CHULALONGKORN
BUSINESS SCHOOL

FLAGSHIP FOR LIFE

Practical Corporate
Financial Modeling

Overview of Corporate Finance

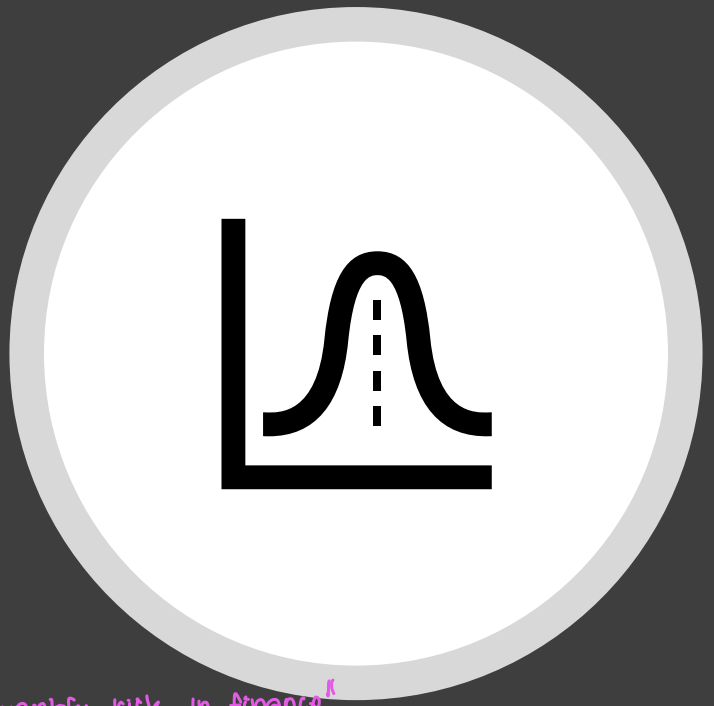
Assoc. Prof. Kanis Saengchote, Ph.D.
Chulalongkorn Business School
kanis@cbs.chula.ac.th
dr-kanis.com

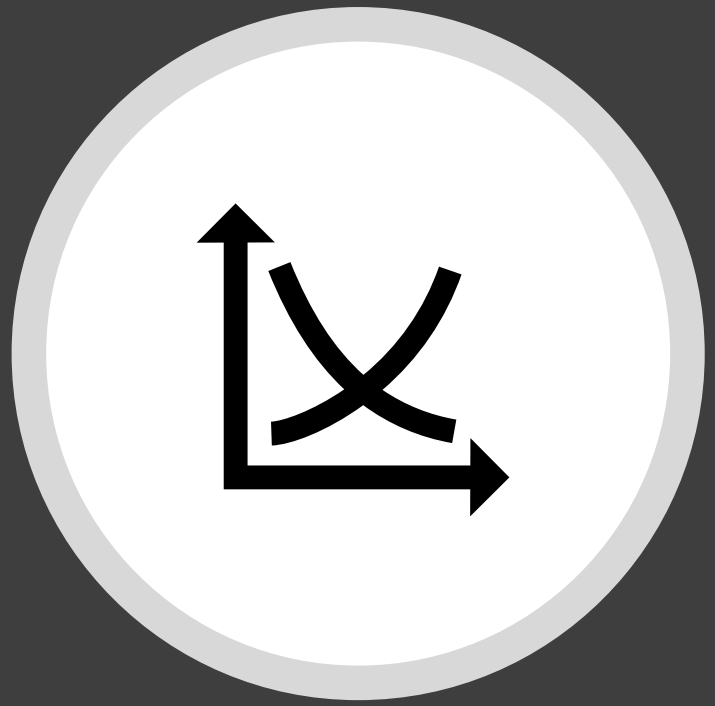
CHULALONGKORN BUSINESS SCHOOL

FLAGSHIP FOR LIFE

Agenda

- The decisions of a financial manager
- Profit drivers, the ROIC framework, and EVA
- Cash flow-based methods of financial evaluation: NPV and IRR





3 financial statements
- BS
- PL : Revenue (Price x Quantity)
  - Cost
  Net profit
- CF

CF vs. PL
↕ accrual
profit → scaled by investment made → efficiency
activity generated → margin
→ compared to peers
Riskiness of invt oppo cost

