS 2017-2021	LAST 3 YEARS 2019-2021
12M ESTIMATES EARNINGS YIELD				
SET EARNINGS YIELD	N.A.	6.9%	6.3%	6.1%
10Y THAI GOV'T BOND (TGB) YIELD	3.4%	2.6%	2.0%	1.7%
ERP	N.A.	4.36%	4.29%	4.41%



Source: Bloomberg

INVERSE CORRELATION

-80% Correlation



Source: Bloomberg

WHY 10Y GOVERNMENT BOND YIELD

1. LONG-TERM ENOUGH

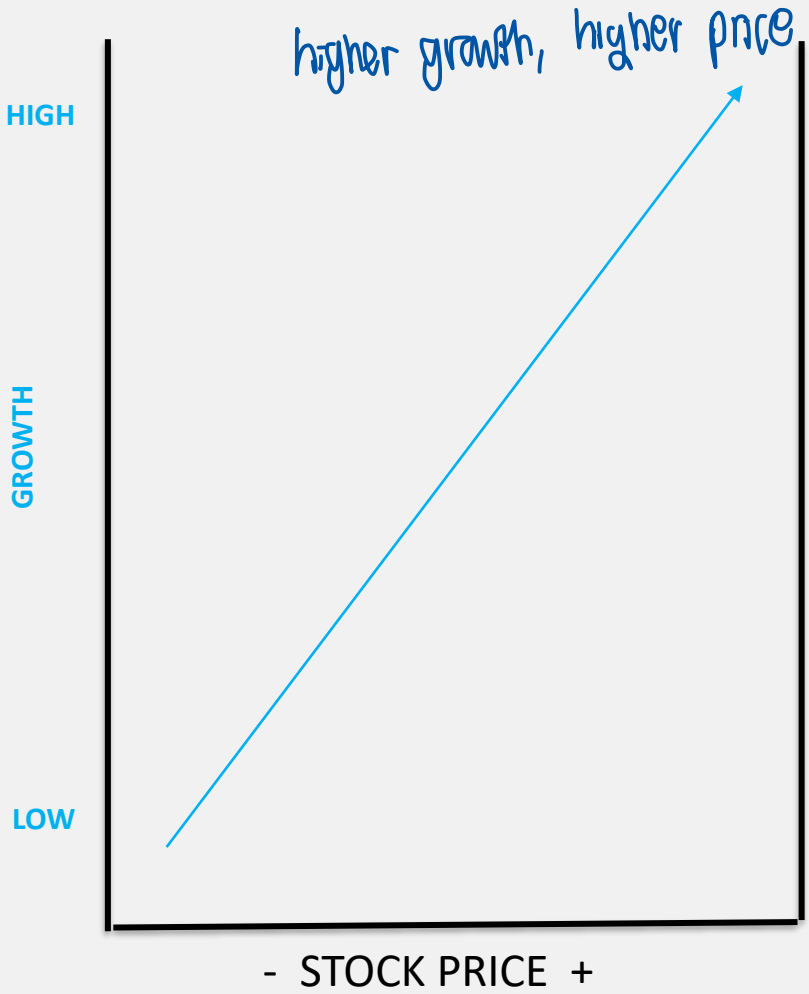
- EQUITIES LAST FOREVER, THEORETICALLY
- RISK FREE RATE USED SHOULD ALSO LAST FOREOVER, OR VERY LONG TIME
  - as proxy
  - 10Y IS LONG ENOUGH FOR PRACTICAL PURPOSES

