

Corporate Risk Management



MAIN MENU



Topic 1

1

INTRODUCTION

INTRODUCTION

What are the importance of corporate risk management?

All firms have to face with various types of risks.

**New regulations, such as SEC,
try to improve corporate governance.**

INTRODUCTION

What is corporate risk management?

- It includes risks of non-financial corporations and also business lines of financial institutions that are not engaged in trading.
- It is a specific management because its risks depend on many factors, for example, size, industry, diversity of business lines, and sources of capital.

INTRODUCTION

What is corporate risk management?

- Some techniques may function well in one business but may not work in another type of business.

Examples :

- An airline faces to risks due to weather, equipment failure, terrorism and oil price.
- A power generator faces the risk that generating plant may go down.

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Topic 2

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**WHY NOT TO MANAGE
RISK IN THEORY?**

UNDERSTANDING OF THE ASSUMPTION BEHIND THE THEORY

**Many theories in risk management,
such as M&M and CAPM, work under the
assumption of PERFECT CAPITAL MARKET**

UNDERSTANDING OF THE ASSUMPTION BEHIND THE THEORY

...PERFECT CAPITAL MARKET...

Investors are pricetakers:

No single buyer or seller can influence security prices or interest rates.
And, all securities and assets are always correctly priced

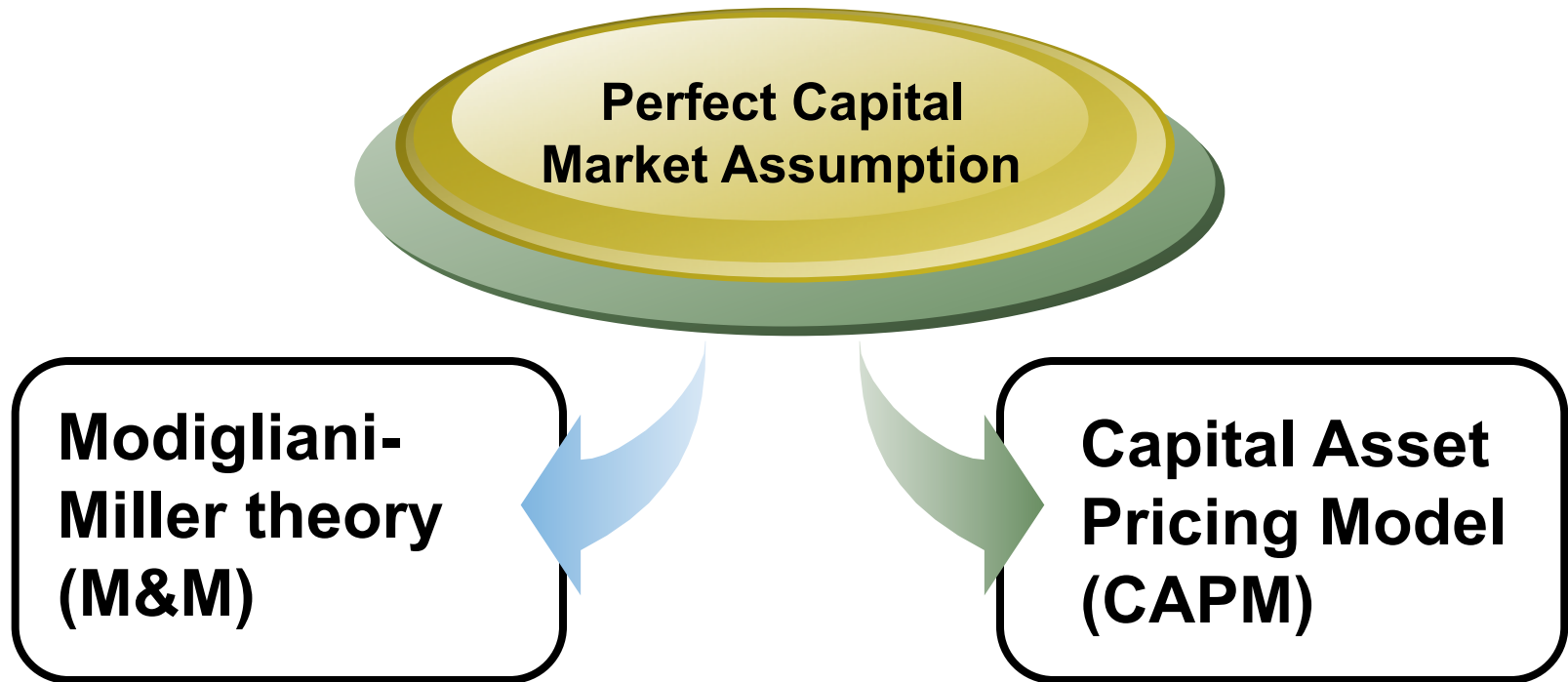
Free Transactions and No Tax:

There are no brokerage fees, dealer spreads,
taxes, other transaction costs.

All Players Think Alike:

There is no difference in the behavior or goals. And, there are many small investors whom are considered price takers, rational and risk averse. Moreover, they possess the same information and the same future expectations about securities.

RELATED THEORIES



Modigliani-Miller theory (M&M)

Basic theorem of M&M :

Under a perfect capital market assumption,
the value of a firm is unaffected by how that firm is financed

But, the risk management aim to increase value of firm

**So if hedging risk is unlikely to affect
a firm's cost of capital and value, then **why do it?****

Capital Asset Pricing Model (CAPM)

$$E(r_i) = r_f + \beta_i(E(r_m) - r_f)$$

where :

$E(r_i)$ = expected return on asset i

r_f = risk free rate

β_i = systematic risk or beta coefficient

$E(r_m) - r_f$ = market risk premium

Under perfect capital market assumption,
Sharpe belief that all specific risk/idiosyncratic risk can
be eliminated through portfolio diversification

If all investors hold well-diversified portfolio
which is considered to be costless,
firms are not necessary to do the same thing.

ANOTHER REASON WHY NOT TO MANAGE RISK

1. Hedging is a ZERO-SUM GAME.

A zero sum game is a term to describe a situation where the gain of one player is offset by the loss of another player, equaling the sum of zero.

ANOTHER REASON WHY NOT TO MANAGE RISK

2. Hedging can distract management from its core business.

Risk management requires certain skills and knowledge, appropriate data, and intensive procedure.

Thus, risk management is a hard work.

The more the firm tries to manage risks,
The less the firm will concern about its main business objectives.

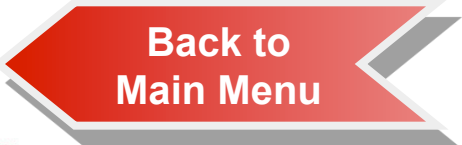
ANOTHER REASON WHY NOT TO MANAGE RISK

3. Risk management is a double-edged sword.

Since risk management is a hard work that requires a lot of skills and information, it is very easy to make a mistake in such complicated process of risk management.

Especially in small firms, they normally have no enough money for hiring good risk managers and paying an expensive risk management procedure.

As a result, miscalculation can occur and leads to a large amount of loss!



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Topic 3

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**WHY DO WE HAVE TO
MANAGE RISK IN PRACTICAL?**

DISTINCTIONS BETWEEN THEORY AND REALITY: **there is no perfect market in real world.**

**Perfect markets have never existed
as we see from information asymmetry and state intervention.**

**Risk-reduction activities have some
advantages in imperfect markets.**

- to reduce the chance of default and
to reduce the cost of financial distress.**
- to reduce the cost of the capital and
enhance their ability to finance growth**

WHY DO WE HAVE TO MANAGE RISK?

- Managers may not be able to diversify the personal wealth that they have accumulated in their company.
- To protect property and other assets at a price that is higher than the expected value of the potential damage that may occur if the risk materializes.

WHY DO WE HAVE TO MANAGE RISK?

- **Environment always keep on changing.**

- **Benefits of risk management**

1. Improved strategic and business planning
2. More effective use of resources
3. Increased ability to deliver on time
4. Improved reliability leading to an enhanced reputation
5. An ability to quickly grasp new opportunities
6. Fewer breakdowns, fewer shocks and fewer unwelcome surprises

CASE STUDY

Case 1

The collapse of Barings Bank in 1995 is due to a huge unauthorized exposure to derivatives. Nick Leeson was in charge of trading at the Singapore Branch of Barings Bank, and also in charge of the back-office operation.

