DOI: 10.24034/j25485024.y2022.v6.i4.5053

p-ISSN 2548 - 298X e-ISSN 2548 - 5024

MODELING OF FAILED RISK FACTORS AFFECTING ON NON PERFORMING LOAN TO MSME'S IN PANDEMIC COVID-19

Luhgiatno

luhgiatno_smg@yahoo.co.id

Sekolah Tinggi Ilmu Ekonomi Pelita Nusantara Semarang
Rauly Sijabat
Universitas PGRI Semarang
Aprih Santoso
Departemen Manajemen, FE Universitas Semarang
Nur Laily
Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya
Nurhidayati
Departemen Manajemen, FE Universitas Semarang

ABSTRAK

Kontribusi kinerja Usaha Mikro, Kecil dan Menengah (UMKM) memiliki peran yang strategis sebagai penyangga perekonomian Nasional. Krisis ekonomi yang beberapa kali melanda Indonesia termasuk saat terjadinya pandemic COVID-19, memberikan pukulan pada sektor UMKM, hingga mengakibatkan tak lagi mampu membayar pinjamannya. Padahal saat itu sektor UMKM sedang berbenah memperbaiki masalah-masalah klasik yang menghambat kinerjanya. Berangkat dari fenomena tersebut studi ini mengkaji hasil penelitian sebelumnya hingga dapat memetakan lima variabel eksogen, yaitu debt character factors, financial factors, management factors, operational factors serta market dan marketing factors sebagai variabel penjelas yang diduga menyebabkan UMKM mengalami risiko gagal membayar kredit yang berdampak pada buruknya Non-Performing Loan (NPL). Hasil analisis dengan menggunakan Structural Equation Modeling (SEM) terhadap data yang diperoleh dari 125 UMKM di Kota Semarang yang terdampak COVID-19 menunjukkan bahwa tingginya risiko gagal bayar yang dialami oleh UMKM disebabkan oleh debt character factors, financial factors, management factors, operational factors serta market dan marketing factors yang buruk yang kemudian berdampak pada meningkatkan ratio NPL

Kata kunci: non-performing loan, risiko gagal bayar, faktor internal

ABSTRACT

The contribution of Micro, Small, and Medium Enterprises (MSME) performance has a strategic role as a buffer for the national economy. The economic crisis that has hit Indonesia several times, including during the COVID-19 pandemic, has hit the MSME sector, so the sector is no longer able to repay its loans. Even though at that time the MSME sector was working to fix the classic problems that hampered it is performance. Departing from this phenomenon, this study examines the results of previous studies to map five exogenous variables, namely debt character factors, financial factors, management factors, operational factors as well as market and marketing factors as explanatory variables that allegedly cause MSMEs to experience the risk of failing to pay credit which has an impact on the poor NPL. The results of the SEM analysis of data from 125 MSMEs in Semarang City affected by COVID-19 showed that the high risk of default experienced by MSMEs was caused by debt character factors, financial factors, management factors, operational factors, and poor market and marketing factors which then impact on increasing the NPL ratio.

Key words: non-performing loans, default risk, internal factors

INTRODUCTION

Globally, the contribution of MSME performance has a strategic role as a buffer for the national economy. Here are some of the reasons underlying this statement. First, from the total number of national economic actors, the number of SMEs is dominated by the number of actors. Second, the contribution of MSMEs to Gross Domestic Product (GDP) exceeds 50%. Third, MSMEs are spread throughout the region to reach remote villages which are the power of the national economy. Fourth, the labor-inten-sive characteristics of MSMEs have been proven to enable MSMEs in terms of employ-ment and contribute to reducing unemploy-ment. This fact provides an acknowledgment that the Micro, Small, and Medium Enterprises (MSME) sector has contributed as an economic buffer through job creation and contribution to the value of Gross Domestic Product (GDP) (Dhamayantie and Fauzan, 2017). It has not been lost from memory, during the 1998 monetary crisis that hit Indonesia, MSMEs became a sector that was able to become a buffer for the national economy. This is evidenced by the ability of this sector to absorb labor and drive the national economy. Then when the global financial crisis hit again in 2008, the MSME sector again demonstrated its ability to remain strong and strong in supporting the national economy.