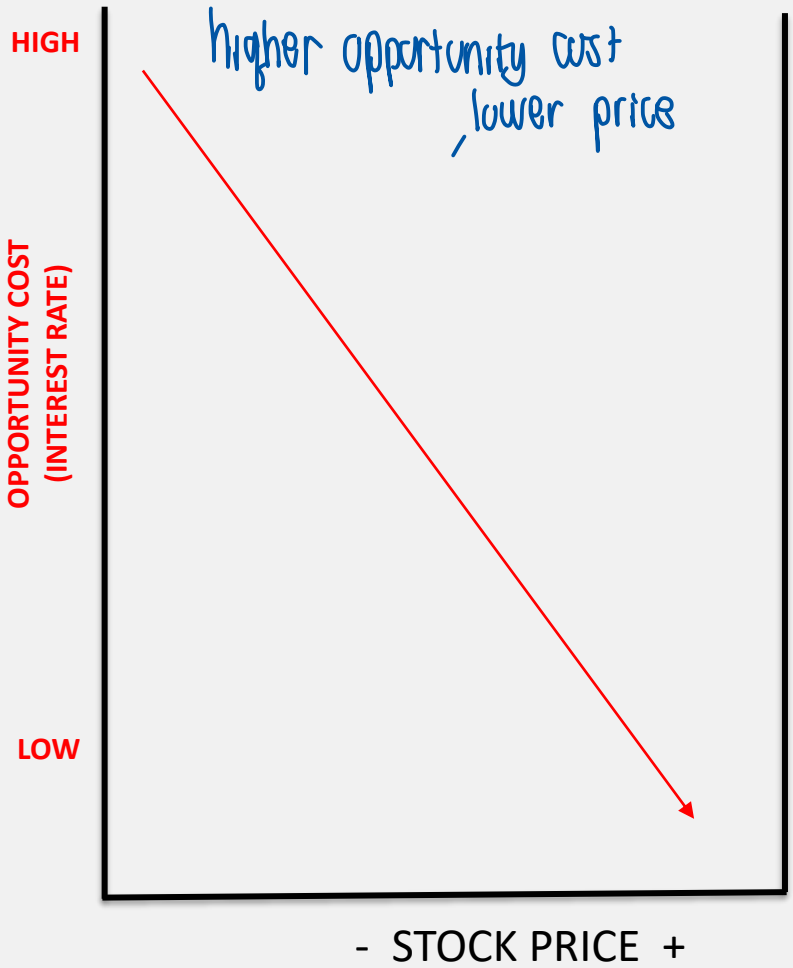
large trade doesn't affect it much

2. GOOD LIQUIDITY AND DEPTH

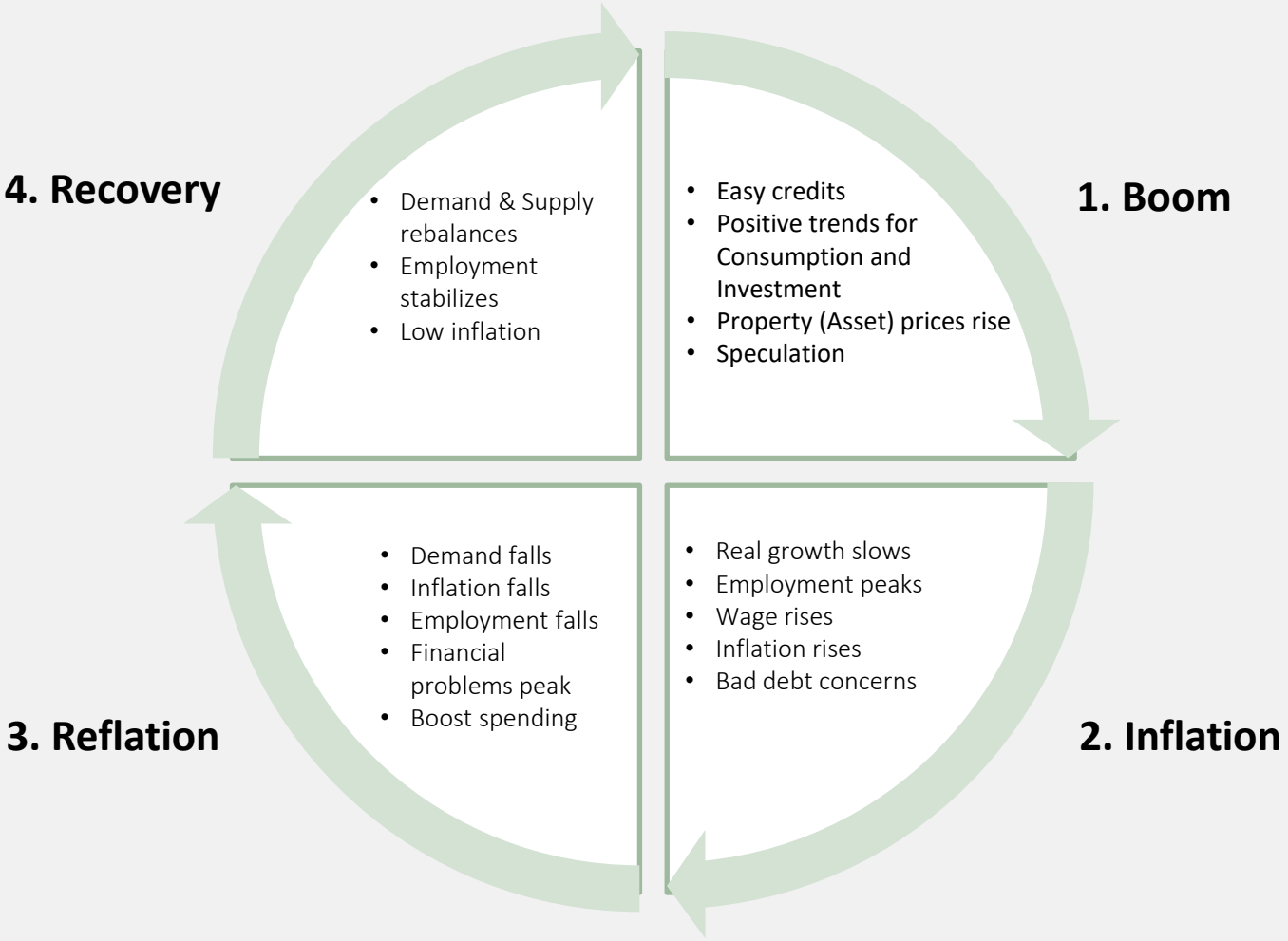
- LARGE VOLUME OF TRANSACTIONS CAN BE EXECUTED WITHOUT MOVING PRICES
- HARD TO MANIPULATE
- USD IS OFTEN USED IN CROSS CURRENCY INVESTMENTS

PRICE, GROWTH & OPPORTUNITY COSTS (INTEREST RATES)



