



## Analysis of Lending to Prospective Debtors with a Risk-Based Approach

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### Abstract

*This article discusses the analysis of lending to prospective borrowers using a risk-based approach. The main objective of this study is to identify the factors that influence lending decisions and develop strategies that are more effective in evaluating credit risk.*

*This study uses a literature study approach with a qualitative approach. Data collection by interviews with lender institutions.*

*The results of the study show that there are several factors that have a significant influence on the decision to grant a loan. These factors include the prospective debtor's credit profile, payment history, debt-to-income ratio, and work background. In addition, there are also macroeconomic factors that need to be considered, such as market conditions and interest rates.*

*The need for a strict policy in lending requires clear guidelines in determining the terms of lending, including the maximum loan limit and payment terms. Clear policies help reduce the risk of default and ensure fairness in the lending process. In the era of increasingly advanced information technology, the use of sophisticated data and risk analysis methods is the key to making the right decisions and reducing credit effectively.*

*In conclusion, based analysis of lending to prospective debtors plays an important role in maintaining the financial stability of financial institutions and preventing unwanted credit risks.*

**Key words:** *analysis of lending, debtor's credit profile, loan factors, risk based*

### 1. Introduction

Sustainable Development Goals: Leading Towards a Better Future

The Sustainable Development Goals (SDGs) are a global call to create a better world for all people and the planet. Defined by the United Nations (UN) in 2015, the SDGs consist of 17 interrelated goals, designed to address the various social, economic and environmental challenges facing the global community today.

The SDGs carry an ambitious but important vision: eradicate poverty, protect our planet and ensure that all people can enjoy peace and prosperity. Each goal has its own focus, from hunger and gender inequality to tackling climate change and ensuring quality education for all.



However, the true essence of SDGs lies in integration. TPB understands that the challenges facing the world cannot be solved in isolation. The success of one goal is often tied to progress on another. For example, good quality education (SDG 4) can have a positive impact on health (SDG 3) and gender equality (SDG 5), which in turn contributes to inclusive economic growth (SDG 8).

In addition, the TPB recognizes that achieving this goal requires partnership and collaboration between government, the private sector, civil society, communities and individuals. By combining knowledge, resources and joint efforts, TPB drives the creation of innovative solutions that can have a greater positive impact. With a deadline of 2030, the SDGs reflect a global determination to create a world that is more sustainable, just and inclusive for all. Every action taken by individuals, communities and countries has the potential to make a meaningful difference in achieving these goals. On the way to a better future, TPB is a shared commitment to create positive changes for current and future generations.

The SDGs represent a collaborative outlook for realizing positive changes in all dimensions of life. Each number reflects the direction we must take to build a better future for all.

According to (BAPENAS, 2014) starting with SDG 1, we pledge to end poverty in all its forms. This is a call to ensure that every individual has access to basic needs, living without hunger and uncertainty.

SDG 2 evokes the spirit of food security and sustainable agriculture. Here, we remember the importance of sufficient and nutritious food for all, as well as efforts to maintain biodiversity and secure the future of the earth.

However, well-being is not only in the abdominal cavity, but also in health which signifies SDG 3. Ensuring a healthy and prosperous life for all ages is our commitment, where quality health services and access to medicines are human rights.

Just as importantly, SDG 4 embraces the right to quality education. In a colorful classroom, we open doors to knowledge, creativity and opportunity. This SDG encourages us to ensure that no one is left behind in the search for knowledge.

SDG 5 puts gender equality at the center of attention. This is a call to eliminate all forms of discrimination against women and girls, and to empower them at all levels of society.

No less impressive, SDG 6 encourages us to protect crucial water resources. By ensuring everyone's access to clean water and proper sanitation, we maintain health and environmental sustainability.

SDG 7 invites us towards the era of renewable and affordable energy. From sun to wind, we embrace sustainable natural resources, bringing light to every corner of the world.

However, sustainable development is not just about the economy, it is also about decent work and inclusive growth (SDG 8). We strive for a world where every working hand gets the rewards it deserves and opportunities for growth.



