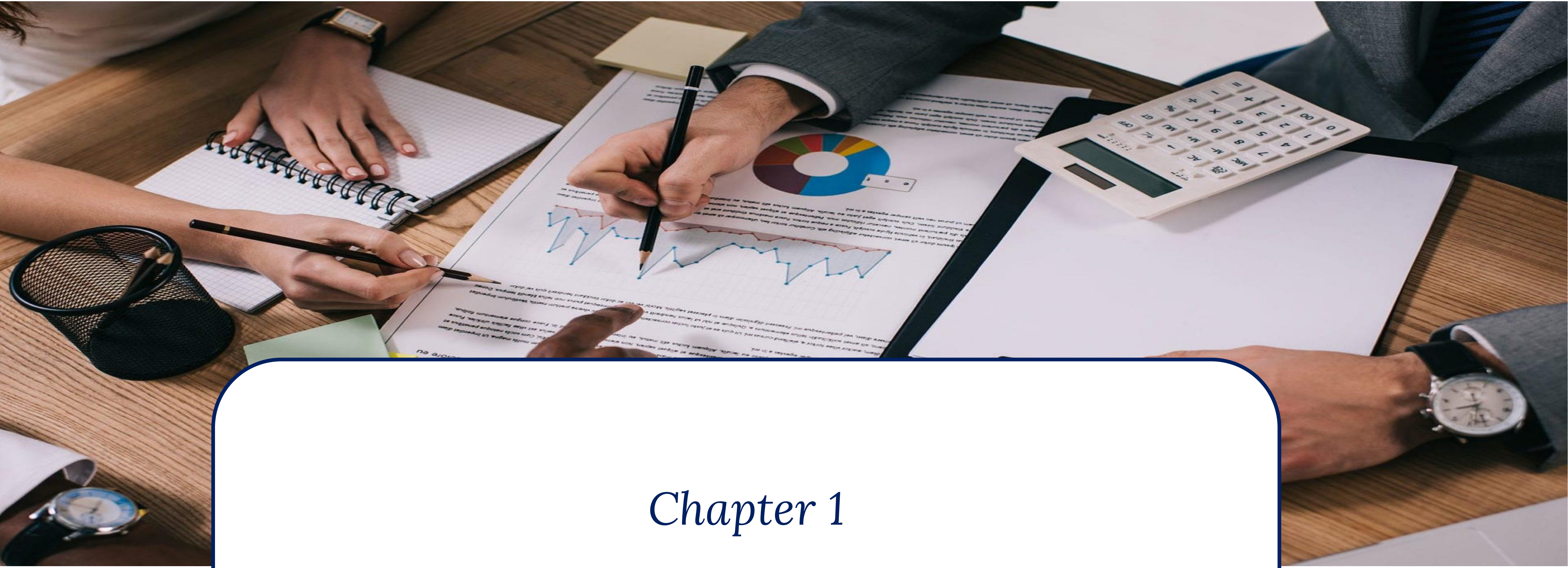
Associate Professional Risk Management

Exam Preparation Course

Syllabus

Section A – RISK MANAGEMENT AND RISK AND RETURN THEORY		
[12 out of 90 exam questions]		
No	Chapter	Title
1	Chapter 1	Risk Management: A Helicopter View
2	Chapter 2	Corporate Risk Management: A Primer
3	Chapter 5	A User-Friendly Guide to the Theory of Risk and Return



Chapter 1

Risk Management: A helicopter View

Chapter 1 – Risk Management: A helicopter View

Section	Title
1	What is Risk?
2	The Conflict of Risk and Reward.
3	The Danger of Names.
4	Numbers are Dangerous, too.
5	The Risk Manager's Job.
6	Typologies of Risk Exposures.

Chapter 1 – Risk Management: A helicopter View

Section	Title
1	What is Risk?
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

1. What is Risk?

Risk refers to the **variability** of possible future outcomes.

Risk refers to the **uncertainty** and **volatility** of possible future outcomes.