The business world and banking are the drivers of the real sector that have an impact on the economy in Indonesia. To support activities in the real sector, banks disburse credit by providing a larger portion credit to small and medium enterprises. However, during the Corona (COVID-19) pandemic that hit the world, including Indonesia in 2020, the MSME sector was actually the sector that was hit at the forefront and became the sector most vulnerable to being affected. According to the Press Conference released by the Indonesian Ministry of Finance (2020), it also explained that the COVID-19 outbreak caused Indonesia to experience a weakening economy which had

an impact on households, MSMEs, corporations, and the financial sector. In the MSME sector, the Ministry of Finance of the Republic of Indonesia noted that MSMEs are no longer able to carry out their business so their ability to meet credit obligations will be disrupted. The NPL of bank credit for MSMEs has increased significantly, which has the potential to further worsen Indonesia's economic conditions. The Minister of Finance Sri Mulyani also conve-yed the same thing that the COVID-19 pandemic caused many businesses to be unable to continue their production activities which had an impact on debt repayments being hampered. This causes a decrease in economic activity which has the potential for loans that cannot be paid. The risk of credit default or an increase in the ratio of non-performing loans (NPL) will increase. It is projected that the effects of the increasingly widespread COVID-19 pandemic will spread to all sectors including the financial sector.

Various studies on the factors that influence the occurrence of non-performing loans have been carried out. The causes of problem loans can be categorized into three factors, namely: (1) mismanagement, (2) lack of knowledge and experience of the owner in the field of business, and (3) fraud. Furthermore, from these three factors, the factor of mismanagement is the factor that gives the most influence on the occurrence of problem loans. The classification of the causes of problem loans can be grouped into two factors, namely (1) by the existence of intentional elements carried customers not to fulfill their obligations in paying credit, and (2) unintentional elements where the customer has the will willingness to pay but does not have sufficient financial capacity to carry out his obligations. From another point of view there are several factors that cause problem loans, namely credit misuse by customers, lack of ability to manage effort, as well as not having good faith by customers.

Research on the factors causing the occurrence of non-performing loans has also

been carried out in previous studies which were mapped into six aspects that led to the emergence of non-performing loans, namely: (1) legal aspects, (2) market and marketing aspects, (3) management aspects, technical aspects, (5) financial aspects and (6) socio-economic aspects. In addition, there are other studies such as 5C (Character, Capacity, Capital, Collateral, and Condition), (Moti et al., 2012) with customer assessment variables, (Arinta, 2014) with individual characteristics variables, (Sijabat, 2017) which examines innovation and createvity capabilities; financial factors, management factors, operational factors, and marketing factors are factors that determine the performance of SMEs (Dipta, 2012); (Muslim, 2012); (Armiati, 2013); (Purwidianti, 2015); (Hati and Irawati, 2017); (Dhamayantie and Fauzan, 2017) as well as factors that determine the risk of default and NPL.

Empirical findings regarding the NPL phenomenon in MSMEs as well as previous studies that mapped the explanatory factors for the occurrence of bad loans with uncertain results, directed this study to conduct an empirical study on customer character factors, financial factors, management factors, operational factors, and market factors and marketing in explaining the risk of default and NPL.