SDG 9 takes us to the realm of sustainable industry, innovation and infrastructure. In the niches of technology and creativity, we design a strong and sustainable future.

However, sustainable development will not be fully achieved if inequality remains a barrier (SDG 10). In the light of equality, we pave the way for all, prevent lag and ensure that voices are heard.

SDG 11 guides us to build cities and human settlements that are inclusive, safe and sustainable. In a lush network of buildings and roads, we create a home for everyone.

Then, SDG 12 invites us to reflect on responsible consumption and production patterns. By minimizing waste and caring for the environment, we create a sustainable footprint.

SDG 13 calls for action on climate change. In this global bond, we care for our planet and protect the legacy for generations to come.

SDGs 14 and 15 invite us to protect life underwater and on land. In our vast oceans and forests, we embrace the biodiversity that gives life to this planet.

SDG 16 promotes justice and peace. Within the bosom of strong institutions, we uphold the law, address inequality and create a harmonious society.

Finally, SDG 17 symbolizes the spirit of partnership to achieve common goals. In a stream of cooperation and collaboration, we strengthen our global efforts and unify potential for a better future.

The 17 Sustainable Development Goals are not just numbers. It is a collective promise and vision that embraces the diversity of humanity, creating a world that is more just, sustainable and more humane for all who live in it. Under this umbrella, we unite to achieve a brighter future, and leave a trail of positive change for generations to come.

## **THEORETICAL BASIS**

In his book Armida Salsiah Alisjahbana & Endah Murniningtyas (2018), that the goal of sustainable development is internalizing the impact of every social and economic action on the environment. Which means, every social and economic activity needs to avoid/prevent or take into account its impact on environmental conditions so that the environment can continue to carry out its function in supporting life now and in the future.

Then according to (BAPPENAS, 2014) the SDGs (Sustainable Development Goals) are not officially grouped into "four pillars," but there is a way to link SDGs to the four main pillars which are often used to encapsulate sustainable issues. These four pillars are often referred to as the four pillars of sustainable development or the four dimensions of sustainability. These pillars are: sustainable economy, sustainable social, sustainable environment and sustainable governance.



Here is a brief description of each pillar:

1. **Sustainable Economy:** It focuses on economic growth that is not only concerned with financial returns, but also takes into account social and environmental impacts. SDGs goals related to this pillar include poverty alleviation, decent work, inclusive growth, and sustainable industrialization (SDGs 1, 8, 9, 10, and 12).
2. **Social Sustainability:** This relates to efforts to create a just, inclusive and equitable society, where human rights are respected and equality is upheld. These include quality education, good health, gender equality and tackling inequality (SDGs 3, 4, 5, 10 and 16).
3. **Environmentally Sustainable:** The main focus is protecting the earth's ecosystems, tackling climate change, and managing natural resources wisely. This involves protecting biodiversity, managing fresh water, and protecting the seas and land (SDGs 6, 13, 14 and 15).
4. **Sustainable Governance:** This refers to effective, transparent and accountable governance at all levels, including national and international levels. These include peace, justice, strong institutions and global cooperation (SDGs 16 and 17).

Although the SDGs are not formally grouped into these four pillars, this approach helps in understanding how the various SDG goals and targets relate to one another and how they together contribute to the ultimate goal of holistic and inclusive sustainable development.

Referring to the first pillar above, that the banking industry plays a central role in the modern economy, functioning as the backbone that supports economic and financial activities throughout the world. As a financial institution that has a variety of functions and services, the banking industry has a significant impact on various aspects of the economy, from extending credit to facilitating global financial transactions. The following is an overview of the role of the banking industry in the economy:

1. **Lending and Funding:** One of the core roles of the banking industry is to provide credit to individuals, businesses and governments. This enables people and entities to obtain the capital needed to start or expand a business, buy a home, educate, and for other purposes. Therefore, banking becomes a catalyst for economic growth by providing access to the necessary funds.
2. **Financial Intermediation:** Banking acts as a liaison between borrowers and lenders. They collect funds from public savings and allocate them to those who need loans. This helps bridge the gap between surplus funds and funding needs.
3. **Risk Management and Security:** Banking plays an important role in managing financial risk. They provide services such as insurance, investment management, and derivatives that help individuals and companies protect their assets from economic risks, such as currency fluctuations or changes in interest rates.
4. **Financial Transactions and Payments:** The banking industry provides payment services that enable fund transfers, bill payments, and commercial transactions. With services such as credit, debit cards and electronic transfers, banking has changed the way we carry out our daily transactions.