Benchmark : invt oppo cost

Bond → contractual
Equity → residual

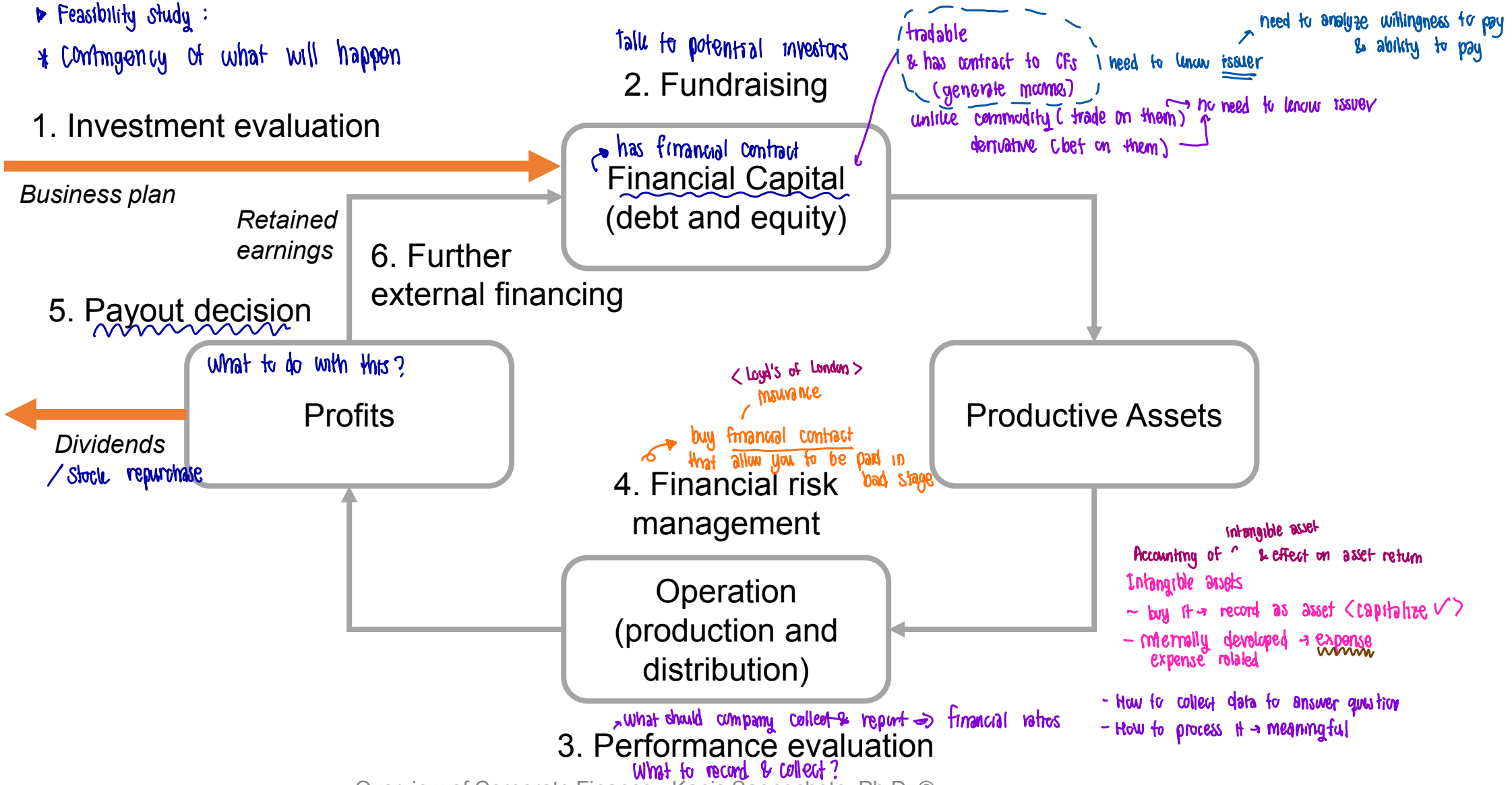
"Quantify risk in finance"
*collect statistics of the past outcomes
↓
to predict the future outcome (we don't know whether stock price will go up/down)
data generating stock → follows normal distribution (μ, σ^2)

Finance is best understood as a combination of three disciplines.