Risk is not associated with the size of the exposure and possible losses.

Risks may be classified as Expected Risks and Unexpected Risks.

1. What is Risk?

Expected Risks

Risks that are expected from conducting normal operations.

Risks are factored in the pricing of the credit facilities.

These risks are predictable.

1. What is Risk?

Unexpected Risks

Risks that are abnormal and not part of normal part of operations.

Risks are factored as part of reserves against capital.

Models such as Value at Risks & Economic Capital are used.

1. What is Risk?

*Relying heavily on statistical analysis based on **historical data** has been proved to be ill advised.*

*Risk managers have put emphasis on **scenario analysis** and **stress testing** to assess the impact of changing a risk factor on possible outcomes*

1. What is Risk?

- *Some banks are willing to take additional amount of risk in view of the following:*

  - ***Confidence*** *in the way it assesses and measures the unexpected losses.*
  - *Accumulation of* ***sufficient capital*** *or the deployment of* ***risk management techniques.***
  - *Appropriate* ***returns from the risky*** *activities, once the costs of risk capital and risk management are taken into consideration.*
  - *Clear* ***communication*** *with stakeholders about the bank's target risk profile.*

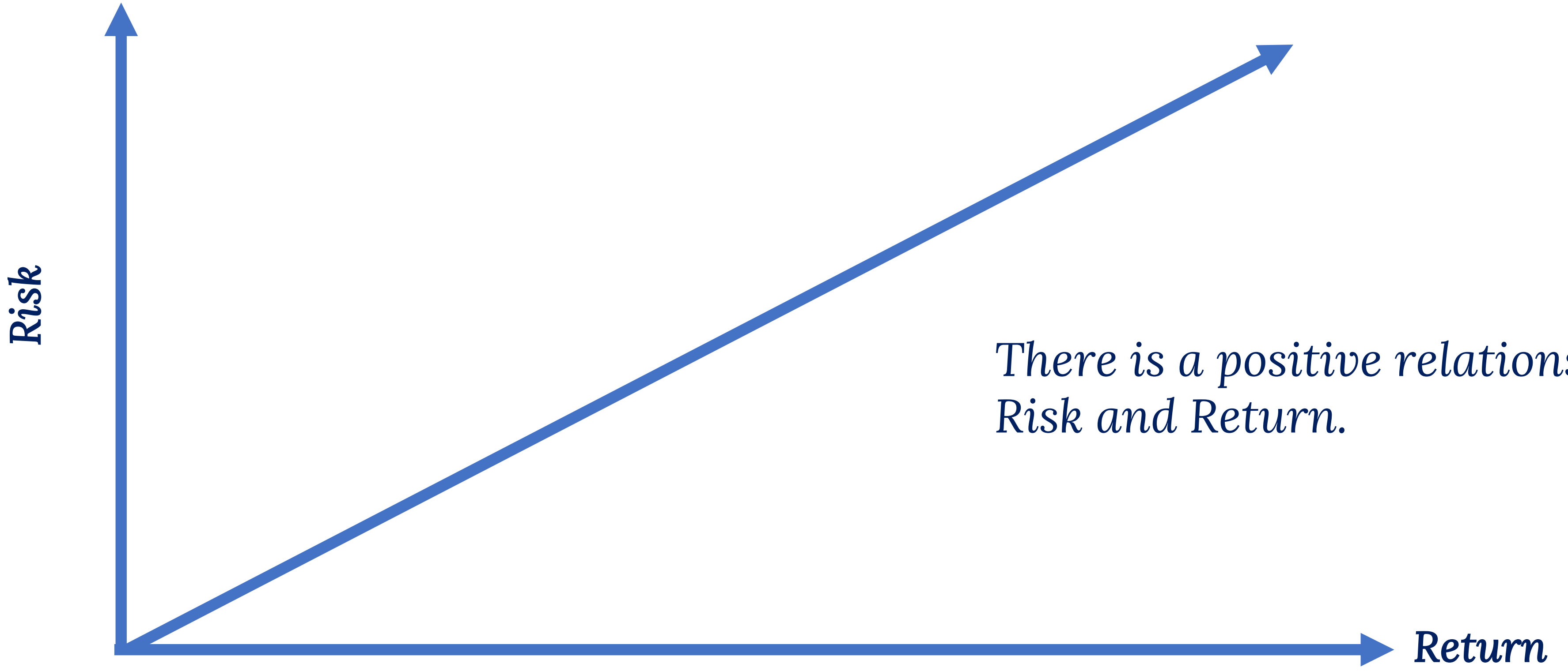
- *Some risk factors, although known, cannot be quantified. As such, in order to quantify them, worst case scenarios are developed.*

