



## Risk Management Policy PT Bank Mandiri (Persero) Tbk.

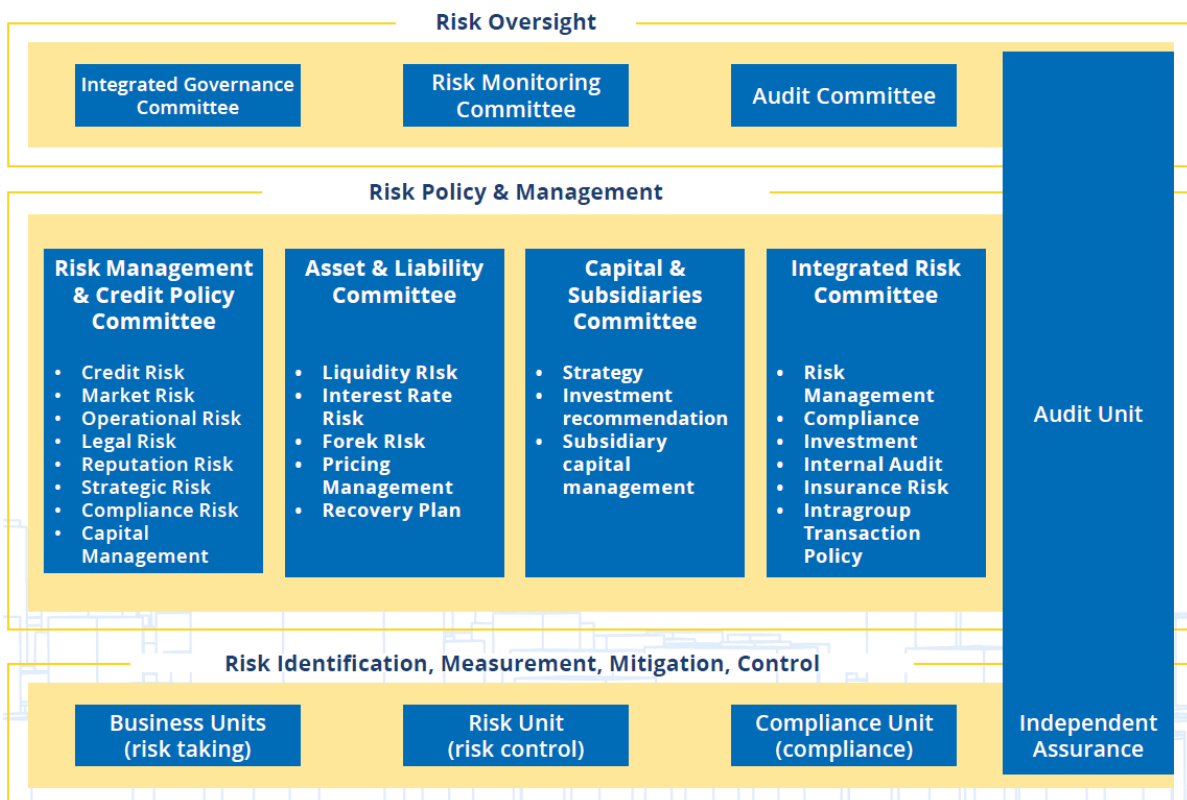
The risk management principle of Bank Mandiri is conducted proactively to achieve a healthy and sustainable financial and operational growth as well as to take care of the optimal risk-adjusted return level in accordance with the desired risk appetite. As a manifestation of Bank Mandiri’s commitment in conducting a good company management practice, particularly in risk management, Bank Mandiri has established policy, process, competency, accountability, reporting and supporting technology in order to make the risk management in Bank Mandiri to be effective and efficient.

### Risk Management Framework

The company risk management framework is written in the risk governance structure of Bank Mandiri encompassing three main parts, which are Risk Oversight, Risk policy and Risk management, as well as Risk identification, Measurement Mitigation, and control. These three main parts are supported by the Audit Working Unit and Independent Assurer to guarantee the effectiveness of its performance.