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

Business cycle :

- Feasibility study :
  * Contingency of what will happen

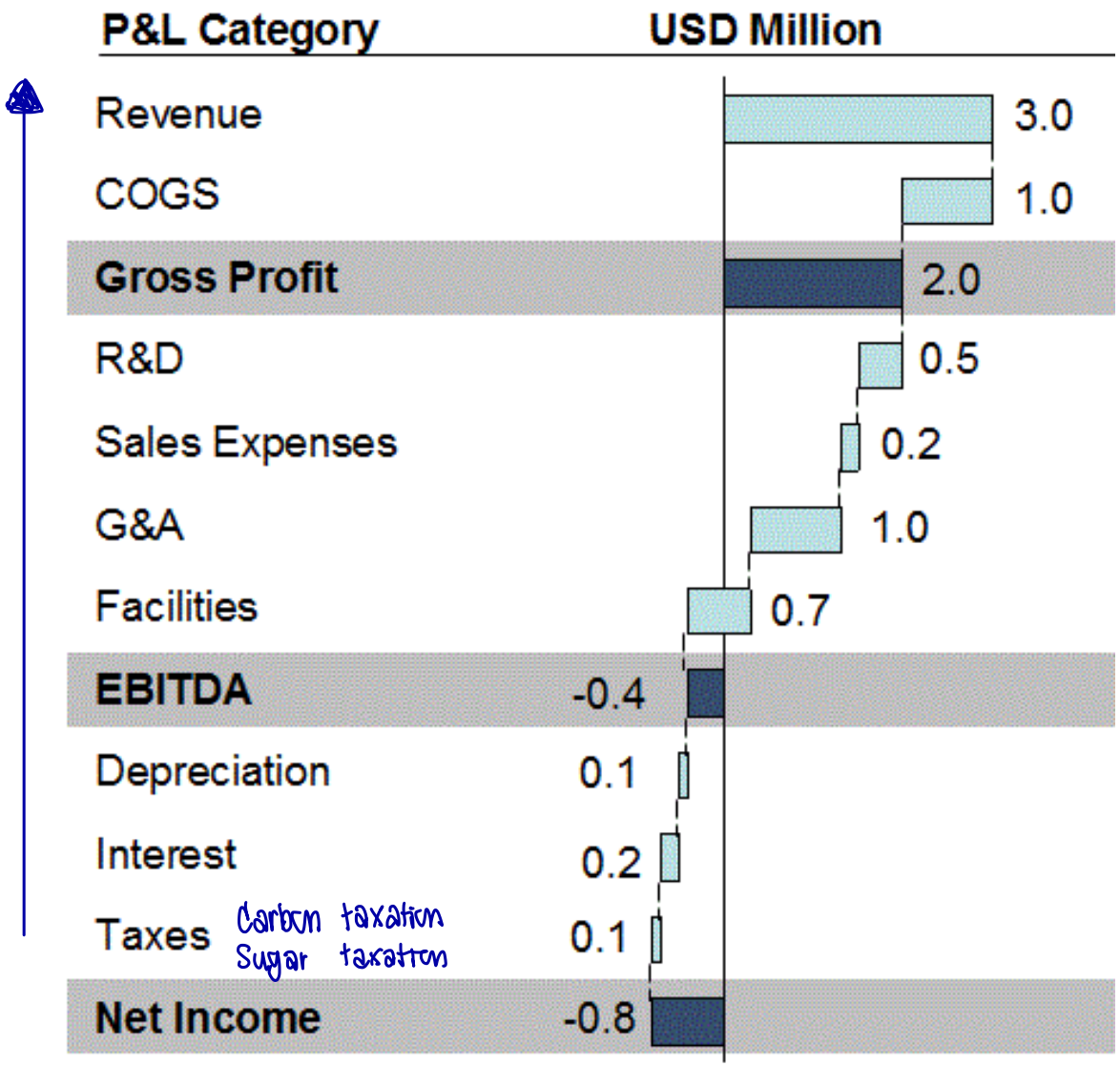


Imagine you're running a business. What would your objective be?

ESG asset allocation

- If you're the only one shdr → it's ok to lose if you've met obligation
  ↗ you're shdr & agent
- BUT, if there's a lot of shdr → maximize shdr's wealth
  <external shdr>

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE



How should we measure profitability of a company?

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

The typical way to evaluate profitability is relative to the investment made.

Profitability = Profit / Investment

[Return on Investment]

should also consider debtholder not just shdr

ROI

Company as whole

1. Investors want return on capital invested
2. to show how effecient that company uses capital

Discussion: How can Starbucks improve its profitability [ROI]?

If you own 100 million baht of assets, do you need to invest 100 million baht?