LITERATURE REVIEW AND DEVELOPMENT OF EMPIRICAL MODEL

Credit

Credit comes from the Greek "credere" which means to believe. Referring to the meaning of the word, if someone gets credit, it means that someone has earned the trust of the creditor. Economically, credit is a post-ponement of payments and achievements given at the present time in the form of money, goods, or services. Several elements are contained in the granting of credit, namely: (1) Element of trust. It is a belief from the lender that credit given in the form of money, goods or services will actually be received back at a certain time in the future. Creditors

will channel their funds to debtors or the public if they are based on an element of trust. The creditor believes that the debtor will not abuse the loan, the debtor will manage loan funds properly, the debtor will have the ability to pay when due, and the debtor has good intentions to return the loan and other obligations at maturity. The element of trust is the basic philosophy behind the granting of credit. This means that the creditor trusts the debtor. (2) Element of agreement. This means that creditors and debtors agree on their respective rights and obligations arising from the provision of credit, including the period of payment or repayment of credit, risks and certain interest rates. This agreement is made between the lender and the credit recipient. This agreement is set forth in an agreement in which each party signing agrees and complies with the fulfillment of their respective rights and obligations. Each of them also agreed to accept sanctions due to their inability to fulfill obligations that were due. (3) Element of time period. In granting credit, it contains an element of time period is relating to the time required to repay the loan given. This period of time is a credit repayment period or period which can be grouped into: (a) short term; (b) medium term; or (c) long term. (4) Elements of risk. The existence of a credit repayment grace period causes a risk of uncollectible credit/jamming. The longer is the credit period, the greater the risk, and vice versa. This risk is borne by the creditor, whether it is a deliberate risk by a negligent debtor or an unintentional risk. The element of risk relates to when the credit provided is uncollectible or bad credit occurs. This element of risk is borne by creditors and debtors. Creditors will experience a risk if the loan cannot be returned within a certain period of time and the debtor must also bear the risk of not being able to return the loan for the agreed time. (5) Elements of reciprocation. This remuneration element relates to returns received by creditors for granting credit. This remuneration is commonly

known as interest and/or credit administration. Both components are recognized by creditors as income.

The provision of credit facilities has a specific purpose. The purpose of giving credit will not be separated from the mission of the credit institution established. The main purposes of granting credit are: (1) Seeking profit or results from the granting of credit. The results are mainly in the form of interest received by lenders as remuneration and loan administration fees charged to debtors. This advantage is important for the survival of lenders. If the lender continues to suffer losses, it is likely that the institution will be liquidated (dissolved); (2) Help debtors who need funds, both for investment and funds for working capital. With these funds, the debtor will be able to develop and expand his business; (3) Assisting the Government in increasing the amount of working capital credit and capital for investment. With the increasing number of loans distributed in the community, the better it is for increasing development in various sectors. The benefits for the government by granting this credit are: tax revenue, increased employment opportunities, increased circulation of goods and services, increased/saving state foreign exchange.

Non-Performing Loan (NPL)

Non-Performing Loans (NPL) or non-performing loans are conceptualized as loans or loans that have problems in completing their obligations to the bank in the form of inability to pay the loan principal, the inability to pay interest, or inability to pay other bank fees that are the responsibility of the bank. According to Bank Indonesia (BI) regulations, the allowed NPL ratio limit is a maximum of 5%.

The NPL status is principally based on the timeliness of the customer to pay obligations, either in the form of interest payments or principal repayments. The process of granting and managing credit well is expected to reduce the NPL as small as possible. In other words, the high NPL is strongly influenced by the ability of creditors to carry out the credit granting process properly and in terms of credit management, including monitoring actions after loans are disbursed and control measures if there are indications of credit irregularities or indications of default.

Default Risk

Risk is a condition that causes delays in achieving the goals that have been set. Another definition, risk a state of openness to the existence of a hazard. Meanwhile, non-performing loans describe a situation in which the approval of credit returns is subject to the risk of failure, even indicating to the bank that it will get a potential loss.

From a financial point of view, risk has meaning as the difference between the possible results that will be received as a form of return on investment and what is expected. Risk from the banking perspective is an event that has both predictable and unpredictable potential. Credit risk is a form of loss that has the potential for consumer refusal or inability to pay a number of loans in full and on time. Non-performing loans are loans where the default in repayment according to the agreement. Thus there are arrears, or there is a potential loss in the lending company.