Sketchily, the work and risk governance framework of Bank Mandiri as mentioned above is described as follows :

Bank Mandiri Risk Governance Structure





The Risk Governance Structure of Bank Mandiri is developed based on four risk management pillars as Follow :

### **Active Supervision by The Board of Commissioner and Director**

The work and risk governance framework in Bank Mandiri consist of the Board of Commissioner performing risk oversight through Audit Committee, Risk Monitor Committee and Integrated Risk Governance, and Board of Director performing risk policy through Executive Committee related to risk management which are Risk management & Loan Policy Committee, Asset and Liabilities Committee, Capital and Subsidiaries Committee, and Integrated Risk Committee. In the operational level, the work unit of Risk Management along with Business Unit and Compliance Work Unit conduct risk identification function, risk measurement, risk mitigation and risk control.

The duties, responsibilities, and authorities of Board of Commissioner are related to active monitoring in risk management activities including :

1. Understanding the risk attached to company functional activity, particularly the one that can influence Company's financial condition.
2. Evaluating and approving the Risk Management policy conducted at least once in a year or more in a higher frequency in the event that there are significant changes in factors affecting company's business.
3. Performing evaluation toward the board of Director regarding Risk Management implementation in order to fit with the established policy, strategy and procedure of the company.
4. Providing consultation to the board of Director regarding transaction or business activity with large amount of fund.
5. Approving the provision of fund to the concerned parties on loan proposed by the loan committee in accordance with their authority.
6. Performing active monitoring toward the company capital adequacy in accordance with company's risk profile thoroughly, including reviewing risk appetite of the company established by the board of director.
7. Improving anti-fraud awareness and culture to all levels of the Company's organization.
8. Monitoring the implementation of Integrated Risk Management in accordance with the characteristics and complexity of the Company's effort.

In order to implement the Integrated Risk Management, the Board of Commissioner is responsible for :

1. Directing, approving, and evaluating policy which regulate the integrated management risk periodically.
2. Evaluating the implementation of integrated risk management policy by the Main Entity Board of Directors.
3. Performing evaluation on the implementation of Recovery Plan.

The duty, responsibility, and authority of Board of Directors related to risk management activity include :

1. Preparing written and comprehensive Risk Management's policy, strategy and procedure including the establishment and approval of the Company's risk limit, re-evaluating once in a





year or more in the event of significant changes in factors affecting company's business activities.

2. Taking the responsibility of the risk management and risk exposure policies implementation conducted by the company, including evaluating and providing direction of Risk Management Strategies based on reports submitted by the Risk Management Unit and periodic submission of accountability report to the Board of Commissioners.
3. Evaluating and determining the transactions that exceed the authority of the Company's officials one level under the Board of Directors or transaction that requires the approval of the Board of Director in accordance with the applicable internal policies and procedures.
4. Developing Risk Management awareness and culture, including anti-fraud culture to all organization, among others through adequate communication concerning the importance of effective internal control
5. Improving Human Capital competence related to Risk Management implementation, among others through continuous education and training programs, particularly related to Risk Management system and process.
6. Implementing an independent Risk Management function, reflected through function separation between the Risk Management Unit that performs identification, measurement, monitor and risk control with the work unit that performs and completes transaction.
7. Conducting periodic review with frequency adjusted with the company's need.
8. Establishing the capital adequacy in accordance with the Company's risk profile and strategy to maintain the capital level, including establishing the Risk Appetite
9. Preparing and implementing Recovery Plan of the company, including delivering the Recovery Plan to the shareholders in the GMS (General Stakeholders Meeting), conveying to all positions and organization levels, and carrying out periodic evaluations and tests.

In order to implement the Integrated Risk Management, the Board of Directors is responsible for:

1. Preparing and carrying out the policy which regulates Integrated Risk Management
2. Developing risk culture as a part of Integrated Risk Management Implementation;
3. Ensuring the effectiveness of Human Capital management to perform the Integrated Risk Management function
4. Ensuring that the Integrated Risk Management has been conducted independently
5. Evaluating the review result of the Integrated Risk Management Work Unit periodically concerning the Integrated Risk Management process.

Bank Mandiri has also stipulated risk management committees which discuss and recommend to the Board of Director, among others concerning :

1. Policy and Procedure as well as monitor the risk faced by the company
2. Management of Company's asset and liabilities including interest rate and liquidity
3. Management of subsidiary (equity capital, divestment, remuneration, stipulation of the subsidiary management)
4. Implementation of Integrated Risk Management
5. Business development





In addition, Bank Mandiri also has a working unit related to risk management consisting of at least :

1. The Director in charge of the risk management function
2. Risk Management Unit (doubled as the Integrated Risk Management Work Unit)
3. Business Unit and Operational Working Unit
4. Internal Audit
5. Compliance Working Unit

In the established organizational structure, the working unit which functioning to perform transaction (Business Unit and Operational Work Unit) is separated from the working unit performing the internal audit, and is also independent towards Risk Management Unit.