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

Let's take a look from the 'profitability' view and analyze firms from the **economics lens** rather than the financial accounting lens.

don't expect to own it permanently
non-permanent

Current Assets	**Current Liabilities**
- Cash and equivalents - Accounts receivable - Inventories - Other current assets	- Accounts payable - Accruals - Other current liabilities - ***Notes payable*** - ***Current portion of long-term debt***
Non-Current Assets - Net fixed assets - Intangible assets	**Long-term debt** - ***Bank loans*** - ***Bonds***
	Shareholders' Equity - ***Paid-up capital*** - ***Retained earnings***

operating liability

financial liabilities <money for money>

productive capital ↑ need financial capital

Focus on the **capital**, required for the investment, not the cash.

need less capital requirement → don't need external capital

- Short receivable period → 7-11 not allow to pay later
- long payable period & don't need to pay to supplier for a while

* Warren Buffett's float — get money first & invest

The insurance float is money that has been paid in premiums and not yet paid out in claims. This is cash that the insurance company holds but does not own.

float is much longer

- Subscription ⇒ shorter float company

How you raise your capital

Invested Capital	Capital Employed
Excess Cash**	**Debt** interest-bearing debt - ***Notes payable*** - ***Current portion of long-term debt*** - ***Bank loans*** - ***Bonds***
Net Operating Working Capital non financial obligation - Adjusted CA minus adjusted CL	
Net Long-Term Assets - Net fixed assets - Intangible assets	**Equity** - ***Paid-up capital*** - ***Retained earnings***

** Some companies have a lot of cash on hand. The portion of cash not required for day-to-day operation is referred to as "excess cash".

* With financial capital → allow us to transform money to productive asset

APPLE

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

The reorganized balance sheet helps us understand the role of the financial manager.

e.g. fix the price (hedge) of sugar (commodity with volatied price)

▷ cost of capital → satisfy investors' different demand
▷ Liquidity : • enough CF
• enough liquid assets to meet liability

Risk management

Invested Capital

Capital Employed

Efficiency vs. Liquidity

Working capital management

Short-term investment **Net Operating Working Capital** AR as investment → investing your own resource in customer and receive later	**Debt** - ***Short-term*** - ***Long-term***
Net Long-Term Assets Capital to be used in long time	**Equity** - ***Long-term***

capital structure

Financing decision

Investment decision

financial feasibility study

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

When evaluating business profitability, we do not want the financing decision to distort our metric. Consequently, we should evaluate firms as if they had no debt.

→ belong to shdr! ⇒ ROA = NI → belongs to shdr / asset → belongs to whole company! } not good for evaluating profitability || ROE → not tell operating performance ← higher leverage, higher ROE

NI = (EBIT – Int)*(1-T) but if Int = 0, then we have EBIT*(1-T), which is often referred to as NOPAT or NOPLAT.

less adjusted tax

unlevered profit ← free from biased interest-deduction

" ——— " investment return on invested capital or ROCE (capital employed)