Case 2

The crises in Orange County in 1994 is explained by large positions in interest rate derivatives.
The investment pool was invested in highly leveraged investments.

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Topic 4

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**HEDGING OPERATION *vs*
HEDGING FINANCIAL
POSITION**

HEDGING OPERATION

What is hedging operation?

- It is when you try to minimize risks occurring from production process and selling activities
 - It requires management attention and optimization of production.
- Firms should concentrate on business areas where it has comparative advantages.

HEDGING OPERATION

Examples :

- Microsoft's reliance on temporary workers
- Using foreign currency derivatives (FCD) to reduce foreign exchange exposures for Taiwan firms
- FCD is less effective when the time horizon lengthens.
- Geographic hedging is a good component strategy when consider long-term management.

HEDGING FINANCIAL POSITION

What is hedging financial position?

- It is when you try to reduce risk that is related to balance sheet and that is not caused by production activities.

Examples :

- Hedging the interest rate risk on bank loan
- Hedging income tax using geographic diversification

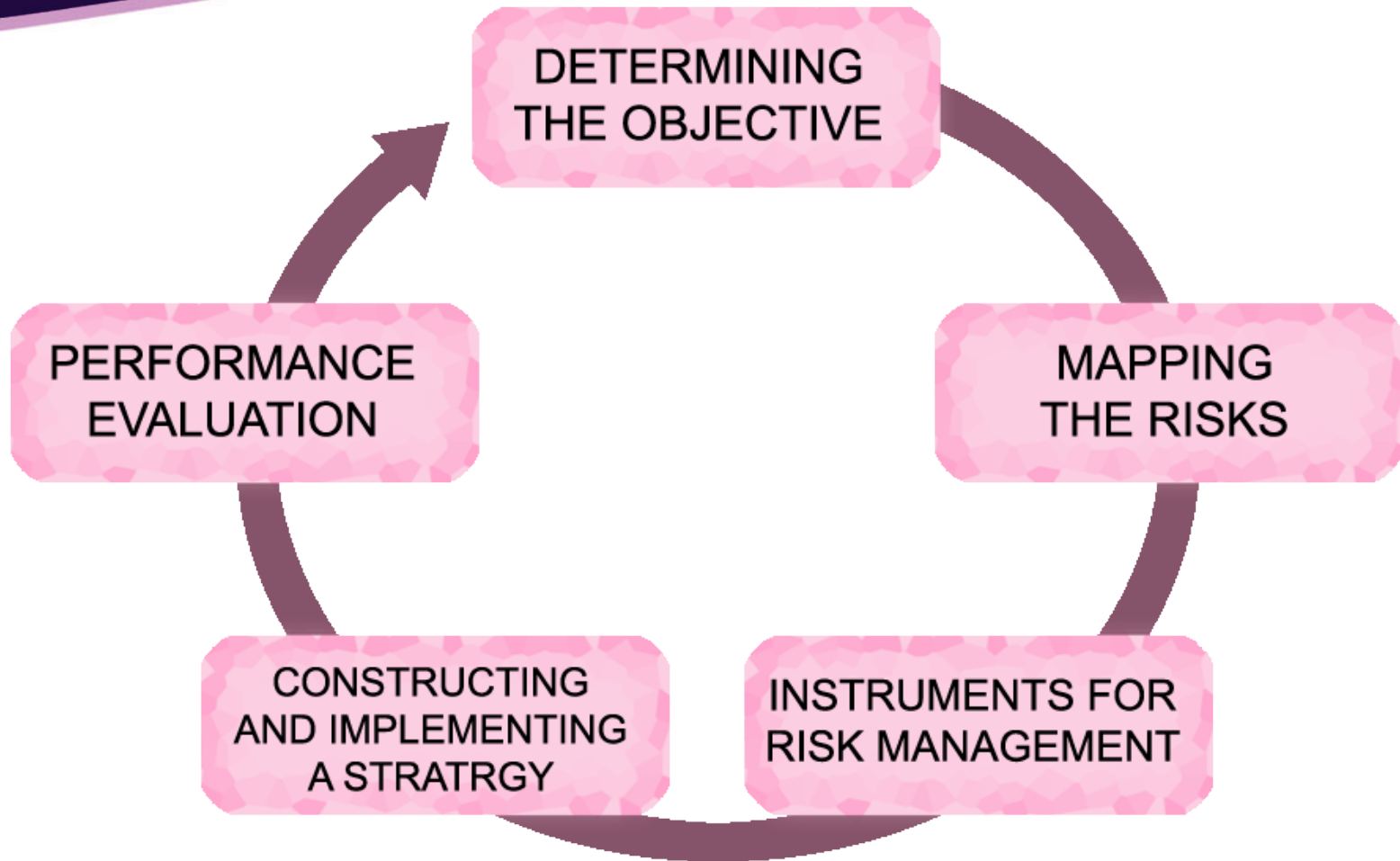
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Topic 5