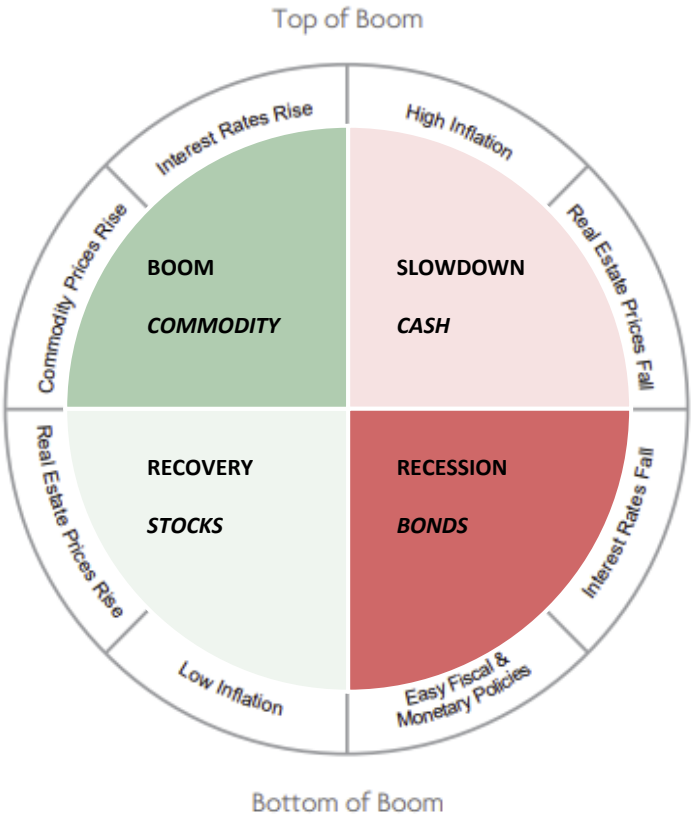


ECONOMIC CYCLES



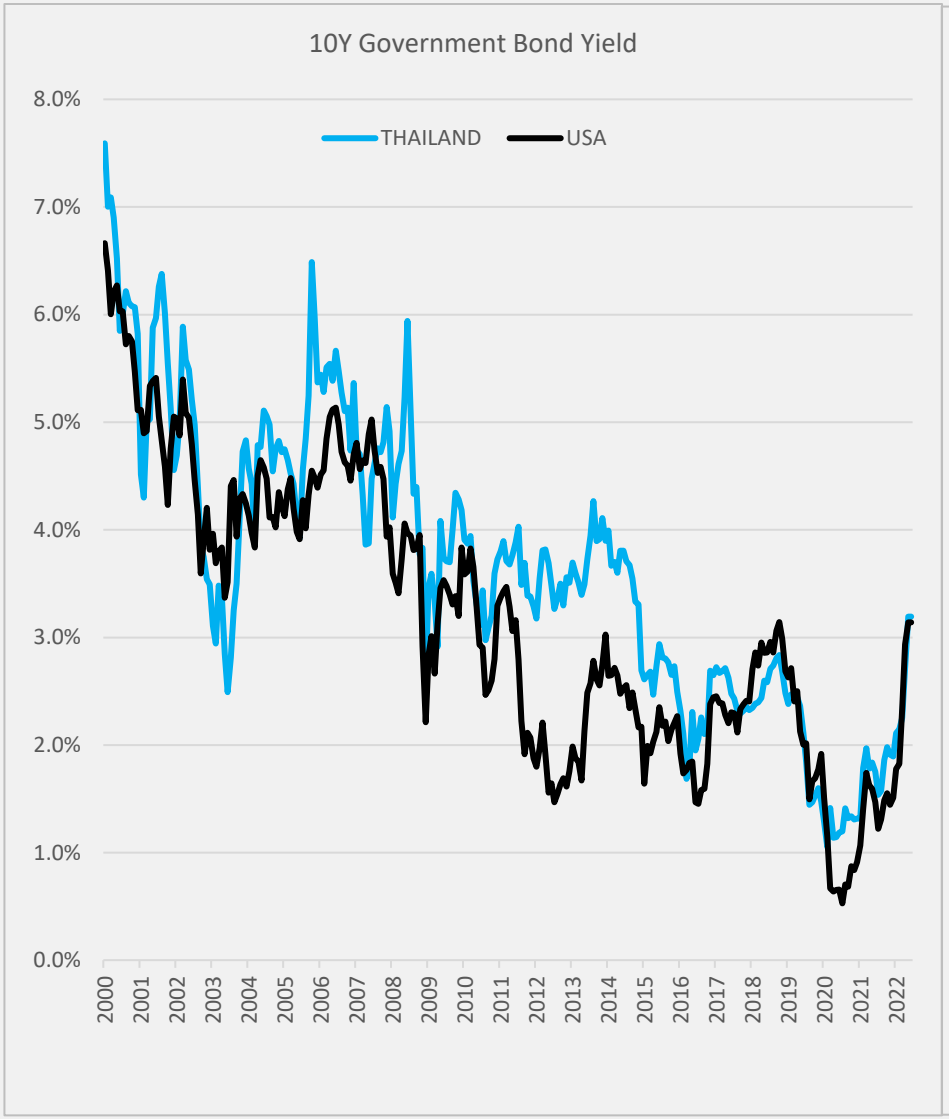
ECONOMIC CYCLES AND INVESTMENT CLOCK

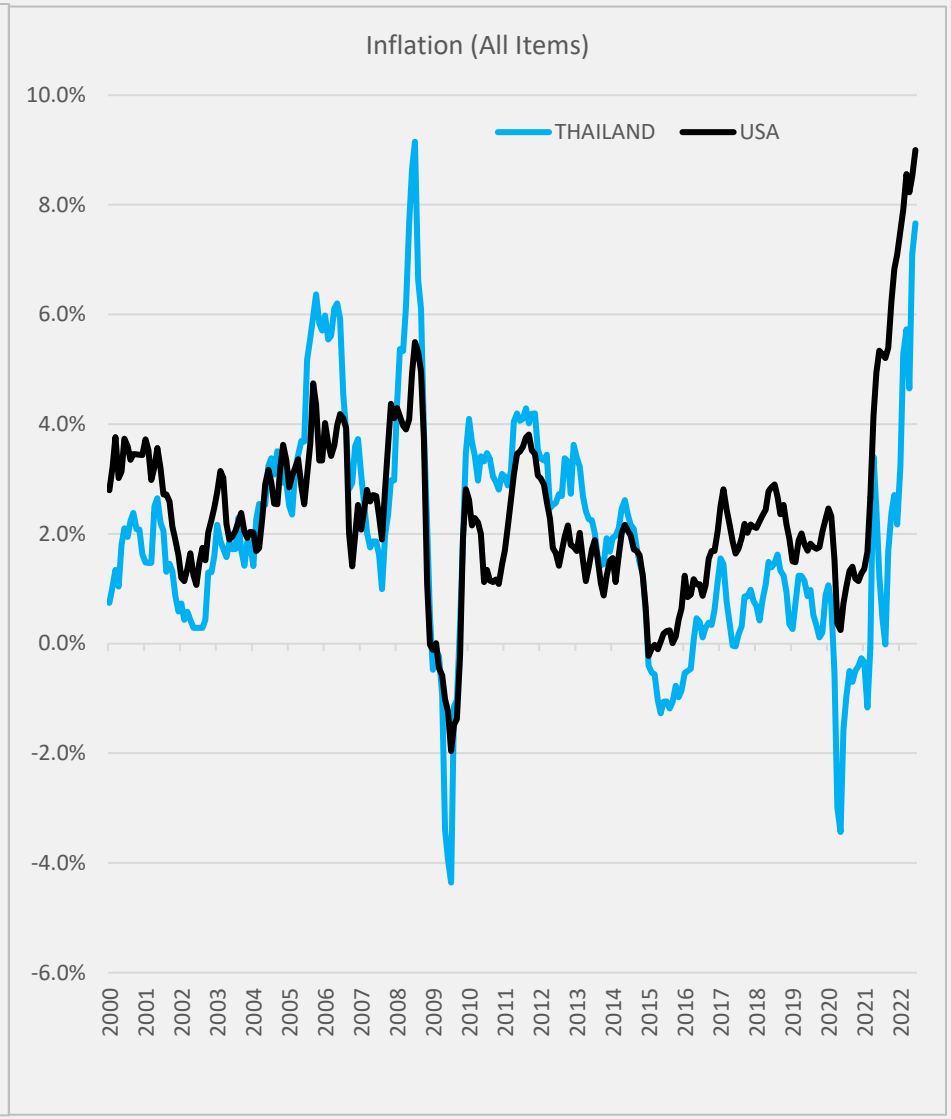
Source: Board of Governors of the Federal Reserve System, Congressional Budget Office, Thomson Reuters Datastream, Russell Investments. July 2020.