The risk of default is closely related to the behavior of credit payments. Credit payment behavior is the behavior of credit users when they get a bill due. The bill must be repaid with conditions including full payment, a minimum payment of 10% of the total bill, the remaining interest being charged, and a payment of less than 10%. This 10% or less payment behavior can be classified as a credit default. The results of the study show that there is one characteristic of demographic factors, namely the status of respondents who are married and respondents' motivational factors that influence respondents to be fined due to being late in paying bills.

Determinants Factors

The occurrence of default risk can be divided into two categories.

Internal Factor

Debtor Character

The principles of providing credit need to pay attention to the 5C principles, namely: (1) Character or character of prospective borrowers is one of the most important considerations in deciding to grant credit. Creditors need to do an analysis of the character of the prospective debtor the goal is to find out that the prospective debtor has the desire to fulfill the obligation to pay off the loan until it is paid off. Creditors want to know that prospective debtors have good character, are honest, and have a commitment to paying off the credit they will receive. This character analysis is very important. In order to find out the character of the prospective debtor, creditors can dig up information about this through Bank Indonesia, other lending institutions, relations or neighbors of the prospective debtor. Prospective debtors must have good character and not have any criminal record, especially in financial matters. (2) Capacity is the borrower's ability to get income in the future, how likely and how much. Analysis of this capacity is intended to determine the ability of prospective debtors to fulfill their obligations according to the credit period. The financial ability of the prospective debtor is very important because it is the main source of repayment of credit provided by the bank. To find out this, the bank can analyze the ability of the prospective debtor in terms of running his business by examining the educational background of the prospective debtor. Thus the bank can find out the ability of prospective debtors to manage their business. (3) Capital is how much and how the nature of the borrower's capital. Creditors must know how much and how much capital structure the debtor has. Capital or capital needs to be included in the object of credit and an in-depth analysis needs to be carried out. Capital is the amount of capital owned by the prospective debtor or

how much funds will be included in the project financed by the prospective debtor. The greater the capital owned by the prospective debtor, the more convincing the creditor will be of the seriousness of the prospective debtor in applying for credit. From this description, it can be seen that creditors will not provide credit to prospective debtors if the prospective debtor only relies on loans from creditors as capital in running his business. Prospective debtors must have other available capital to run their business. (4) Collateral is property belonging to the debtor or a third party bound as collateral in the event of the debtor's inability to settle his debt in accordance with the credit agreement. Collateral is a guarantee given by the prospective debtor for the proposed credit. Collateral is the second source of payment, meaning that if the debtor cannot pay his installments and is included in bad credit the creditors can execute the collateral. It should be noted that not all property meets the requirements as collateral, but there are certain principles that must be met in order to be accepted as collateral for a loan. This principle is known as the MAST Principle, which is a combination of the first letters of the desired requirements (Firdaus and Ariyanti, 2016), namely: Marketability, meaning that there is a wide enough market for the guarantee in question and thus there are quite a number of buyers for the guarantee without having to lower prices too much. Ascertainability of value, intended so that the guarantee received has a more certain price standard. Because collateral is an item that is easy to obtain, there is no need to ask for assistance from an appraisal agency in estimating the price of collateral. Stability of value, intended so that the property that is used as collateral should not decrease in price and even if possible continues to increase in the future. So the meaning of stability here does not degenerate. In this way, the bank will be guaranteed that if one day it has to sell the collateral, then the proceeds from the sale will be able to cover its debts. Transferability,

meant that the property that is guaranteed must be easily transferrable both physically and legally, meaning that every member of the public who can afford it is allowed to buy and own the item. (5) Condition of economic. The condition of the economy is how the state of the economy was at that time, whether the country's economy was healthy and directed. Condition of Economy is an analysis of economic conditions. Creditors need to consider the prospective debtor's business sector in relation to economic conditions, whether these economic conditions will affect the prospective debtor's business in the future. Several analyzes that need to be carried out related to the Condition of Economy are government policies. In this case the creditor must give more consideration to the prospective debtor's business fields which are vulnerable to government policies, for example the government's policies regarding exports and imports.