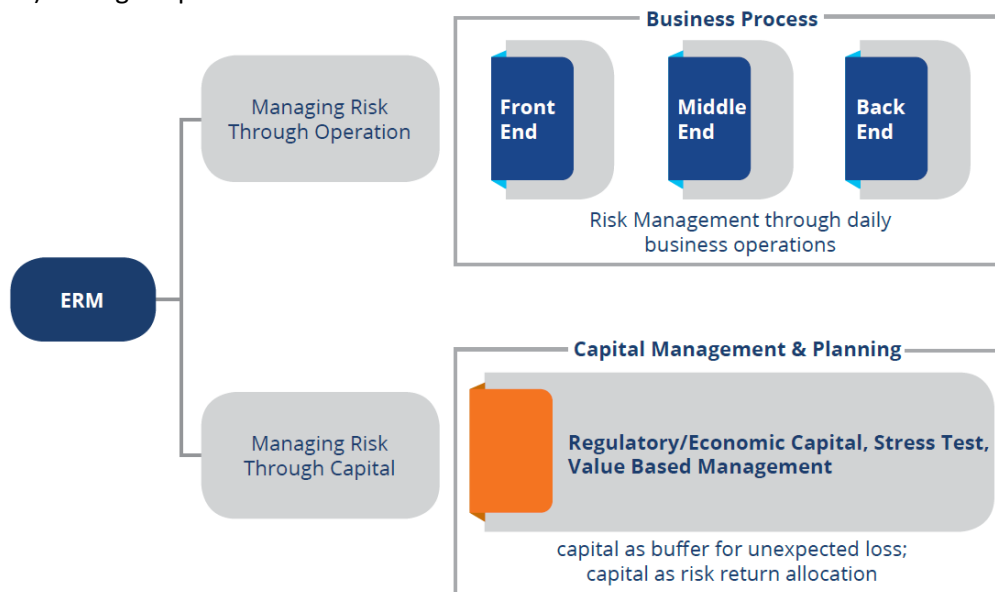
### Adequacy of Policies, Procedures, and Determination of Limits

Bank Mandiri has a Risk Management policy used as the main guidance in carrying out risk management. For more specific business area, Bank Mandiri owns more special policies and procedures, for example in credit, treasury, and operational. Among other things regulated in the policies and procedures is the limit establishment for each activity, both in portfolio and transactional levels.

All policies and procedures in Bank Mandiri are the form of risk management attached in each Company’s operational activity that is evaluated and updated at least once a year.

### The Adequacy of Identification, Measurement, Risk Monitoring and Control Processes, and Risk Management Information System (ERM)

Bank Mandiri conducts Processes of Identification, Measurement, Risk Monitoring and Control, as well as Risk Management Information System through Enterprise Risk Management (ERM) frameworks. The ERM implementation in Bank Mandiri uses two-prong approach, to ensure that the risk is not only mitigated properly through daily business, but also in unexpected situation (downturn) through capital reserve.





The four main components functioning as the supporting pillar in the implementation of two-prong approach are :

**1. Organization and Human Capital**

The Risk Management working unit of Bank Mandiri is responsible for managing all risk encountered by Bank Mandiri, including the development of supporting tools required in business process and risk management. In addition, there is a work unit in each unit business acting as the risk counterpart in the four-eye process of loan allocation. As the risk management is the responsibility of all work unit in Bank Mandiri, the success of risk management is determined by the existence of risk awareness in all working unit with adequate technical capability. Therefore, Bank Mandiri always improves the employee’s capability and knowledge, most importantly in risk management, by conducting internal training on a regular basis through Risk Management Academy. Furthermore, Bank Mandiri also conducts socialization, discussion forum, apprentice, or program on risk management which is in line with company’s culture internalization regularly at least once in a year. The Risk Management Unit of Bank Mandiri consists of Risk Management Directorate in charge of the Risk Management Independent unit and two Loan Approval Risk units known as Retail Risk directed by SEVP Retail Risk and Wholesale Risk directed by SEVP Wholesale Risk.