LONG-TERM US TREASURY YIELD HAS BEEN TRENDING DOWN FOR ABOUT 40 YEARS UNTIL 2021

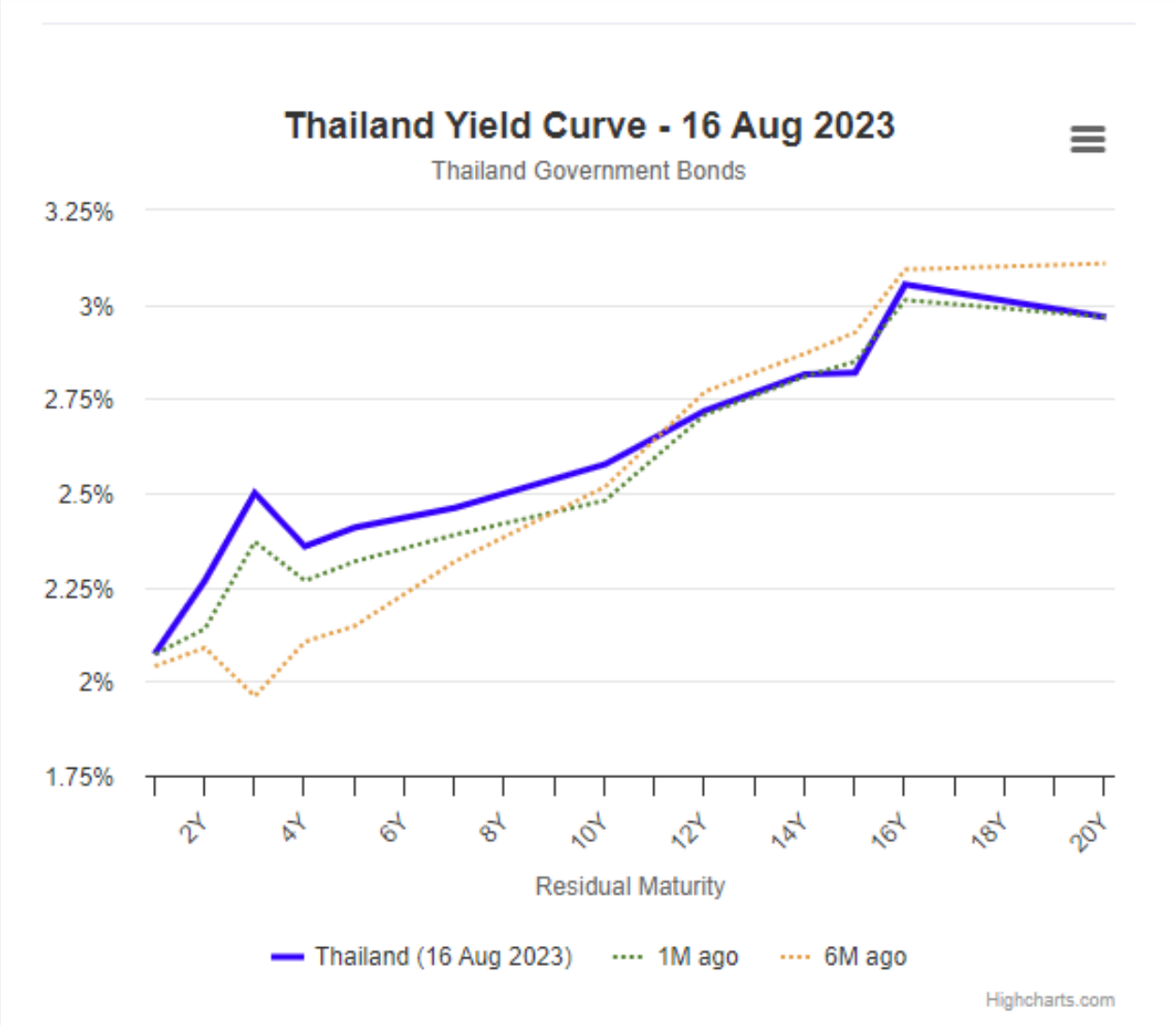
SIMILAR TO THAILAND





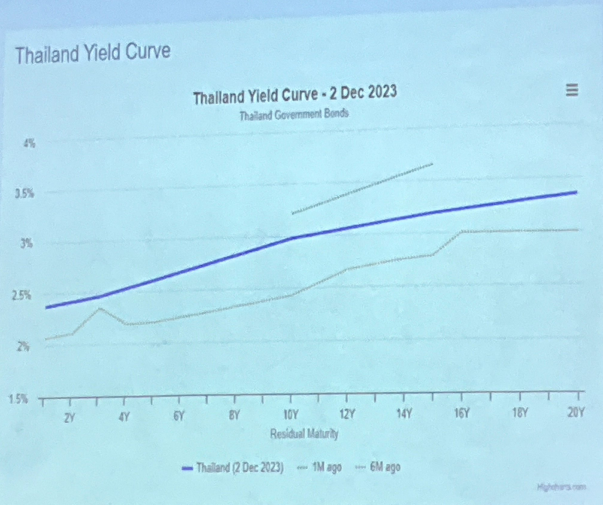
Source: MOC, BOT, FRED, THAIBMA

THE YIELD CURVE



Source: worldgovernmentbonds.com/country/thailand/

THE YIELD CURVE



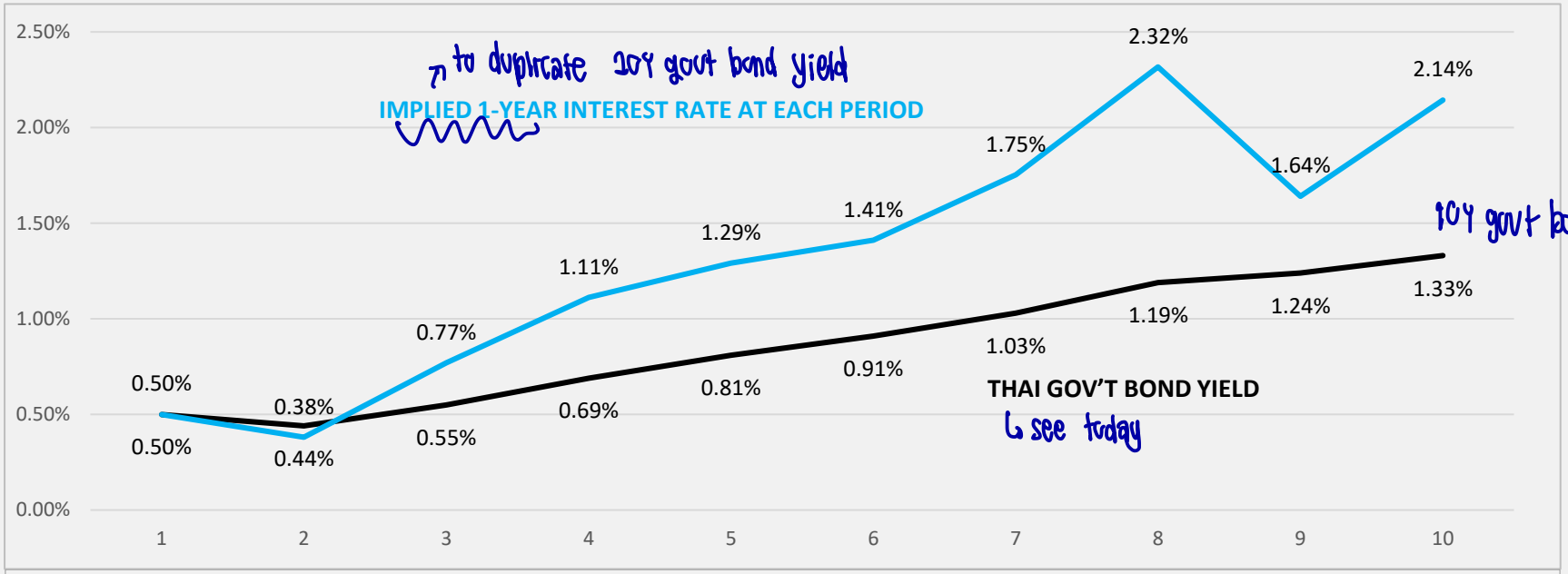
Source: worldgovernmentbonds.com/country/thailand/