IC	NOPAT	ROIC

Net Operating Working Capital

Net Long-Term Assets

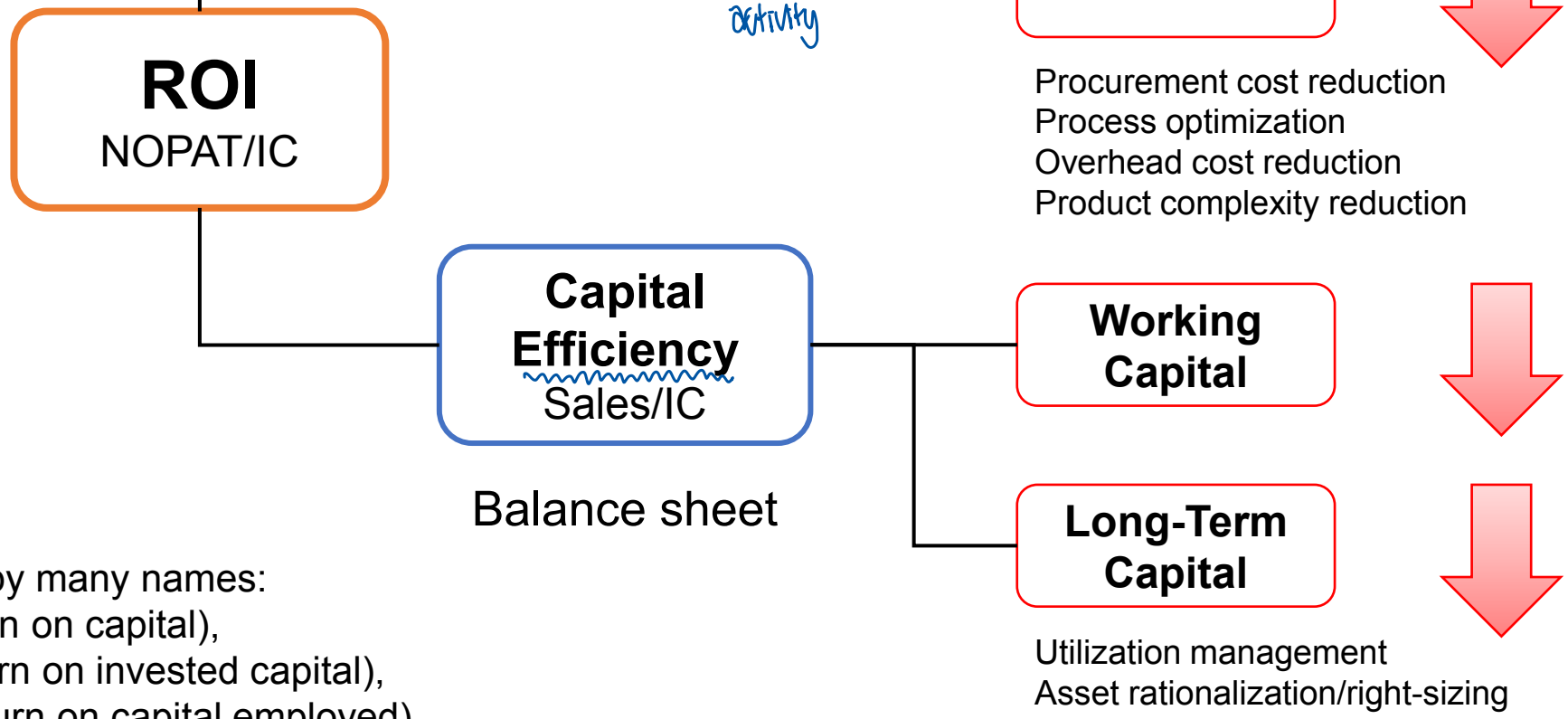
NOPAT/IC

Glossary:
NOPAT = Net operating profit after tax
EBIT = Earnings before interest and tax
ROIC = Return on invested capital

- **NOPAT is the after-tax profit that the business generates from its invested capital.**
- **The profit is independent of how the business is financed.**
- **ROIC is sometimes referred to as ROC or ROCE.**

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

Dupont analyses



higher price may not be good
price x quantity

understand business action
Business model
- what is your customer?