Another principle used by creditors in analyzing credit is the 3R principle which consists of: (1) Return is defined as the business result achieved by the debtor's prospective company. Creditors need to analyze the results to be achieved by prospective borrowers. The analysis is carried out by looking at the results that have been achieved before getting credit from creditors, then estimating the business that might be achieved after getting credit. (2) Repayment is defined as the ability of the prospective debtor company to make repayments of credit that has been enjoyed. Creditors need to analyze the ability of prospective debtors to manage their business. This can be seen from the company's ability to create profits. Then the creditor also needs to calculate the time period needed by the debtor to be able to pay off these obligations. (3) Risk bearing ability. In this case the creditor must know and assess the extent to which the credit applicant company is able to bear the risk of failure if something unexpected happens. By having strong capital, the company will usually be stronger in winning competition with other parties. In addition,

the ability to bear risk is not only for the company, but also for creditors by asking for guarantees from the debtor.

Business Character

In terms of the characteristics of the debtor's business, the risk of default can be caused by financial factors, management factors, and operational factors. Financial factors as the cause of non-performing loans include; debt increased sharply, payables increased disproportionately to the increase in assets, decreased net income, decreased sales and gross profit, selling expenses general and administrative expenses increased, bad debts increased, inventory turnover slowed, delays in obtaining customer balance sheets on a regular basis, invoices concentrated on a particular party.

Management factors that cause nonperforming loans include changes in management and ownership, no clear regeneration and job description, illness or death of important people in the company, failure in business development planning, top management was dominated by incompetent people, violations of credit agreements or clauses, credit abuse, income increases with decreasing quality, low enthusiasm in managing the company, business management systems that do not provide satisfaction to employees so that many employees go on strike.

Operational factors that cause nonperforming loans include: Deteriorating customer relationships with business partners, delays in the supply of raw or auxiliary materials, loss of one or more major customers, poor human resource development, delays in replacing obsolete machinery and equipment, system operations inefficient, disrupted marketing distribution, company's operations pollute the environment.

External Factors

Internal factors for non-performing loans occur due to several things such as the banking institution itself, the economic condition of a country, applicable regulations, and the occurrence of natural disasters. Problems that give rise to defaults originating from banking institutions include: (a) Expansive credit policy. Banks that have excess funds often set credit policies that are too expansive that exceed normal credit growth, namely by setting a number of credit targets that must be achieved for a certain period of time, resulting in no longer being selective in choosing prospective debtors and not applying sound credit principles, in assessing credit applications properly. (b) Deviations in the implementation of credit procedures. Deviations in credit systems and procedures could be due to the inadequate number and quality of human resources, especially those dealing with credit issues. (c) Weak credit administration and supervision system. Weaknesses in the administration and supervision of bank credit can be seen from the credit documents that should have been requested from the debtor but not carried out by the bank, the credit documents were incomplete and irregular, the monitoring of the debtor's business was not carried out regularly and directly, the inspection of the debtor's place of business was not carried out periodically. (d) Weak credit information system. Credit information systems that are not running properly will weaken the accuracy of bank reporting which in turn will complicate early detection, which can cause delays in taking the necessary steps to prevent non-performing loans.

Previous Research

This study uses an explanatory research approach, so it is necessary to conduct a review of previous research to justify the research model and research hypotheses that will be developed. The following table (Table 1) is a review of previous research conducted in this study.

Hypothesis Development The Influence of Debt Character Factors on Defaults Risk

The factors that cause non-performing loans are caused by the debtor's side. Determinants of NPL conceptually there are

a number of factors that influence the prospect of credit repayment or also known as the default risk model. If the quality of these factors is good, it will reduce the level of probability of default or probability of non-performing loan or default risk. On the other hand, if the quality of these factors is poor or low, the probability of default or the probability of non-performing loan or default risk will be high. These factors include character. Character is related to character, which is the most important factor in giving trust to customers from the bank, and moral risk which has the core of willingness to pay debts from customers. The results of research (Hanis and Nursyamsi, 2013) and (Haron et al., 2013) conclude that good character has a positive effect on smooth credit payments.