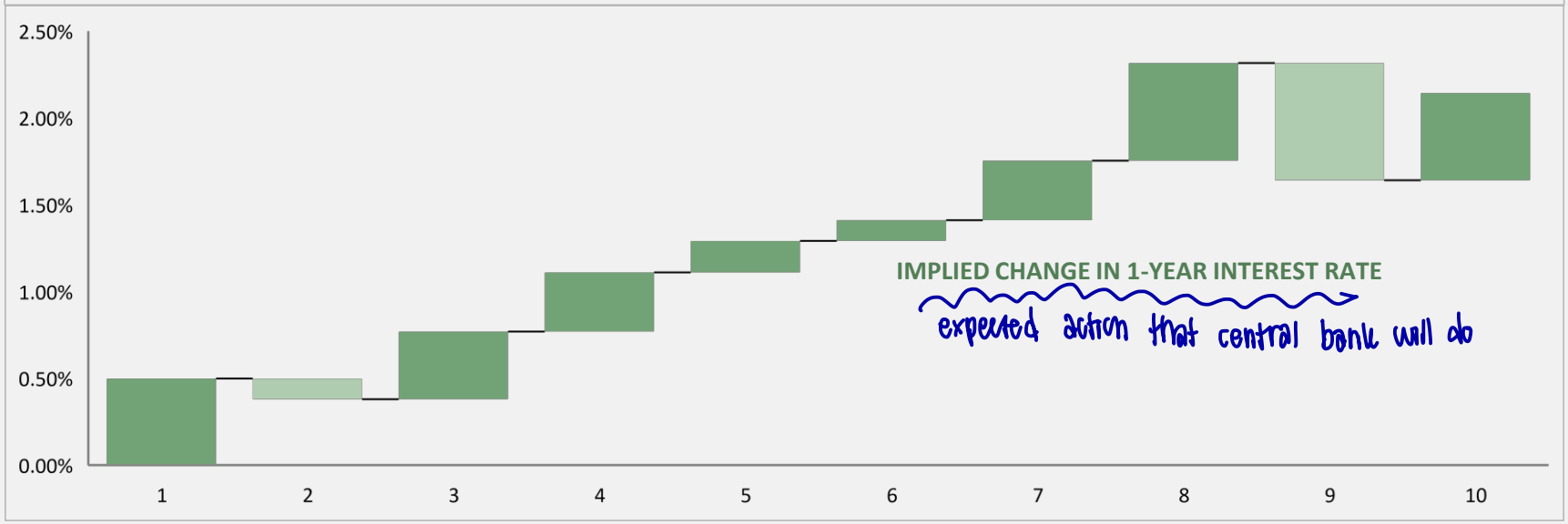
CONCEPT OF DISCOUNTING

TIME VALUE: MONEY EARNED TODAY IS WORTH MORE THAN SAME AMOUNT EARNED IN THE FUTURE

TIME	NOW	YEAR 1	YEAR 2	YEAR 3	..	..	YEAR 10
AMOUNT OF MONEY	100	100	100	100			100
PERIOD	0	1	2	3			10
FORMULA	100/(1+5%)^0	100/(1+5%)^1	100/(1+5%)^2	100/(1+5%)^3			100/(1+5%)^10
INTEREST (DISCOUNT) RATE	5%						
MONEY WORTH TODAY	100.00	95.24	90.70	86.38	-	-	61.39

READING THE YIELD CURVE





CURVE INVERSION 2Y-10Y

(inverted yield curve) vs. Bond mkt conflict with equity mkt (PIE high)

Ajam believes this more

COMMON APPROACH TO VALUATION

- TECHNICAL ANALYSIS
- QUANTITATIVE ANALYSIS
- FUNDAMENTAL ANALYSIS

AN EXAMPLE OF TECHNICAL ANALYSIS

Mantra: Stock price movements tend to follow history. They repeat themselves.

AN EXAMPLE OF QUANTITATIVE ANALYSIS

lead, lag effect

Mantra: Correlations

- Relate stock prices to economic and trading statistics
- Look for pattern or relationships
- Identify deviations from patterns to spot opportunities

Equity market performance vs Earnings Revision Ratio

Chart 15: YoY Global Equity Market Performance vs Global Earnings Revisions trend

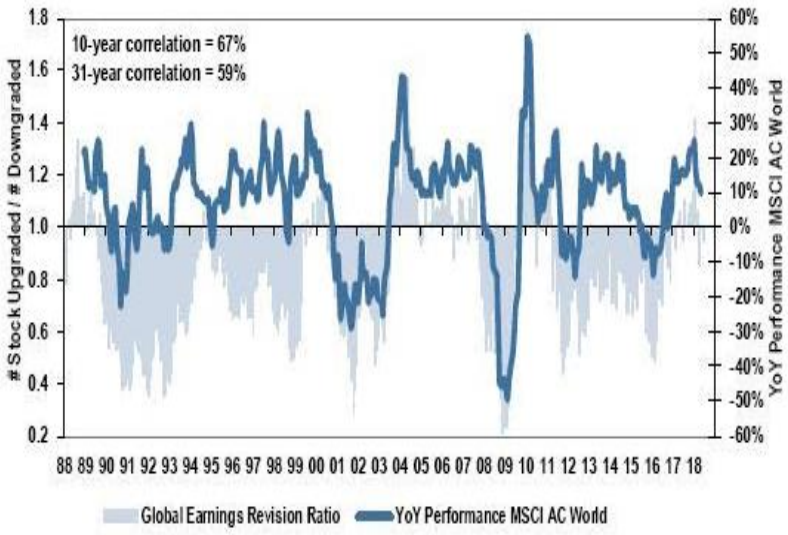
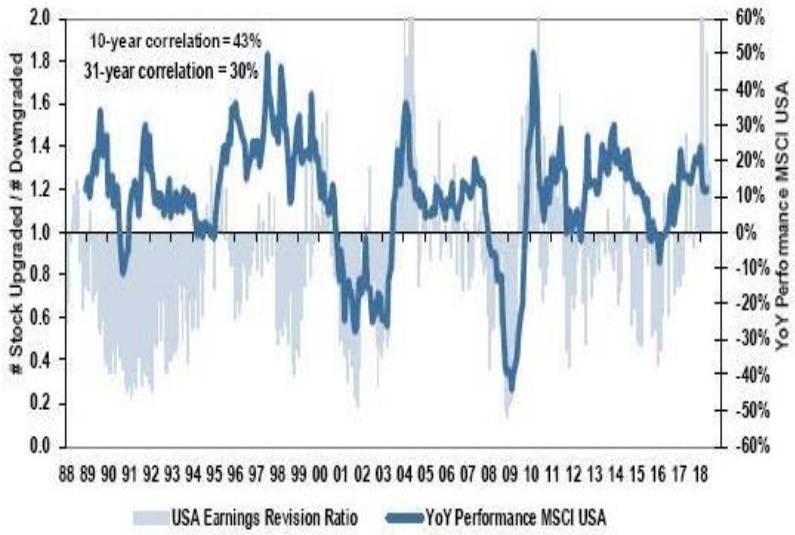