Chapter 1 – Risk Management: A helicopter View

Section	Title
1	What is Risk?
2	The Conflict of Risk and Reward.

2. The Conflict between Risk and Return

- *Relationship between the Risk and Return*



There is a positive relationship between Risk and Return.

2. The Conflict between Risk and Return

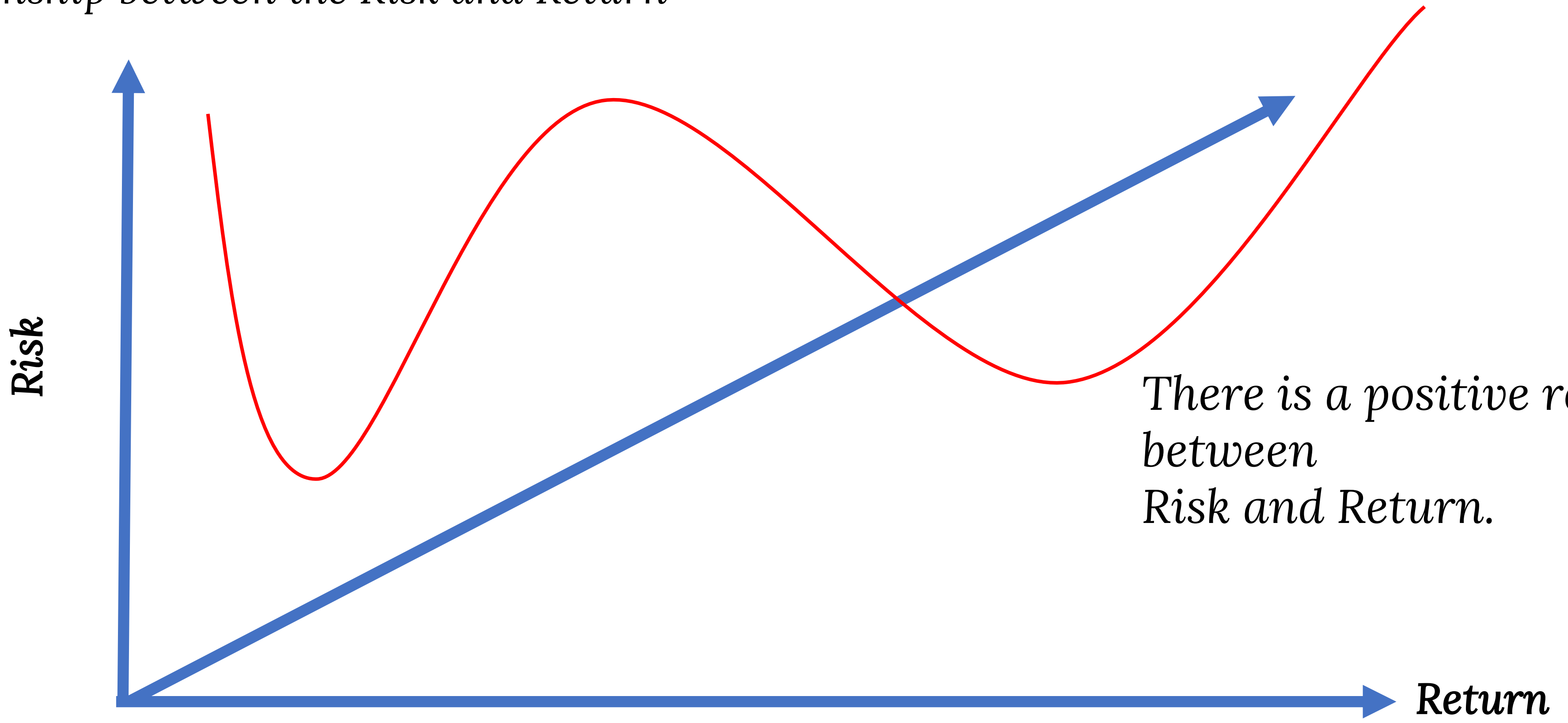
- *The relationship between the risk and return may not be straight forward:*
  - *A bond price may be an indication of the risk of the underlying bond. However, if we consider the market value of the bond as a measure of risk alone, we are ignoring key risks including liquidity risk and tax effect.*
  - *During economic upturns the differences in the yields between risky bonds and risk free bonds (Treasuries) reduced only to increase significantly during economic crisis such as the subprime crisis.*
  - *For securities where market prices are not clear, it would be difficult for a risk manager to assess the underlying risk. In these cases, the risk manager is required to assess large losses in the future arising from activities that generate appropriate profits.*
  - *Powerful clients tend to exaggerate their returns while underestimating the risks associated with their exposures.*