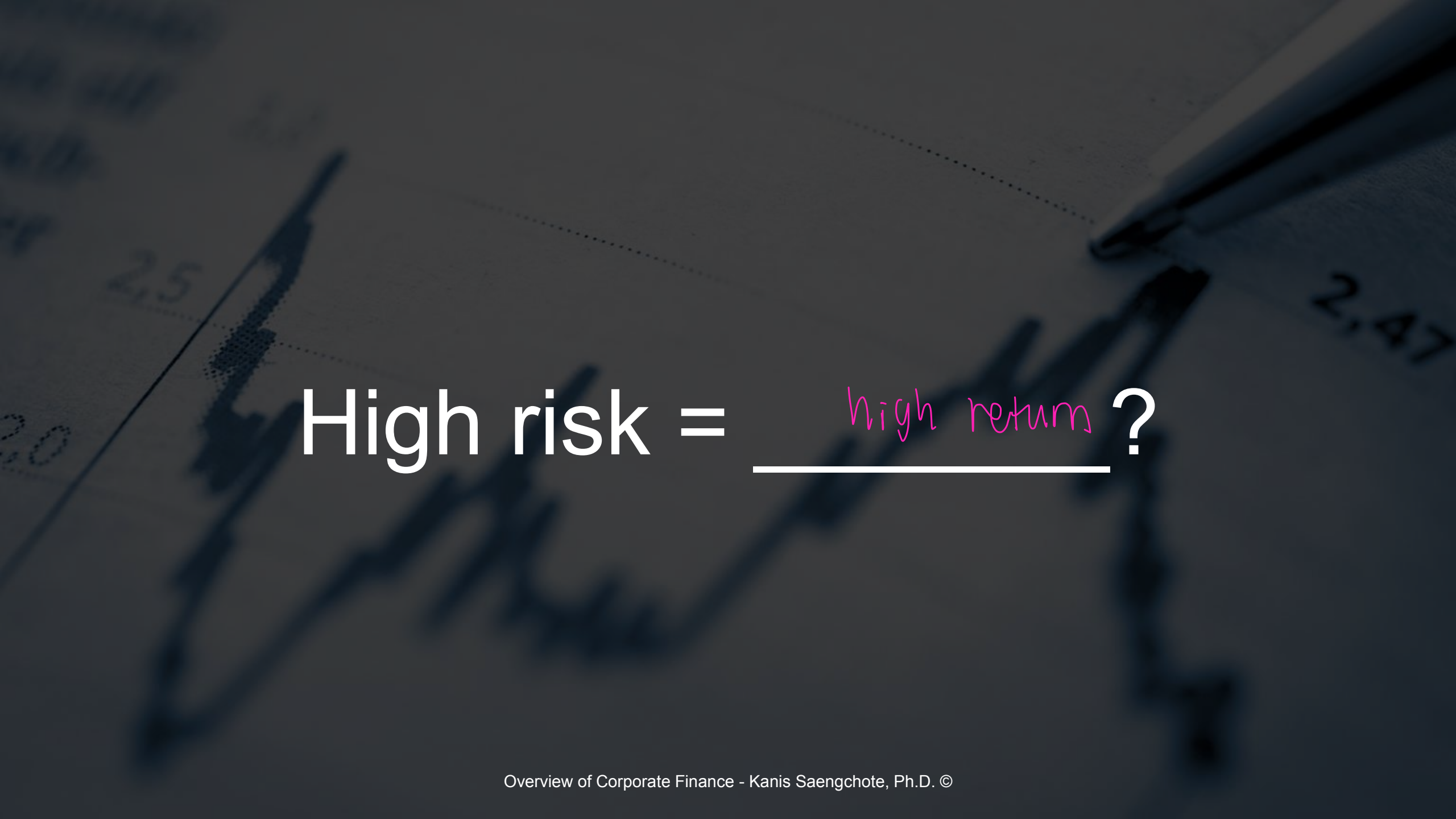
represent business activity

ROI goes by many names:
ROC (return on capital),
ROIC (return on invested capital),
ROCE (return on capital employed)

Economic profit is a measure of business success.

What we **expect to** receive vs What we're **supposed to** receive

But how much are we supposed to receive?


High risk = high return ?

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

We are risk-averse, so we want to be rewarded for investing in something risky.

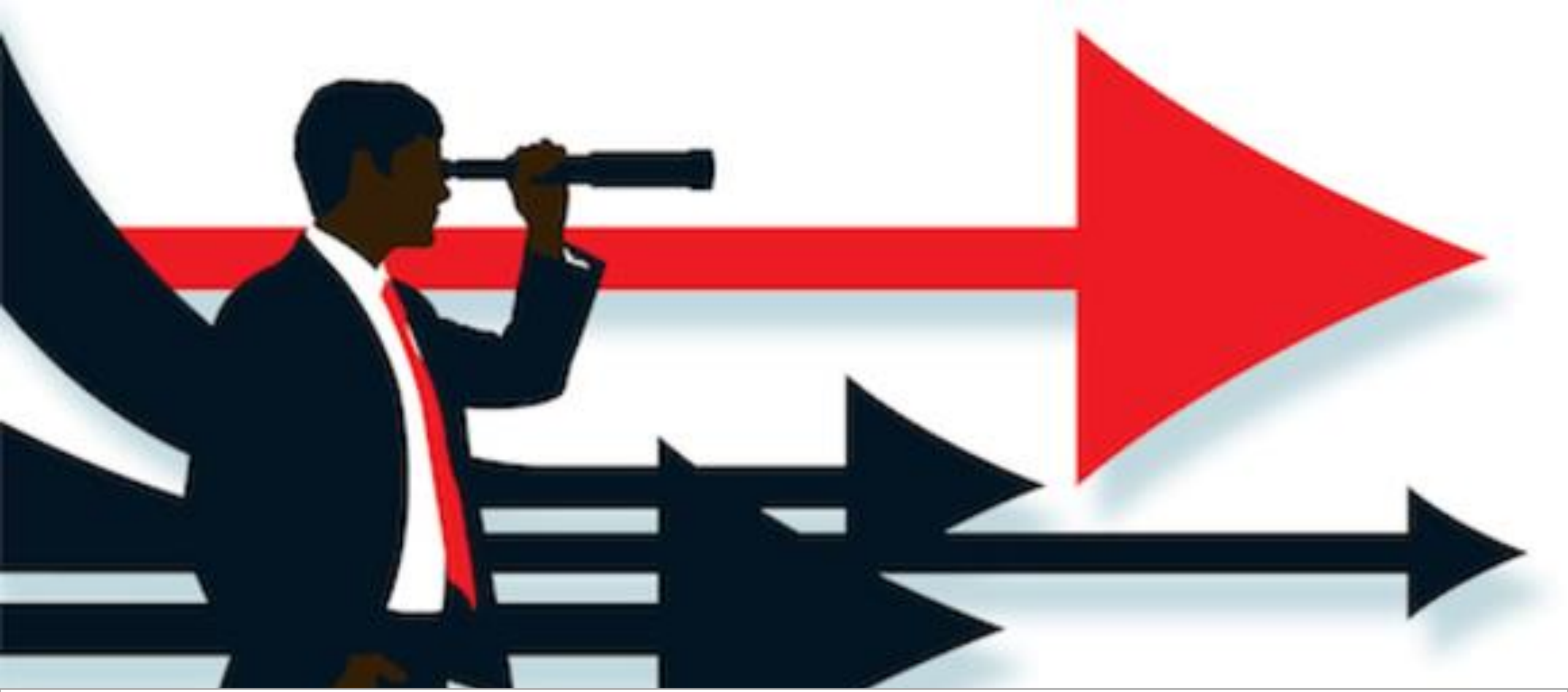
low required return rate → can bid higher → win ∴