Referring to the influence of debt character factors and the risk of default which is supported by previous research, the hypothesis developed is as follows:

H₁:Bad debt character factors have a positive effect on the risk of default

Effect of Financial Factors on Defaults Risk

Financial management is important because today's capital investment decisions may determine the business the company will run in 10 years, 20 years or more in the future and the failure or success of the business is very dependent on the best management and decisions. Therefore, if this financial management is carried out properly, financial planning will be sound and credit can be managed properly so as to reduce the risk of bad credit.

Financial factors as the cause of nonperforming loans include; debt increased sharply, payables increased disproportionately to the increase in assets, decreased net income, decreased sales and gross profit, selling expenses general and administrative expenses increased, bad debts increased, inventtory turnover slowed, delays in obtaining customer balance sheets on a regular basis, invoices concentrated on a particular party.

Table 1 Previous Research Studies

Source	Finding
Arinta (2014)	- Number of dependents → Ability of debtor to pay credit (+); No sign
	- Education level → Ability of debtor to pay credit (+); No Sign
	- Business turnover → Ability of debtors to pay credit (+); Sign
	- Business experience → Ability of debtor to pay credit (+); Sign
	- Loan amount debtor → Ability to pay credit (+); No sign
	- Repayment period debtor → Ability to pay credit (+); No sign
Muslim, (2012)	- Marketing management → Bad credit (-); No sign
	 Level of competition → Bad credit (+); Sign
	- Financial management → Bad credit (+); No sign
	- Technical management → Bad credit (-); Sign
	- Government policy → Bad credit (+); Sign
Hanis and	- Character → Smooth payment (+); Sign
Nursyamsi,	- Capacity → Smooth payment (+); No sign
(2013)	- Capital → Smooth payment (+); Sign
	- Collateral → Smooth payment (+); Sign
	- Conditions → Smooth payment (+); No sign
Moti et al., (2012)	- Credit terms → Loan performance (+); Sign
	- Client appraisal → Loan performance (+); Sign
	 Credit risk control → Loan performance (+); Sign
	- Credit collection policies → Loan performance (+); Sign
Widayanthi,	- Education level → Credit return rate (+); Sign
(2012)	- Number of family dependents → Credit return rate (+); Sign
	- Business experience → Credit return rate (+); Sign
	 Operating profit → Credit return rate (+); No sign
	- Loan amount → Credit return rate (+); Sign
	- Payback period → Credit return rate (+); No sign
Haron et al.,	- Character → credit (+) ; Sign
(2013)	- Collateral → credit (+) ; Sign
	- Capacity → credit (+); Sign

Source: Extracted from various journals for this research, 2020

Customers who receive aid/loan/ debt funds are not 100% allocated for business capital or business development and purchase of business facilities, but there are indications that the aid/loan/debt funds are allocated for consumption costs. The results of the study (Arinta, 2014) show that business turnover has a positive effect on the debtor's ability to repay credit. Good financial management will reduce the risk of bad credit (Muslim, 2012). The results of this study are an indication that financial management has an influence on the risk of default.

Referring to the influence of financial factors and the risk of default which is supported by previous research, the hypotheses developed are as follows:

H₂:Bad financial factors have a positive effect on the risk of default

Effect of Management Factors on Defaults Risk

Management factors that often cause default risk include changes in management and ownership, no clear regeneration and job description, illness or death of important people in the company, failure in business

development planning, top management is dominated by incompetent people, violation of credit agreements or clauses, credit abuse, increased income with decreasing quality, low enthusiasm in managing the company, business management systems that do not provide satisfaction to employees so that many employees go on strike. A higher level of education and better business experience from management can increase the ability to repay credit (Arinta, 2014; Widayanthi, 2012).