**2. Policies and Procedures**

The Risk Management Policies (KMR) employed as the main guidance in performing operational risk management and capital management in Bank Mandiri consist of :

- a. The prudential principle, such as Capital Adequacy Preparation, Early Warning System, Limit Establishment and Risk Diversification.
- b. Risk Management, such as Risk Profile, Risk Appetite, Stress Testing and Integrated Risk Management.
- c. Risk Management for each risk type, including identification process, measurement, risk monitoring and control.
- d. Risk Monitoring, including monitoring of activity implementation/risk management methodology in Bank Mandiri, and Internal Control System.

These Risk Management Policies become the basis for the preparation of procedures and technical guidelines related to risk management in Bank Mandiri.

**3. System and Data**

The risk management system is developed to support more efficient business processes so that decision making can be faster but still refers to the principle of prudence. In order to maintain data integrity and quality, Bank Mandiri has implemented a system including :

System	Objective
<ul style="list-style-type: none"> <li>- Integrated Processing System</li> <li>- Loan Origination System</li> </ul>	To improve the efficiency of the loan process and maintain data quality in all business segments.
Integrated Collection System	To enhance the integration and quality of limit data and the exposure of all customer facilities, in the context of implementing limit management.
Summit System	To manage market risk for treasury activities and monitoring credit risk arising from treasury activities.
ALM System	To manage and measure the size of the banking book risk for treasury and asset & liability management activities.
Risk Assessment Consolidation Generator System (RACER System)	To get a risk profile overview of Bank Mandiri both as the parent company and the Company's risk profile that is consolidated and integrated with the Subsidiaries. RACER System is web-based so it speeds up access and simplifies monitoring.
ERM System	To monitor overall risk management, especially in calculating capital to cover risks. ERM system has the capability to perform capital charge calculations (Standardized Approach and Advanced Approach), implementation of operational risk management tools, active portfolio management, and value-based management.





System	Objective
Fraud Detection Systems (FDS)	To monitor transactions of Loan Cards, Debit Cards, Merchants, Electronic Money (Mandiri E-Cash), Internet Banking and Micro loan by using predetermined parameters (rule based) determined based on historical data, mode and fraud trend. With the existence of this system, precautionary measures can be taken earlier and can minimize fraudulent transactions.
Fraud Risk Management System (FRMS)	To provide an integrated fraud control system that is capable of carrying out early detection of transactions that occur on various channels. Currently FRMS has been implemented on the Mandiri Online channel and will be followed by further implementation of other channels including loan cards, debit cards, prepaid cards (e-money), electronic money (e-cash), Mobile Banking (USSD, STK/DSTK, Text Type), Acquiring (ATM and Merchant), as well as branches and employees.
Anti Fraud Application System (AFAS)	To detect the risk of application fraud by utilizing rules. This system has been implemented, among others, on Loan Cards, Micro loan, and Unsecured Loans.

#### 4. Methodology/Model and Analytics

Bank Mandiri has continuously implemented a risk measurement that refers to international best practices by using both quantitative and qualitative methods through the development of risk models such as rating, score, Value at Risk (VaR), portfolio management, stress testing and other models as supports in judgmental decision making. Periodically, these risk models are calibrated and validated by an independent Model Risk Validator unit to maintain the reliability and validity of the models and meet regulatory requirements.

In order to synchronize the implementation of Basel II and ERM with Basel II regulation and best practice implementation, Bank Mandiri has adopted and implemented Basel II as well as ERM framework. The implementation of Basel II and ERM in Bank Mandiri covers the areas of Credit Risk, Market Risk, Liquidity Risk, Interest Rate Risk in Banking book Position, Operational Risk, Capital Management and Internal Capital Adequacy Assessment Process (ICAAP).

#### The Implementation of Basel II and ERM

Implementation Aspect	Scope of Implementation
Credit Risk	Development and Improvement of Basel II Risk Parameters for the implementation of Internal Rating Based Approach (PD, LGD, and EAD).
Market Risk	Measurement of structured product risks, limit trading treasury, and treasury system infrastructure.
Liquidity Risk	Improvement of liquidity limit, core deposit analysis, Risk Appetite Statement (RAS), stress testing liquidities, reprising gap method, and implementation of Assets and Liabilities Management System.
Operational Risk	Development of Framework and Governance Operational Risk Management (ORM).
Capital Management	Improvement of Economic Capital model, development of framework Portfolio Optimization and Capital Optimization.
Internal Capital Adequacy Assessment Process(ICAAP)	Implementation of Risk Appetite Statement, Stress Testing, Capital Planning, and synchronization with related regulation of Risk Based Bank Rating (RBBR).