5. Mobilization of Funds: Through fundraising activities, banks support economic development by channeling funds from individuals who have excess funds to sectors that require investment. This provides a boost to growth and job creation.

6. Developing Financial Innovation: The banking industry continues to innovate in financial products and services, such as online banking, financial technology (fintech), and digital payments. This influences the way we interact with money and facilitates easier and inclusive access to financial services.

7. Promoting Financial Stability: Banking has an important role in maintaining financial system stability. Tight regulation and supervision of banks helps prevent systemic risk and financial collapse that could disrupt the economy as a whole.

The banking industry plays a very important role in creating a stable and sustainable economic environment. Through the services they offer, banks help drive growth, minimize risk and facilitate the flow of funds needed for various aspects of life and business.

## **Risk**

### **Risk management**

According to Bank Indonesia Regulations (2009) risk management is a set of methodologies and procedures used to identify, measure, monitor, and control risks arising from all bank business activities.

And the purpose of implementing risk management is to minimize existing risks. According to Yushita (2008) there are three important things in bank risk management, which should be of concern to bank managers and owners, namely complete procedures, internal controls, and human resource factors.

Implementation of Risk Management at least includes::

- a. active supervision of the Board of Commissioners and Board of Directors;
- b. adequacy of policies, procedures, and setting limits;
- c. adequacy of the processes of identification, measurement, monitoring and control of Risks as well as Risk Management information systems; And
- d. comprehensive internal control system

Management of risk management by means of risk measurement must be carried out periodically both for products and portfolios as well as all bank business activities.

In carrying out operations in order to achieve the goal of making a profit, the company will be faced with various risks. This risk is the uncertainty of the results to be obtained in the future, or the risk of potential loss due to an incident. The relationship that occurs between risk and profit or income to be obtained by the company is unidirectional, meaning that when the level of income to be obtained is very high, the risks faced are also very high. And vice versa when the risk that is dared to be faced is only at the level is low, the income to be earned is also low. Although basically, the nature of investors is to expect high returns with low risk.



Due to the risks faced by the company, it is necessary to have management efforts for these risks. Risk management aims to manage the risks faced, so that these risks can hopefully be reduced or even eliminated. The banking industry is one of the industrial sectors that has a high level of risk. Its main activity is as a mediation institution between those who have excess capital and those who need capital. Immediately will face high and various risks. The risks faced by banks can come from within the company itself or from outside.

The high risk conditions, so that the government requires the application of risk management policy rules in every bank in Indonesia, through Bank Indonesia regulation number 11/25/PBI/2009, regarding the application of risk management for commercial banks. Aims to maintain the stability of the bank's condition against existing risks as well as to increase the trust of all existing stakeholders.

Risk management that is carried out properly and correctly by a bank will certainly affect its competitive ability. So that you are more prepared to face the risks that arise. The big risk is that the bank will face various problems related to risk and can result in losses and even bankruptcy. Therefore banking as an industrial sector with a high level of risk really needs to implement risk management.

The progress of today's increasingly modern era, technological developments are very rapid so that companies are required to keep up with developments. Do not miss the banking industry is also an industry that is required to dynamically follow the development of information technology. This will support banks in carrying out their operational activities as well as improving services to their customers so that they can compete with other banks. Related to the risks arising from the use of information technology, banks must be able to implement risk management properly, so that the utilization of information technology can be maximized and avoid existing risks.