Referring to the influence of management factors and the risk of default which is supported by previous research, the hypotheses developed are as follows:

H₃: Poor management factors have a positive effect on the risk of default

Effect of Operational Factors on Defaults Risk

Operational factors that cause the risk of default include declining customer relationships with business partners, delays in the supply of raw or auxiliary materials, loss of one or more main customers, poor human resource development, delays in replacing outdated machines and equipment, operational system is inefficient, the distribution of marketing is disrupted, the company's operations pollute the environment. Operational management is an obstacle that is often faced by small entrepreneurs who obtain People's Business Credit facilities that affect the risk of default. Good company technical management will reduce the risk of bad credit (Muslim, 2012), and greater operating profits will increase the ability to repay credit (Widayanthi, 2012).

Referring to the influence of management factors and the risk of default which is supported by previous research, the hypotheses developed are as follows:

H₄: Bad operational factors have a positive effect on the risk of default

Effect of Market and Marketing Factors on Default Risk

Default or bad credit can be seen from the principle of a feasibility study including the marketing aspect. A marketing process can be seen starting from the planning process, pricing, until the promotion is carried out. If the marketing strategy is carried out in a planned and structured manner, this can increase the sales results of these MSME products and of course further reduce the risk of MSME bad loans. Marketing Management is one of the factors that significantly negatively affect bad loans in small and medium enterprises. So it can be concluded that the higher the level of marketing intensity carried out by MSMEs, the smoother their business activities. Thus, the possibility of failing to pay obligations to creditors will decrease and the level of bad credit will also be small. So that the higher the marketing aspect, the lower the level of bad credit for MSMEs. The higher the sales turnover, the more able to increase the debtor's ability to pay credit (Arinta, 2014). Likewise, the better the level of business competition, the smaller the risk of bad credit (Muslim, 2012).

Referring to the influence of market and marketing factors and the risk of default which is supported by previous research, the hypotheses developed are as follows:

H₅: Poor market and marketing factors have a positive effect on the risk of default

Effect of Defaults Risk on NPL

From the debtor's point of view, the characteristics of most SMEs in Indonesia are, among others, that they still do not run their business with modern management principles, do not/do not have an official business entity, and limited assets owned. Meanwhile, on the side of creditors, investors, or financial institutions to protect credit risk, demand business activities that are carried out with modern management principles, official business licenses, and guarantees. Banking institutions as one of the optimal sources of capital still cannot help

the problems faced by these small entrepreneurs.

From the results of research on the profile of people's business credit in Indonesia conducted by the credit bureau of Bank Indonesia (BI), it is known that several credit conditions are less favorable for small businesses. In calculating interest rates by commercial banks, the higher the scale of business, the smaller the credit risk premium, namely: (1) Risk premium for micro business loans is 3.1%; (2) Risk premium for small business loans is 2.6 %; (3) The risk premium for medium business loans is 1.8%. On the other hand, in terms of margins, on average, commercial banks state that the higher the scale of business, the smaller the margin obtained, namely: (1) the average margin for micro-credit is 5.9%; (2) the average margin for micro-enterprises is 5.9%, small business loans by 4.7%; (3) the average margin for medium business loans is 4%. The amount of the risk premium is very contradicttory when compared to the default risk of credit for micro and small and businesses.

Referring to the influence of market and marketing factors and the risk of default which is supported by previous research, the hypotheses developed are as follows:

H₆: High default risk has a positive effect on NPL

Empirical Model

In the following (figure 1), a visualization of the influence between variables is presented which is also an empirical model that was developed and will be tested in this study.

RESEARCH METHODS Population and Sample

The population studied in this study were, MSMEs in the city of Semarang (Table 2). The research sample was determined by non-probability sampling method with accidental sampling approach during the study period.