CAPM ← asset pricing model → predict fair rate of return

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

There are several synonyms for this kind of returns:

- Required returns investors
- Cost of capital [WACC] from corporate perspective
- Discount rate
- Hurdle rate → minimum rate for new project



In determining the attractiveness of an investment today, we also take into account its future potential. We want to invest in opportunities that are the most “valuable” to us. → Importance of **time value of money**.

What does ‘VALUE’ mean?

What does ‘VALUE’ mean?

what you observe in real world

price vs. value

depends on person who valuate the asset

uncertain

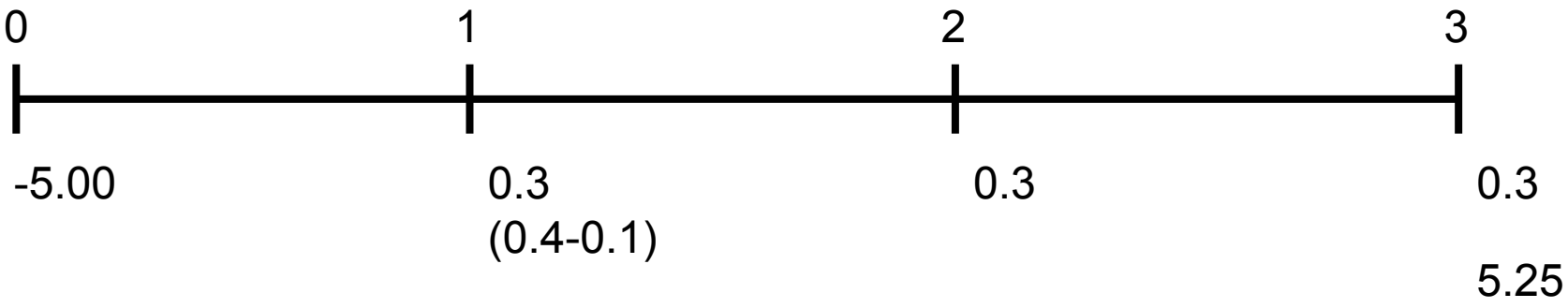
What does VALUE CREATION mean in economics / finance?

The cash flow-based methods of evaluation are NPV and IRR.

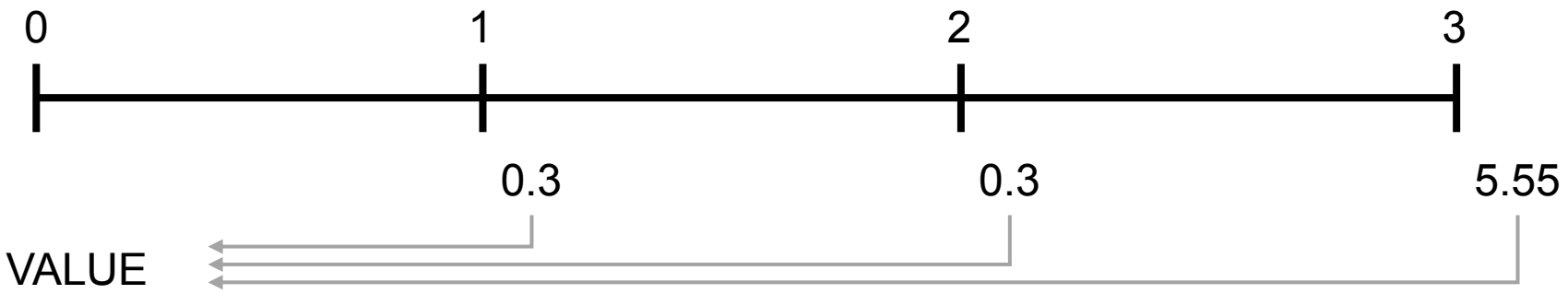
You want to invest in a condominium which is priced at **THB 5 million**. At the current gross rental yield of 8%, you believe your annual rental income will be 8% x 5 = **THB 0.4 million**. The common area management fee and other expenses are estimated to be about **THB 0.1 million** per year.