According to the Financial Services Authority Regulation (OJK, 2016), Concerning the Application of Risk Management for Commercial Banks. There are 8 types of risks that must be managed by commercial banks, namely:

a. credit risk

Risk due to failure of the debtor and/or other parties in fulfilling obligations to the Bank

b. market risk

Risks on balance sheet positions and off-balance sheet positions including derivative transactions, due to overall changes in market conditions, including the risk of changes in Option prices

c. liquidity risk

Risk due to the bank's inability to meet its maturing obligations from cash flow funding sources and/or from high quality liquid assets that can be used as collateral, without disrupting the activities and financial condition of the bank





d. operational risk

Risks due to insufficient and/or malfunctioning of internal processes, human errors, system failures, and/or external events that affect bank operations.

e. legal risk

Risk due to lawsuits and/or weaknesses in juridical aspects

f. reputation risk

Risk due to decreased level of stakeholder trust originating from negative perceptions of the bank

g. strategic risk

Risk due to inaccuracy in making and/or implementing a strategic decision and failure to anticipate changes in the business environment

h. compliance risk.

The risk due to the bank not complying with and/or not implementing the applicable laws and regulations.

According to (Darmawi, 2005) the benefits of risk management are given to the company, can be divided into 5 (five) main categories including:

1. Risk management is likely to prevent a company from failing.
2. Risk management can directly support the increase in profit.
3. Risk management can provide indirect benefits.
4. There is peace of mind for managers due to a protection against pure risk, is a non-material asset for the company.
5. Risk management can protect a company from pure risk, and because customers and suppliers prefer companies that have protection, it can indirectly increase public image.

According to Kasmir (2014) The purpose of credit analysis is to avoid credit financed later that is not feasible. The analytical tool that can be used to determine the eligibility of a credit is by 5 of C as follows:

1. Character is the nature or character of the customer, this analysis is to find out the nature or characteristics of a credit applicant customer. From this character or nature, it will be seen that the customer's willingness to pay under any circumstances. However, on the contrary, if the customer does not have the nature of being willing to pay, the customer will try to avoid paying for various reasons, of course. This character or trait can be seen from the customer's past through observations, experiences, curriculum vitae, as well as the results of interviews with customers. Instructions for the Bank to know the character of the customer.



2. Capacity, namely the analysis used to see the ability of customers to repay credit. This ability can be seen from personal income for consumer loans and businesses financed for productive trade credits. This ability is important to assess so that the bank does not experience losses. To assess the ability of customers can be assessed from the documents owned, the results of confirmation with parties who have the authority to issue certain letters (for example a person's income), the results of interviews or through the calculation of financial ratios.

3. Capital is to assess the capital owned by the customer to finance credit, this is important because the bank will not finance the credit 100%. This means that there must be capital from customers. The goal is that if the customer also owns the capital invested in these activities, the customer will also feel a sense of ownership so that he is motivated to work seriously so that the business is successful, and is able to pay his credit obligations.

4. Conditions, namely the current and future general conditions, the conditions to be assessed, especially the current conditions, whether it is feasible to finance credit for certain sectors. For example, the production conditions for certain crops are booming (saturated). Thus, credit for the sector is on the contrary reduced. Other conditions that must be considered are the conditions of the surrounding environment, for example security conditions and social conditions of the community.

5. Collateral is a guarantee provided by the customer to the bank in the context of financing the proposed loan. This guarantee is used as a last alternative for banks to guard against a breakdown in the credit being financed. Why is collateral or collateral the last assessment of 5 of C. This is because the most important is the assessment above beforehand. If it is feasible, the guarantee is only an addition, just in case there are unavoidable factors that cause bad credit, for example natural disasters.

Besides that, to motivate customers to pay because the guarantee is withheld by the bank, a loan feasibility study is carried out through the 7 P's

1. Personality or personality is an assessment used to determine the personality of the prospective customer. In assessing the personality that is carried out by the bank, it is almost the same as the character or character or character of the customer. It's just that personality matters are more emphasized on the person, while in character it includes his family.