#### Internal Control System (Internal Audit)

Bank Mandiri practices effective risk managements in all work units by implementing the three line of defence models with the following conditions :

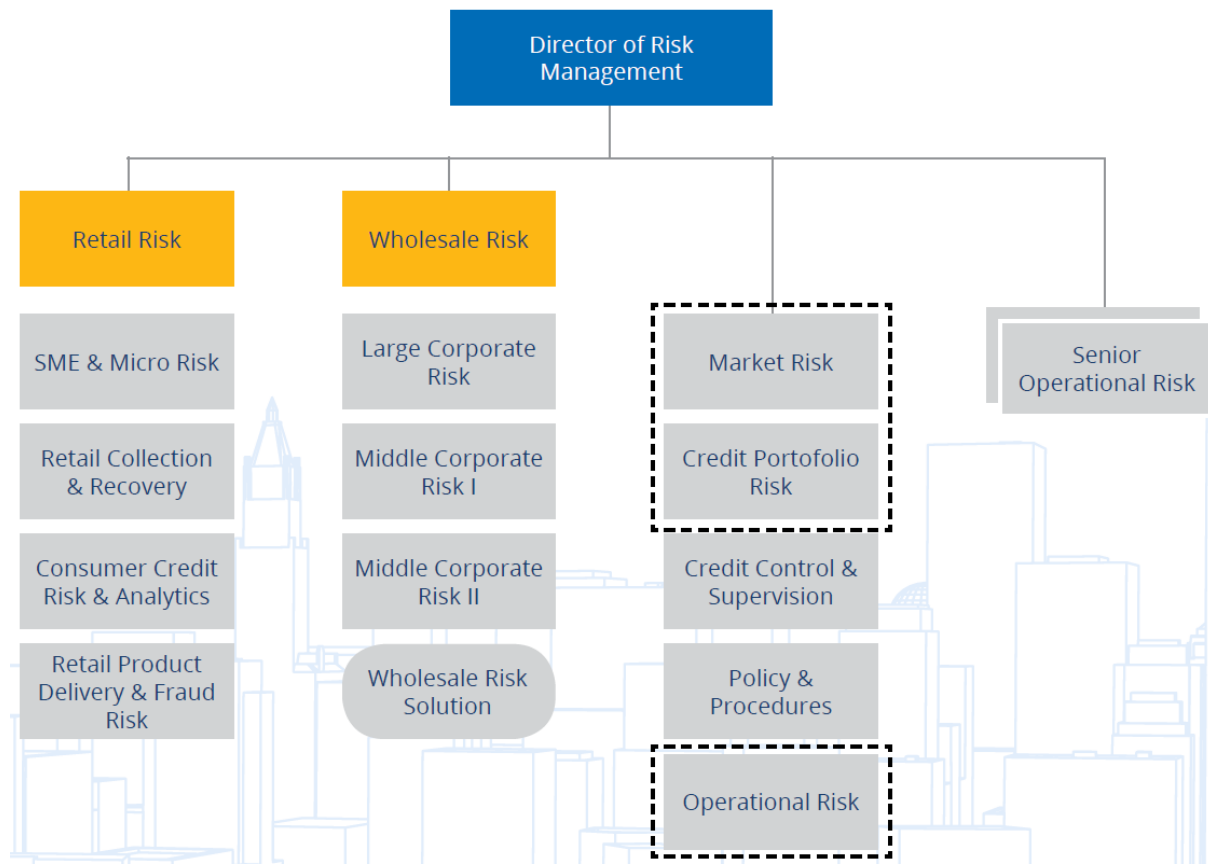
1. Work unit as the risk owner is the first line of defence responsible for risk management in its unit
2. Risk Management Unit is as the second line of defence performing oversight function
3. Internal Audit Unit is as the third line of defence performing independent assurance function





### Risk Management Organizational Structure

The Risk Management Structure in Bank Mandiri consists of Risk Management Directorate led by the Risk Management Director which oversees one Independent Risk Management and 2 Credit Approval Risk Units known as Wholesale Risk directed by SEVP Wholesale Risk and Retail Risk directed by SEVP Retail Risk. The Independent Risk Management Unit consists of Market Risk group, Credit Portfolio Risk Group, Credit Control & Supervision Group, Policy & Procedures Group and Operational Risk Group, each directed by Senior Vice President (SVP).