Suppose you expect to be able to sell the condo in 3 years time (net of all taxes and fees) at **THB 5.25 million** and your required rate of return is **6%**, will you buy the condominium?

Project free cash flow



NPV = Value – Price
If NPV > 0, then this is a good deal.



- The project value is the sum of present value of the cash flow you expect to receive in the future (often called the discounted cash flow).

  $= 0.3/(1.06)^1 + 0.3/(1.06)^2 + 5.55/(1.06)^3$
  $= 5.21$

- The "price" of the project is 5. NPV = Value – Price = 5.21 – 5 = **0.21m**

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

IRR = profit as %
If IRR > r, then this is a good deal.

- NPV tells us if we're making a profit (in the "buying low" sense) beyond what we deserve go get (based on how much risk we're taking). However, this number isn't as intuitive compared to % return.

- The internal rate of return (IRR) measures how much % return we get (in terms of future cash flow) based on the price we pay (the initial investment).

$$5 = 0.3/(1+\mathbf{IRR})^1 + 0.3/(1+\mathbf{IRR})^2 + 5.55/(1+\mathbf{IRR})^3$$

- Here, IRR = 7.55% > 6%, so we're making a profit.

Throughout this class, we will use case studies to explore the key financial decisions made from the perspective of business value creation.

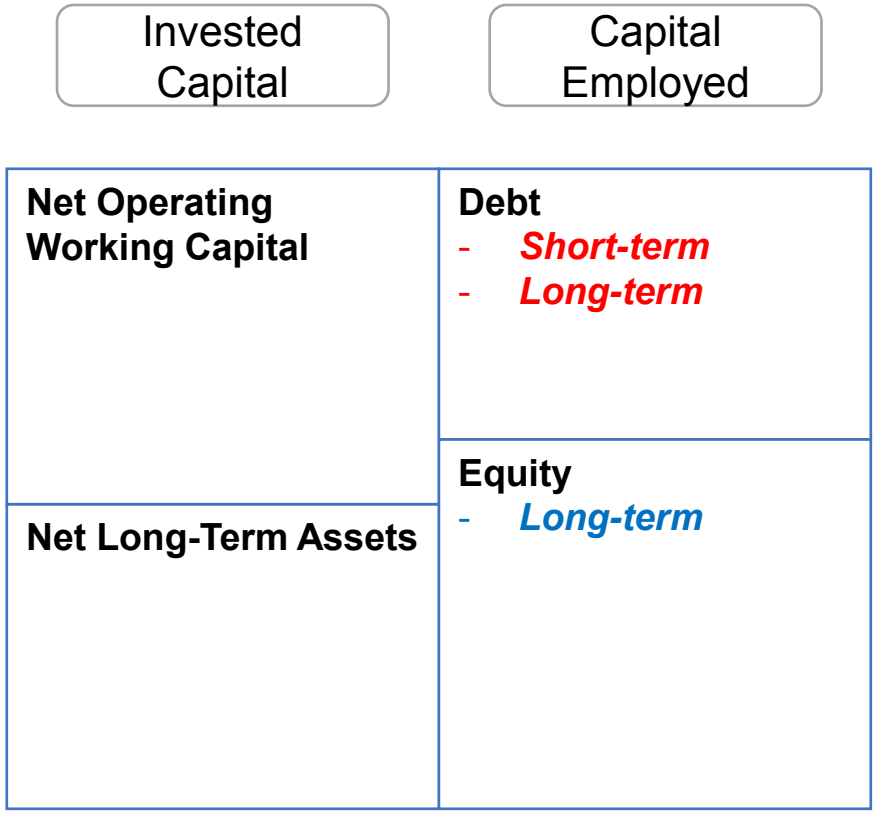
Some issues to think about

- Profit versus cash flow
- Valuation and value creation
- Discount rate estimation
- Theory versus practice

Risk management

Working capital management

Investment decision



Financing decision

CHULALONGKORN BUSINESS SCHOOL
FLAGSHIP FOR LIFE

Workshop: Financial [Spreadsheet] Modeling

Key issues to think about

- Purpose
- Structure
  - Flexibility and granularity
- Formatting
- Formulas

This website provides a very good guide.

https://www.wallstreetprep.com/knowledge/financial-modeling-best-practices-and-conventions/