2. Purpose, namely the purpose of taking credit. As previously known, there are three purposes for taking credit, namely, first, for productive businesses, second, for personal use (consumptive), third, for trade. The assessment of these three objectives is slightly different. Therefore, don't let the credit extended by the bank be misused by the customer.

3. Party, meaning that in extending credit, the bank sorts into several groups. This is done so that banks are more focused on handling these loans, for example loans for small, medium or large





businesses. Or it can also be selected based on region, for example rural areas, urban areas or business sectors, for example livestock, industry, or other sectors.

4. Payment is a way of paying credit by customers. An assessment is carried out to assess how the customer pays credit, whether from income (salary) or from the object being financed. From this assessment will be seen the ability of customers to pay credit.

5. Prospect, namely to assess expectations in the future, especially for the object of credit being financed. Of course the desired hope is to give a good or bright hope. Businesses that do not have bright prospects are postponed because they will make it difficult for banks and customers, for example businesses that have entered high saturation.

6. Profitability, meaning that credit financed by the bank will provide benefits for both parties, both the bank and the customer. If not, you should not give it. The advantage for the bank, of course, is in the form of remuneration provided by customers from interest or profit sharing. Preferably for the customer is the development of the business being financed which in the end is profit and additional capital for him.

7. Protection, meaning protection of the credit object being financed. Protection is not limited to physical guarantees given, but more than that, namely guarantees for the taker, such as death insurance and guarantees for protection against physical guarantees provided from loss, damage or otherwise.

## 2. Method

For this method, a qualitative descriptive methodology is used, namely a research approach that aims to understand and explain phenomena or symptoms in depth with a focus on detailed descriptions and context. Through concept development, gathering information and understanding from various literatures, which is appropriate to the subject matter and is helpful in the writing process.

## 3. Result and Discussion

Banks are required to have an integrated risk management approach to be able to identify, measure, monitor and control risk effectively. Technology-related risks must be reviewed together with other risks owned by a bank to determine the bank's overall risk profile. The main risks related to the implementation of information technology are:

### a. Operational risk

Operational risk is inherent in every

products and services provided by the bank. The use of information technology can lead to operational risks caused by, among other things, inadequate or inappropriate design,



implementation, maintenance of systems or computers and their equipment, security methods, testing and internal audit standards and the use of other parties' services in the operation of information technology.

## b. Compliance risk

Compliance risk can arise if a bank does not have a system that can ensure bank compliance with regulations that apply to banks, such as the confidentiality of customer data. Compliance risk can have a negative impact on a bank's reputation and image, as well as impact on business opportunities and the possibility of expansion.

## c. Legal Risk

Banks face legal risks caused by lawsuits, absence of supporting laws and regulations or weaknesses in engagements such as non-compliance with the legal requirements of a contract.

## d. Reputation risk

Negative public opinion can arise, among others, due to system failures that support products, cases that exist in bank products and the inability of banks to provide customer service support in the event of system failure (downtime). This negative opinion can reduce the bank's ability

maintaining customer loyalty and the success of bank products and services.

## e. Strategic risk

This risk arises due to the incompatibility of the information technology used by the bank with the strategic objectives of the bank and the strategic plans made to achieve these objectives. This is because the quality of implementation and the resources used by information technology are inadequate. These resources include communication channels, operating systems, as well as capacity and capability of information technology managers.

## Information Security

Information is a very important asset for the Bank, both information related to customers, finance, reports and other information. Leaks, inaccuracies, unavailability or other disruptions to this information can have an adverse impact both financially and non-financially for both the bank and the customer. Given the importance of information, information must be protected or secured by all personnel at the Bank. Information security is highly dependent on securing all related aspects and components of information technology, such as software, hardware, networks, supporting equipment and human resources.

Background to Debtors: Financial institutions provide loans to individuals, companies or business entities that need funds for various purposes. Loan backgrounds can include the following:

a. Loan Purpose: Reasons why the debtor needs a loan, such as for venture capital, investment, project funding, asset purchases, or consumer needs.