2. The Conflict between Risk and Return

- *The relationship between the risk and return may not be straight forward:*
  - *Returns need to be adjusted to the economic risks to account for changes in the economic cycle.*
  - *Management may be tempted to leave some gap in risk assessment so as to report higher profits, especially if their performance bonuses are linked to the bottom line. As such, they will be tempted to push income forward although cash is not realized (Such as mart to market security measurements) or defer risk into the future.*
  - *A poor industry practice or weak banking regulatory would also have adverse impact on assessing risks (For major players where their default might have adverse impact on the entire economy, regulators may loosen up their regulations to ensure the defaulter continues to operate)*
  - *The level of risk appetite varies from time to time during the economic cycle. During the upside economic cycle, banks loosen up their risk restrictions only to tighten them up during economic downturns- Give an umbrella to a client during sunny days only to take them away during rainy days.*

2. The Conflict between Risk and Return

- *Relationship between the Risk and Return*



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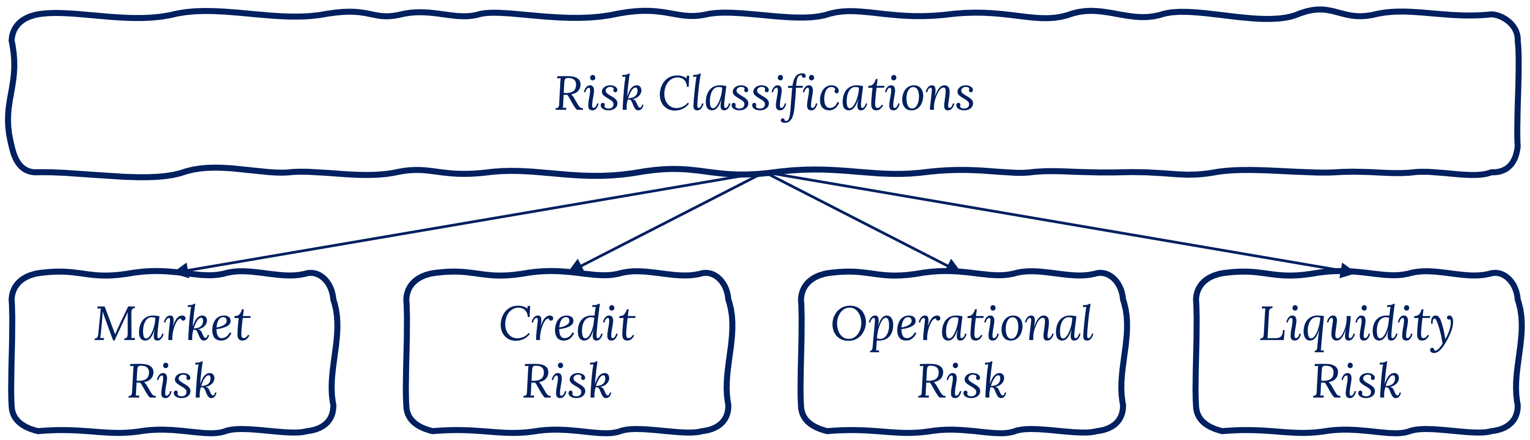
3. The Danger of Names