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**PUTTING RISK
MANAGEMENT INTO
PRACTICE**

CORPORATE RISK MANAGEMENT PROCESS



I. DETERMINING THE OBJECTIVE

- **Setting A Goal**

- **Clarify whether to manage volatility in accounting profit or economic profit**

- **Consider the time horizon**, such as liquidity, accounting and tax implication for your chosen derivatives

- **Identify the risks**

Strategic risk, Operational risk, Financial risk, Information risk

Advantage of Determining the objective

The firm can manage risk that related to its goal and not engage the unrelated activities which might be costly

CASE STUDY: PTT

Objective :

To mitigate in volatile oil price and business cash flow to meet business target budget and guarantee business performance.



II. MAPPING THE RISKS

- Map the relevant risks and estimate their current and future magnitude.
- Estimate their current and future magnitude.
- Distinguish between taking or NOT taking risk
- Do “Risk response” whether or not that risk can be
 - insured against
 - hedged
 - neither of both

An example from PTT Plc. → Crude Oil Hedging

III. INSTRUMENTS FOR RISK MANAGEMENT

- Different firms have different ways in hedging the Risks

- After deciding to hedge the risk, the firm must base its judgment on

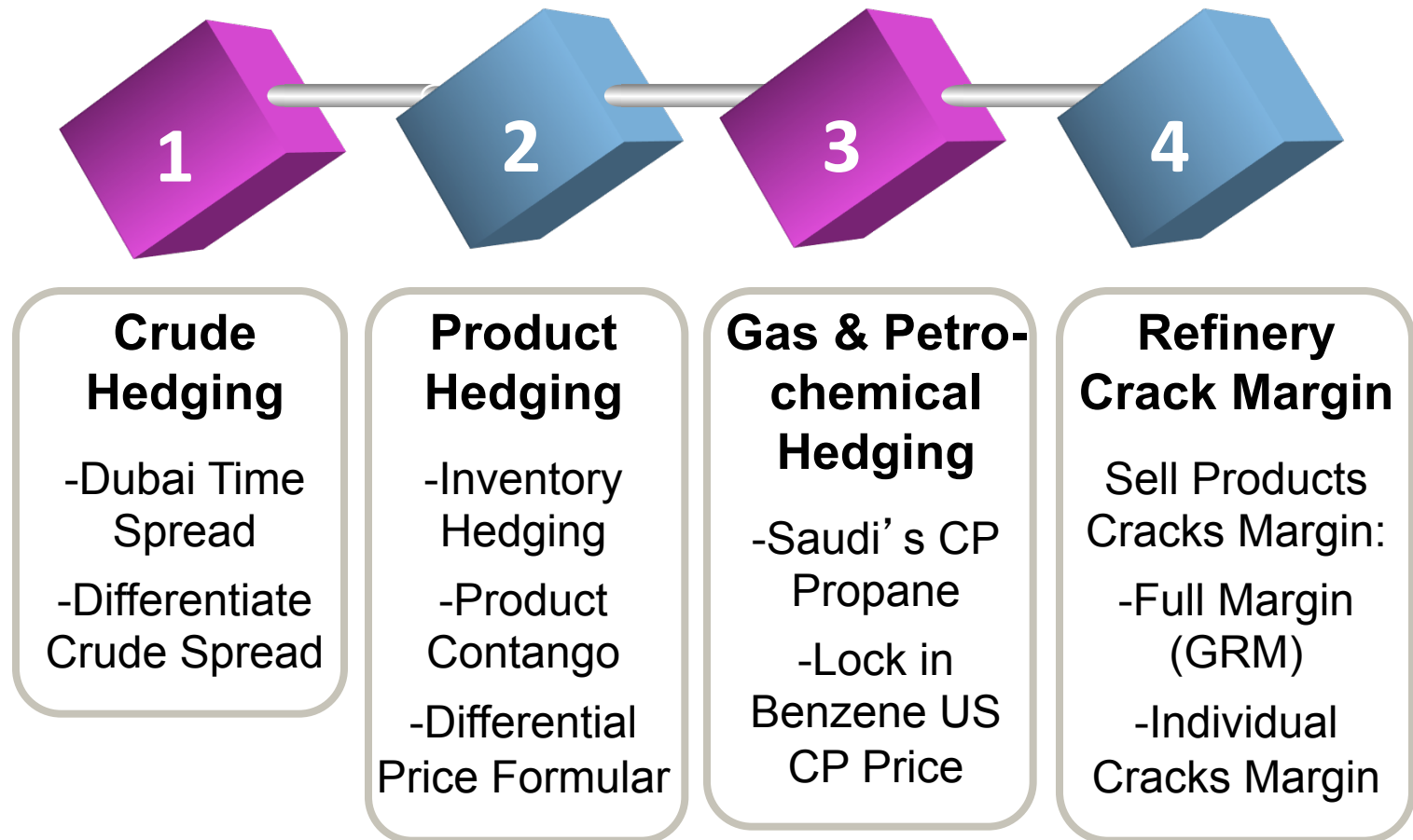
Advantages & Disadvantage of each Financial Instrument :

e.g.

- Future
- Forward
- Swap
- Option
- etc.

CASE STUDY: PTT

MAIN ACTIVITIES





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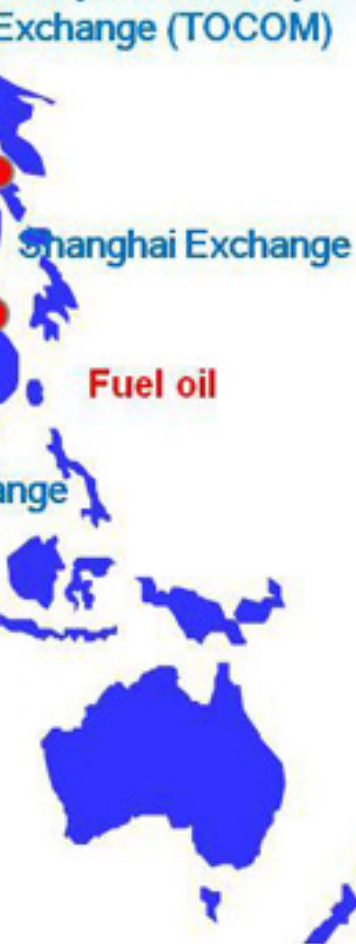
New York Mercantile Exchange
(NYMEX)



Inter-Continental Exchange
(ICE Former IPE)



Tokyo Commodity
Exchange (TOCOM)



Dubai Mercantile Exchange
(DME)

IV. CONSTRUCTING AND IMPLEMENTING A STRATEGY

Constructing

**Setting the risk limit which the corporation can bear,
setting time horizontal, evaluating**

Implementing

**In order to achieve the goal,
instruments or strategies must be conducted in a systematic way;
the systems of monitoring, transparency,
and the most important thing is that a strategy must
be conducted by skillful and experienced people.**

V. PERFORMANCE EVALUATION

- **The system must be evaluated periodically whether or not it makes the company achieve the overall goals that the risk is eliminated**
- **When evaluating the performance of risk management, the board of directors also decides whether or not to change the company's objectives and policy**

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