- b. Debtors Profile: Information about the debtor's profile, including credit history, financial reputation, and capacity to repay the loan.
- c. Collateral: If applicable, the financial institution will consider the collateral submitted by the borrower to secure the loan.
- d. Risk Analysis: The financial institution will carry out a risk analysis to assess the ability of the borrower to repay the loan.
- e. Terms and Conditions: Details about the interest rate, term and other conditions that apply to the loan.

The background of a financial institution's loan is very important in the decision-making process to provide a loan. By understanding the background of financial institutions and borrowers, financial institutions can mitigate risks and ensure that loans are in accordance with sound financial principles.

General steps involved in providing information technology-based loans:

**Registration and Registration:** Prospective debtors must register and create an account on the platform or loan application. Personal and financial information is usually requested during this process.

**Data Verification:** The platform will verify the debtor's personal and financial data using information technology. This can include verifying identity, income, credit history, and more.

**Risk Assessment:** The lender uses algorithms and data analysis to assess the risk of the debtors. Information from different data sources is used to determine the extent to which a debtor is eligible for a loan.

**Loan Offer:** If the debtor is deemed eligible, they will receive a loan offer that includes the amount that can be borrowed, the interest rate, and the term of the loan.

**Approval and Disbursement of Funds:** If the borrower accepts the offer, they will agree to the loan terms and the funds will be transferred to the debtor's account quickly via digital payment methods.

**Tracking and Payment:** Debtors will be able to track their loans through platforms or applications. Payments are usually made automatically via automatic debit or bank transfer.

**Loan Reporting and Management:** Borrowers can access reports and other important information about their loans through platforms or applications. They can also manage their loans, such as applying for extensions or paying faster.

Information technology-based lending has several advantages, including a fast application process, more efficient risk assessment, and accessibility for many people. However, as a potential borrower, it is always important to be careful and carefully read the terms and conditions, and understand the interest rates and fees associated with the loan before agreeing to it.



#### **4. Conclusion**

Information technology-based lending has experienced rapid growth in recent years. Information technology has enabled financial institutions and online lending platforms to provide loan services more efficiently and easily for customers. Several conclusions regarding the provision of information technology-based loans are:

**Greater accessibility:** Information technology has opened up access to loan services for many people who previously had difficulty getting access to finance from traditional financial institutions.

**Better risk assessment:** With the adoption of information technology, financial institutions can perform more sophisticated risk assessments, including big data analysis and predictive modeling to assess borrower viability.

**Process efficiency:** Process automation in information technology-based loans reduces operational costs and increases efficiency in providing loans.

**Diversification of loan products:** Information technology allows financial institutions to offer different types of loans and customize products according to the needs of borrowers.

#### **Suggestion:**

Although information technology-based lending offers many advantages, there are several suggestions that need to be considered to ensure successful and sustainable implementation:

**Legal and regulatory compliance:** Financial institutions and lending platforms need to ensure that they comply with all applicable laws and regulations regarding lending, data privacy and consumer protection.

**Data security:** Protection of borrowers' personal and financial data is crucial. A strong security system must be implemented to protect sensitive information from unauthorized access.

**Transparency and openness:** Financial institutions must provide clear and complete information about fees, interest rates and other terms related to loans to potential borrowers.

**Financial education:** Information technology-based lending can be attractive to individuals with less financial experience. Therefore, it is important to provide adequate financial education to help borrowers understand the obligations and risks associated with loans.

**Accurate risk evaluation:** While information technology can assist in risk assessment, it is still important to ensure that the risk assessment model used is accurate and non-discriminatory.

**Good customer service:** Ensuring good and responsive customer service will increase borrowers' trust in lending platforms and financial institutions.

Taking these suggestions into account, information technology-based lending can serve as a powerful tool to promote financial inclusion and economic growth in a responsible and sustainable way.



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## **Implications and Limitations**

This article uses a qualitative descriptive approach method so that it only examines existing information, so that further in-depth research can be carried out by analyzing more detailed and complete data related to the application of information technology risk management in banking in Indonesia.

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