3. The Danger of Names

Risk Classifications

- Market Risk
- Credit Risk
- Operational Risk
- Liquidity Risk

The assessment of each type of risk requires certain set of skills, knowledge, monitoring and assessment tools

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Risk Classifications

- Market Risk
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The assessment of each type of risk requires certain set of skills, knowledge, monitoring and assessment tools

Classification of risks allows the development of certain skills and area of expertise in the relevant risk.

3. The Danger of Names

Limitations of Risk Classifications

Create potential for missed risks and gaps in responsibilities due to focusing on a specific type of risk.

Departments within risk management will operate in silos and may result in communication gap to senior management. Accordingly Senior Manager will not have a complete image of the underlying risks related to a single exposure.

Risks may be correlated. A sudden increase in the market prices may be considered a market risk but also may have adverse impact on credit and operational risks. During the subprime crisis, the prices for real estate properties dropped significantly (Market Risk). However, this also had a default/ credit risk as recovery rates dropped significantly and some borrowers defaulted deliberately given the increase in the LTV ratios.

3. The Danger of Names

Enterprise Risk Management ("ERM")

- *Some tools have been developed to gap the silo approach of assessing risk such as VAR, Economic Capital and Enterprise Risk Management ("ERM")*
- *ERM is an attempt to break the silo approach of managing risk and focus on enterprise-wide risk and include risk in business decisions and business strategies.*
- *ERM may include enterprise risk measurements, monitoring tools and/ or organizational tools.*

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3. The Danger of Names

Enterprise Risk Management ("ERM")

It is difficult to distinguish clearly between risk measurement tools and economic capital tools since risk measurement tools will be a factor in calculating the economic capital (Unexpected losses part of the risks).

It is also difficult to distinguish between economic capital tools and the balance sheet tools given that economic capital (A figure that reflects risks) will have an impact on the balance sheet and income statement of the bank.

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4. Numbers are Dangerous, too

Benefits of Assessing Risks based on Numbers

It allows the ranking of exposures based on Risk

Helpful in decision making

Make potential economic decisions about assuming, managing and transferring risks.

4. Numbers are Dangerous, too

Limitations of Assessing Risks based on Numbers

- Comparability (A risk manager should not use face value as a measurement of risk as risks associated with a 10 year treasury bond are different than risks associated with a 4 year corporate bond).
- Even sophisticated tools such as VAR have limitations (VAR is suitable to measure risk during a liquid, normal and short term market conditions).
- Risk measurements will ultimately depend on the integrity of the control environment. Trading desk losses are examples where traders found loopholes in the control environment to deliberately take exposure that cannot be captured through VAR.

4. Numbers are Dangerous, too

Limitations of Assessing Risks based on Numbers

Using past data as statistical inputs. The future may not be correlated with the past.

Risk measurement tools have estimation errors such as the degree of confidence level.

Banks tend to mis-assess the impact of extreme changes in operating environment.

5. The Risk Manager’s Job

Main functions of the Risk Manager

- Uncover the source of risk and make them visible to decision makers and stakeholders in terms of probabilities.
- Implement the appropriate policies, procedures, methodologies and infrastructure to risk adjust numbers and improve forward looking business decisions.
- Communicate the risk elements with senior management by keeping close relationship with them while remaining independent [This depends on the attitude of Senior Management and directions of the Board in regards to Risk Management].