Chart 16: YoY USA Equity Market Performance vs USA Earnings Revisions trend



FUNDAMENTAL ANALYSIS

Function	Scope
Economist	Top down
- Economic growth / risks	
- Broad developments / themes	
- Longer time scale impact	
Strategist	Asset Class
- Attractiveness by region/country	
- Broad developments / themes	
- Rotation (region / country / sector)	
- Fundamental + Quantitative	
Analyst	Bottom-up
- Company / Industry analysis	
- Fundamentals / Valuation	
- Shorter time scale	

PROCESS of valuation → then do financial models

- FUNDAMENTAL ANALYSIS AND FORECASTS
  - BUSINESS STRATEGY
    - BUSINESS MODEL
    - COMPETITIVENESS
  - INDUSTRY OUTLOOK
    - INDUSTRY CYCLE
    - COMPARATIVE ADVANTAGE
    - GLOBAL TRENDS
    - TECHNOLOGY
  - ECONOMIC
    - LOCAL AND TRADING PARTNERS
    - INTEREST RATE / FX
    - COMMODITIES
- VALUATION
  - MULTIPLE-BASED
    - PEERS
  - ABSOLUTE
    - CREDIBILITY
  - SUM-OF-PARTS / EVA
    - SUSTAINABILITY
- COMPILE IDEAS
  - SYNTHESIZE STORY
  - EVIDENCE IN SUPPORT OF VIEW
    - CHARTS
    - PICTURES
- COMMUNICATE
  - KEY POINTS
  - DELIVERY
    - PRESENTATION
    - WRITTEN

FIELDS OF KNOWLEDGE

FUNDAMENTAL ANALYSIS AND FORECASTS

- BUSINESS STRATEGY
  - BUSINESS MODEL
  - COMPETITIVENESS
- INDUSTRY OUTLOOK
  - INDUSTRY CYCLE
  - COMPARATIVE ADVANTAGE
  - GLOBAL TRENDS
  - TECHNOLOGY
- ECONOMIC
  - LOCAL AND TRADING PARTNERS
  - INTEREST RATE / FX
  - COMMODITIES

VALUATION

- MULTIPLE-BASED
  - PEERS
- ABSOLUTE
  - CREDIBILITY
- SUM-OF-PARTS / EVA
  - SUSTAINABILITY

COMPILE IDEAS

- SYNTHESIZE STORY
- EVIDENCE IN SUPPORT OF VIEW
  - CHARTS
  - PICTURES

COMMUNICATE

- KEY POINTS
- DELIVERY
  - PRESENTATION
  - WRITTEN

BUSINESS ANALYSIS

Basic accounting, Financial analysis, Business understanding, Excel skills

ECONOMY

Basic economic understanding (Monetary, Fiscal, Drivers), Industry view, High awareness of market development

VALUATION

Knowledge of valuation tools, Peers knowledge, External capital market conditions

SYNTHESIS ☆☆☆

Data search and Analysis, Cross-check assumptions, Synthesis skills, Competitors views, Management views, Your views