## The Duties and Responsibilities of Risk Management Group

The supervision of Risk Management in Bank Mandiri is generally performed by several work units, which are Market Risk Group, Operational Risk Group and Loan Portfolio Risk Group supervised by the Risk Management Director. The duties and responsibilities of each work unit are described as follows :

Group	Functions, Duties and Responsibilities
Market Risk	<ol style="list-style-type: none"> <li>1. Conducting market risk measurement using Standard method, Internal method and market risk modelling.</li> <li>2. Conducting analysis, giving recommendation proposal and carrying out the function of market risk control on trading treasury activity to business and management units.</li> <li>3. Conducting management of Bank liquidity by implementing the principles of liquidity risk management and preparing alternative strategy of funding liabilities and Bank assets financing to ensure that Bank liquidity is managed efficiently with controlled risk.</li> <li>4. Managing the risks of interest rate risk exchange rate in the portfolio banking book and formulating recommendation on Bank balance management strategies to achieve optimal risk and return in order to maintain profitability and increase shareholder value.</li> <li>5. Conducting a methodology study on third party Funds pricing, loan and Funds Transfer Pricing which is in line with asset and liabilities management strategies.</li> <li>6. Managing information system management in order to manage interest rate risk, exchange rate risk and liquidity risk.</li> </ol>
Operational Risk	<ol style="list-style-type: none"> <li>1. Formulating, developing, and refining the framework, methodology, system, and tools used by the company in managing operational risk according to business development.</li> <li>2. Carrying out analysis, study and review or risk profile and providing feedback on improving the quality of framework implementation.</li> <li>3. Developing and implementing regulatory capital charge measurement methodology (Regulatory Capital Charge) in accordance with the existing regulation and Basel stipulation, as well as conducting the monitoring of its execution.</li> <li>4. Creating risk awareness and risk culture programs on operational risk management process to all employees.</li> <li>5. Developing report methodology in accordance with best practice and submitting the report of Company's Operational Risk Profile, for the management, regulator, and other external parties.</li> <li>6. Conducting study and providing advisory for the new product suggested by the working unit to improve the management of operational risk.</li> </ol>
Credit Portfolio Risk	<ol style="list-style-type: none"> <li>1. Developing and improving the methodology, Loan Risk Tools (Loan Monitoring System, Rating ad Scoring System, Recovery Monitoring System, LoanRating and Scoring Stress Testing Tools and Financial Spread Sheet) as well as the process employed in loan granting to fulfil the need of business development, loan process improvement, regulatory changes, competitor development as well as best practices.</li> <li>2. Providing Portfolio Guideline methodology, limit per economic/industry sectors calculation methodology, product limit calculation, in-house limit, loan risk profile, stress testing, and other portfolio management methodologies.</li> <li>3. Carrying out portfolio management in both bank-wide and business segment scales, encompassing loan portfolio study, Loan Risk Profile, portfolio per industry study and providing recommendations on changes in internal and external conditions /macroeconomic in order to optimize the portfolio of the company.</li> <li>4. Formulating, preparing and coordinating the implementation of Enterprise Risk Management (ERM) which includes policies, governance, methodology, process and information system, to assist the implementation of risk management attributed to the business process and risk-based performance, by referring to international best practice, regulations of Bank Indonesia and Basel Committee documents.</li> <li>5. Providing company's identification and risks, such as loan risk, market and operational, in bank-wide and consolidation, both in normal and abnormal conditions, Enterprise Risk Assessment, Risk Profile Report, Early Warning Indicators and Scenario Analysis (Stress Testing).</li> <li>6. Conducting model validation supervision and advisory on the development/modification to ensure the risk management models have accountable quality both academically and business to meet regulatory requirements.</li> <li>7. Performing function in implementing Basel II related to Bank Indonesia and other external parties.</li> <li>8. Managing accurate, reliable and timely loan database and ERM data mart to be utilized in process of modelling, portfolio management and ERM implementation.</li> </ol>