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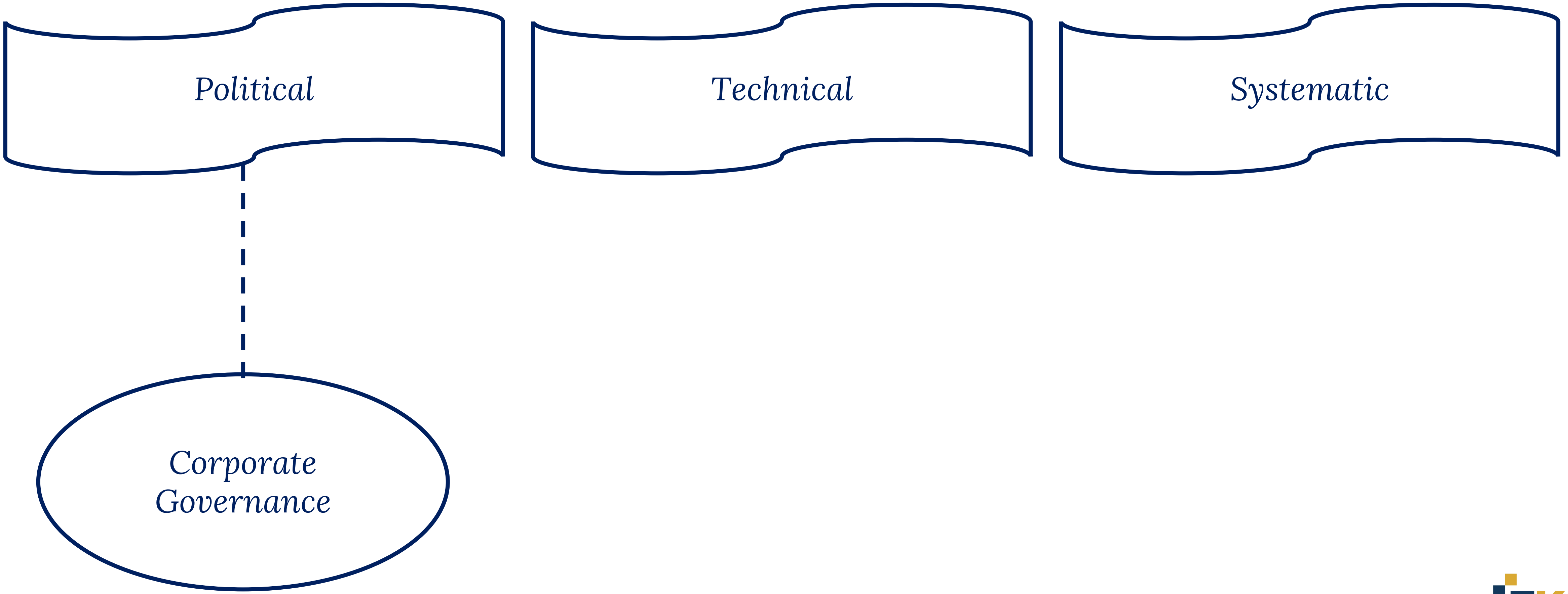
It is not the role of the risk manager to control and reduce expected losses but rather the process of understanding, costing and efficiently managing unexpected losses.

5. The Risk Manager's Job

Key Challenges that would affect the Risk Manager's Role



6. Typologies of Risk Exposures

Risk Categories

- Market Risk
  - Interest Rate Risk
  - Equity Price Risk
  - FX Risk
  - Commodity Risk
- Credit Risk
  - Default Risk
  - Bankruptcy Risk
  - Downgrade Risk
  - Settlement Risk
- Liquidity Risk
  - Funding Liquidity Risk
  - Trading Liquidity Risk
  - Portfolio maturity Risk

6. Typologies of Risk Exposures

Market Risk

Risks Associated with changes in the market prices.