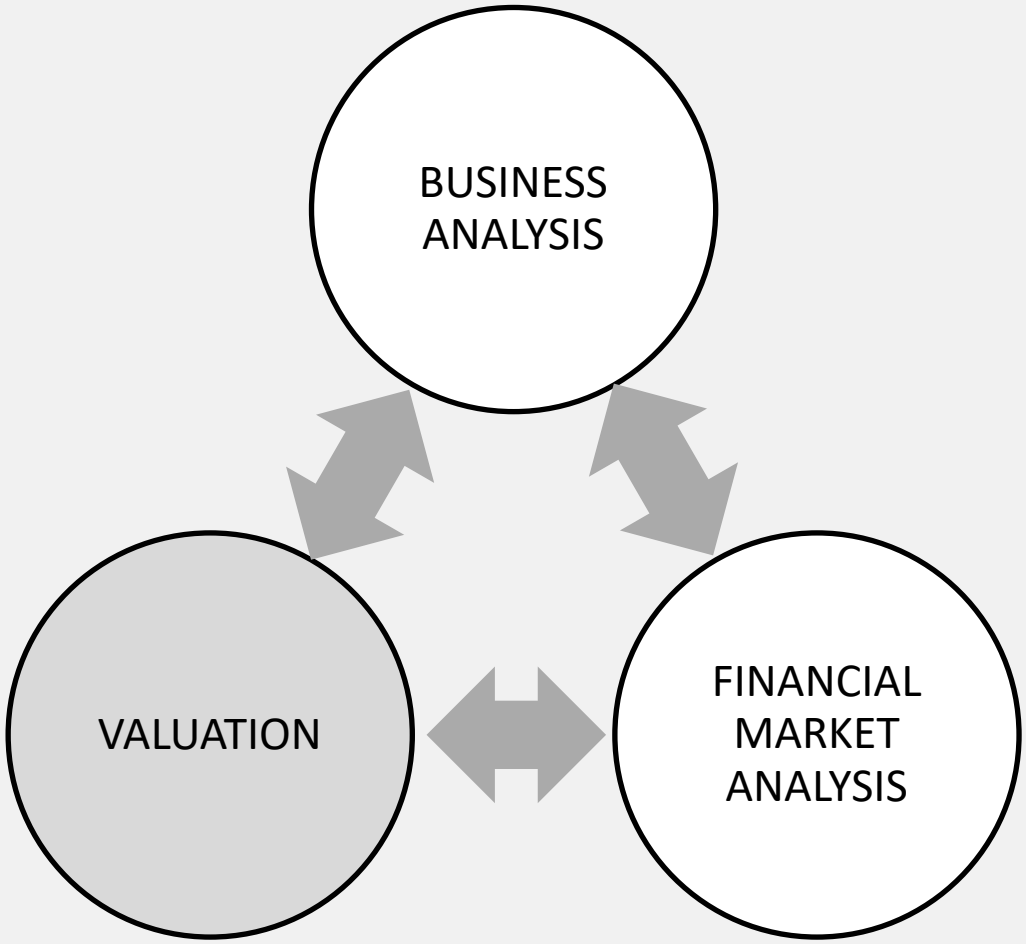
⇓

to your forecast

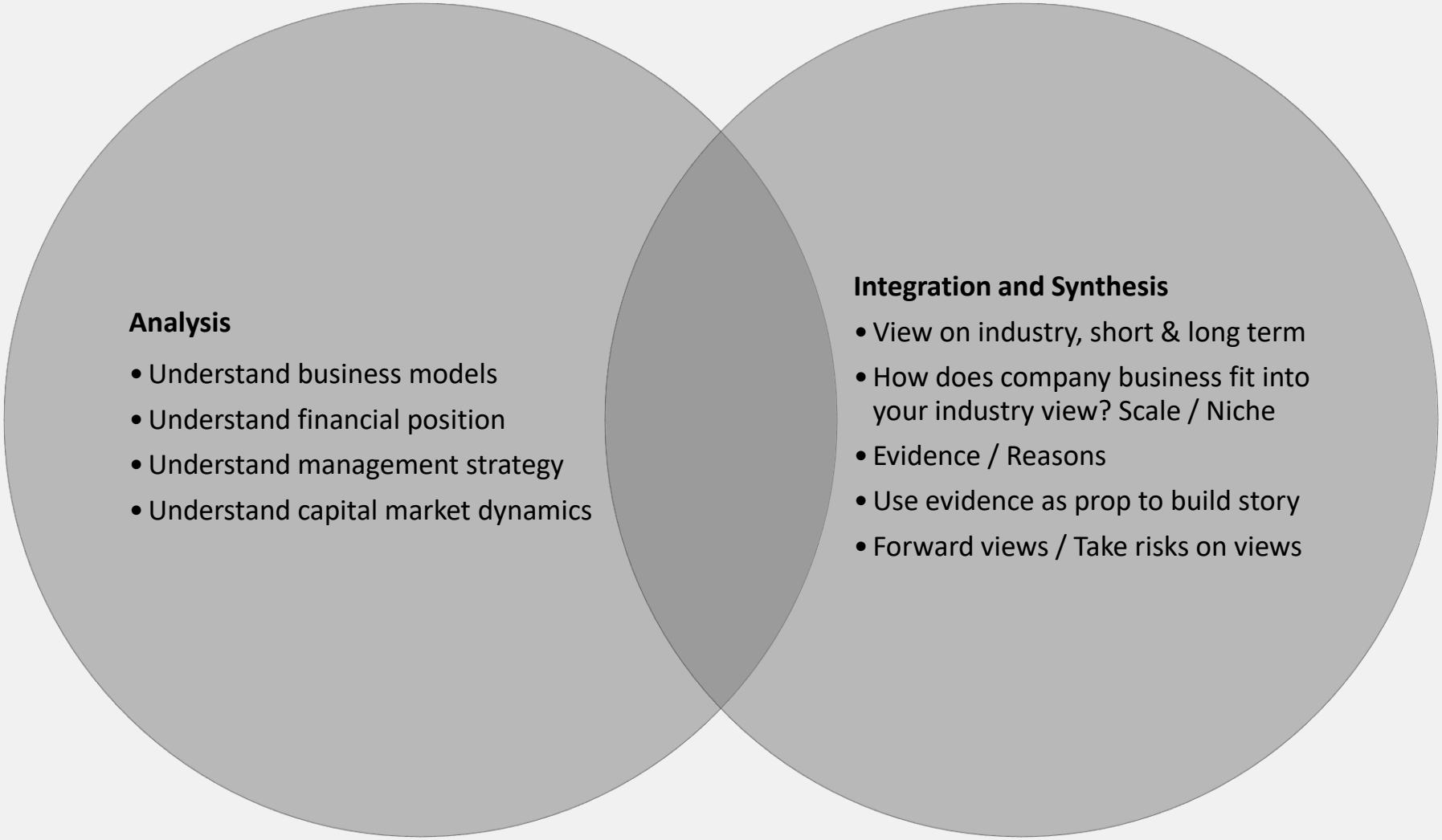
COMMUNICATE

Key points, Style, Delivery, Impression

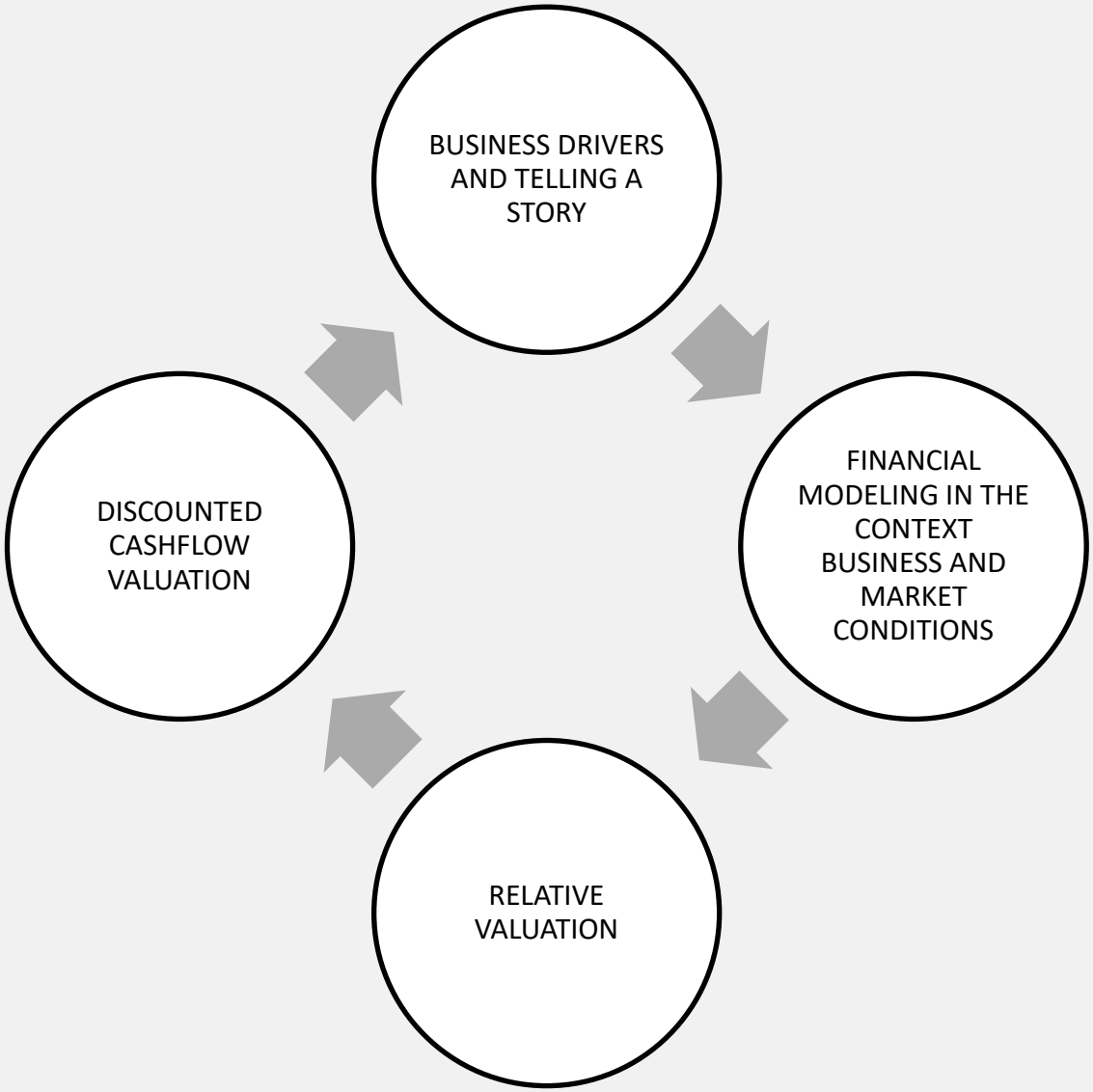
VALUATION AN ON-GOING PROCESS



A GOOD ANALYSIS IS ULTIMATELY A GOOD SYNTHESIS



CLASS PROGRAM REVOLVE AROUND 4 ASSIGNMENTS



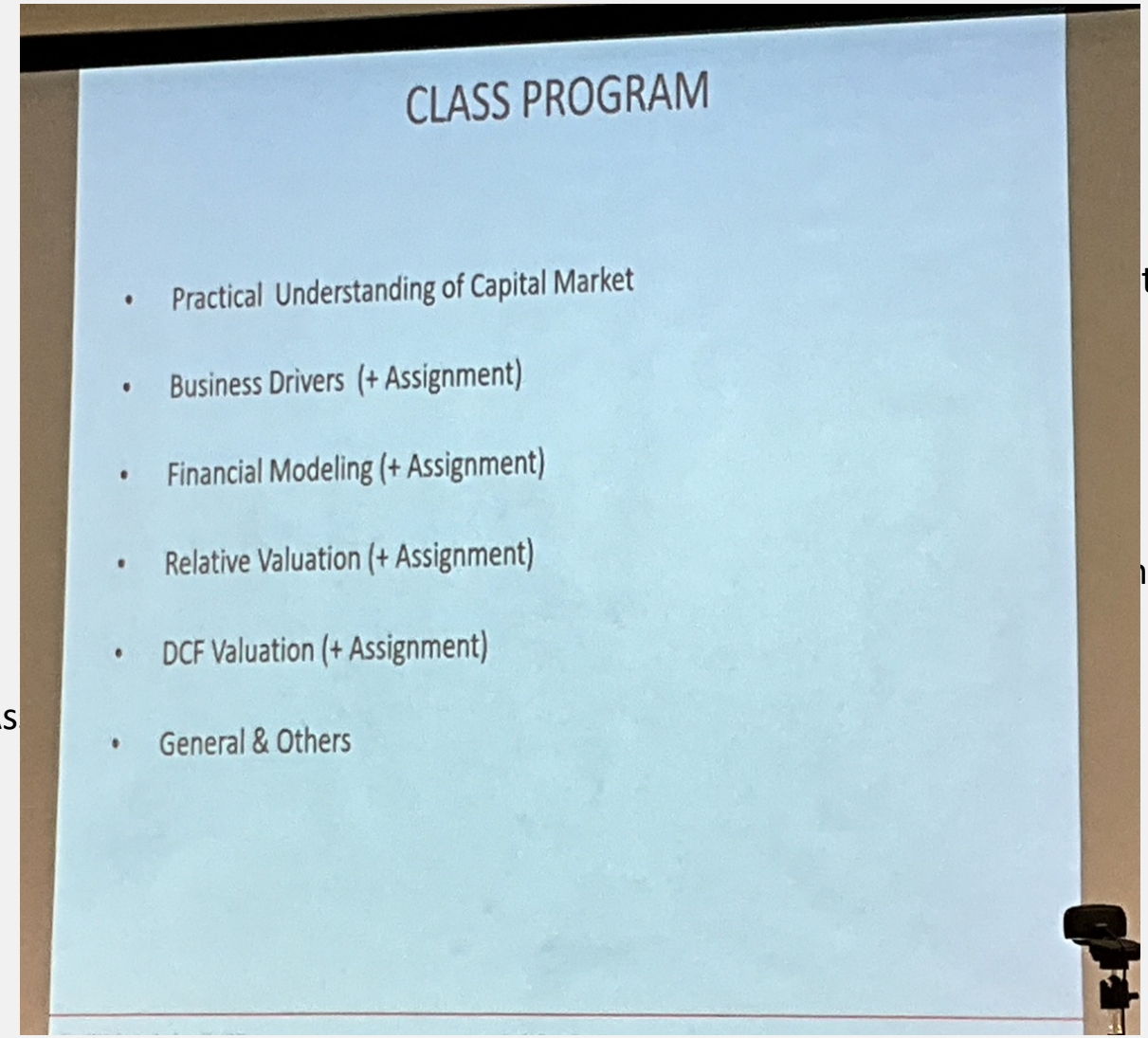
21 June

1 July

2 July

14 July

Individual As
8 July



tal Markets

g (Group)

STAY INVOLVED

Read News

- Reuters
- Bloomberg
- Economist
- Wall Street Journal
- Financial Times
- Economic calendar

READ AND WATCH

- **READ**: VALUATION, MEASURING AND MANAGING THE VALUE OF COMPANIES, Fifth Edition. McKinsey & Company , Tim Koller, Marc Goedhart and David Wessels
  - Chapter 4, Return on Invested Capital (Page 59+)

- **WATCH MOVIES**: THE BIG SHORT, TOO BIG TO FAIL

QUIZ