6. Typologies of Risk Exposures

Market Risk

Interest Rate Risk

Risks associated with changes in the interest rates which would lower the valuation of fixed income instruments.

Duration and convexity are risk management tools that are used to assess the Interest Rate Risks

6. Typologies of Risk Exposures

- Market Risk
  - Interest Rate Risk
  - Equity Price Risk

Risks associated with changes in the prices of stocks in the market.

Equity Price Risks may be classified as either:

- Systematic Risks.
- Standalone Risks.

6. Typologies of Risk Exposures

- Market Risk
  - Interest Rate Risk
  - Equity Price Risk
  - FX Risk

Risks associated with changes in the foreign exchange rates between currencies.

FX risks prevail as a result of imperfect correlation between the FX changes and the international rate changes.

6. Typologies of Risk Exposures

Market Risk

Interest Rate Risk

Equity Price Risk

FX Risk

Commodity Risk

Risks Associated with changes in the prices of commodities.

Commodity Risks are higher than other types of market risks since the commodity markets are less liquid compared to other types of markets.

6. Typologies of Risk Exposures

Credit Risk

Risk that the counterparty will not fulfill their financial obligations.

6. Typologies of Risk Exposures

Credit Risk

Default Risk

The risk of nonpayment of principal/ interest within 30-90 days.

6. Typologies of Risk Exposures

- Credit Risk
  - Default Risk
  - Bankruptcy Risk

The risk that the collateral is not sufficient to settle the existing outstanding exposure.

6. Typologies of Risk Exposures

- Credit Risk
  - Default Risk
  - Bankruptcy Risk
  - Downgrade Risk

The risk that the credit rating (For rated companies) or credit grade (Based on Bank's credit grading models) would be downgraded.

6. Typologies of Risk Exposures

- Credit Risk
  - Default Risk
  - Bankruptcy Risk
  - Downgrade Risk
  - Settlement Risk

The counterparty will fail to pay the settlement amount.

This risk is common when discussing derivative cash settlement instruments.

6. Typologies of Risk Exposures

Liquidity Risk

The risk that funds are not available to meet short term commitments or;
the risk that an asset could not be converted into cash (i.e. sold) at fair value.

6. Typologies of Risk Exposures

Liquidity Risk

Funding Liquidity Risk

The risk that an entity will fail to make their payments or refinance a debt at maturity.

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6. Typologies of Risk Exposures

Liquidity Risk

Funding Liquidity Risk

Trading Liquidity Risk

The risk that the market is illiquid which affects the trading of securities.

It also refers to the risk of not being able to find a counterparty to transact with.

6. Typologies of Risk Exposures

Liquidity Risk

- Funding Liquidity Risk
- Trading Liquidity Risk
- Portfolio maturity Risk

The risk that the maturity date of a portfolio is concentrated on certain maturities/ dates/ years.

6. Typologies of Risk Exposures

Operational Risks

Risks that arise from or are related to:

- Technology risks.
- Failure of Internal Control.
- Incompetent Management.
- Fraud.
- Human errors.
- Natural Disasters.
- Settlement Operational Risk.
- Leveraged Derivative transactions and incorrect valuation models.

6. Typologies of Risk Exposures

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There is a high level of correlation between operational risk and market/ credit risks.

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6. Typologies of Risk Exposures

Business Risks

From an income statement perspective: Business factors that affect the income statement from revenues to operating income.

This may include drop in the selling prices and increases in operating costs. It could also include economic or implantation difficulties impacting operations.

Business risks may be measured by the variability of revenues and operating income in addition to the degree of operating leverage.

6. Typologies of Risk Exposures

Reputation Risks

Risks that arise from:

- *Trustworthiness of the entity.*
- *Engaging in fair dealing and conduct businesses.*

With the internet and advanced social media, the reputation risk has increased.

Have a Question?

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