Table 2
Distribution of Study Samples

Industry	Total
Advertising	11
Craft	7
Fashion	41
Publishing or printing	6
Culinary	60
Total	125

Source: Processed Primary Data, 2020

Variable Measurement Development

Measurement of research variables is carried out using indicators adopted from relevant previous studies. Indicator development is presented in the following table 3.

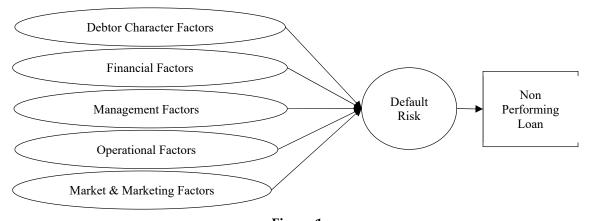


Figure 1
Empirical Model Development

Source: Developed for this study, 2020

Table 3
Development of Measurement Indicators

Variable	Indicator
Debtor Character	Character (X1)
	Capacity (X2)
	Capital (X3)
	Collateral (X4)
	Condition of economic (X5)
Financial Factors	Accounts Payable (X6)
	Net income (X7)
	Cost of sales (X8)
	Administrative costs (X9)
	Bad debts (X10)
	Concentrated bill (X11)
Management Factor	Changes in the composition of managers (X12)
, and the second	Change of ownership (X13)
	The absence of regeneration (X14)
	Failure of business planning (X15)
	Failure in business development (X16)
	Violation of covenant (X17)
	Credit abuse (X18)
Operational Factors	. Slowing inventory turnover (X19)
	. Worsening relationships with suppliers (X20)
	. Worsening relationships with consumers (X21)
	. Delays in supply (X22)
	. Procurement of production machines (X23)
	. Efficiency of the operating system (X24)
	. Disruption of product distribution (X25)
Market and	Decreased sales (X26)
Marketing Factors	. The level of competition (X27)
	. Business network (X28)
	Promotion (X29)
Default Risk	. Not able to pay fines / administrative costs (X30)
	. Unable to pay interest (X31)
	. Unable to pay the loan principal (X32)
Non Performing	The ratio of the number of non-current loans to the number of loans
Loan (NPL)	$NPL = \frac{Non Current Credit Amount}{Total Credits}$
	16 di 1200

Source: Adopted and developed for this research, 2020

Data Collection

The need for research data is accommodated through interviews using a questionnaire. The questionnaire is composed of statement items which included variable measurement indicators. The structured statements are closed in which respondents have been provided with alternative answers

using agree or dis agree scale approach on a scale of 1-10.

Analysis Technique

Structural Equation Modeling (SEM) is an analytical technique approach that is used to empirically test the research model developed at the same time to test the influence between the variables reflected in the research hypothesis.

RESULTS AND DISCUSSION Research Result

Empirical testing of research models and research hypotheses is carried out using the Structural Equation Modeling (SEM) approach. There are three stages of the analysis carried out which are described as follows:

Confirmatory Factor Analysis

Confirmatory factor analysis is an analysis aimed at confirming the fulfillment of the indicators adopted and developed in this study that can be used as a measuring tool and produce precise measurements of the variables under study. Confirmatory factor analysis is done by analyzing the value of the factor weights and the value of the reliability construct and variance extracted. Results of Confirmatory Factor Analysis (CFA) presented in table 4.

Table 4
Results of Confirmatory Factor Analysis (CFA)

			Std Estimate	Estimate	S.E.	C.R.	P
Failure_Risk	<	Debtor_Character	-,774	-,896	,180	-4,977	***
Failure_Risk	<	Financial_Factor	-,300	-,257	,109	-2,368	,018
Failure_Risk	<	Management_Factor	-,275	-,191	,068	-2,818	,005
Failure_Risk	<	Marketing_Factors	-,215	-,159	,073	-2,180	,029
Failure_Risk	<	Operational_Factor	-,225	-,203	,092	-2,213	,027
X1	<	Debtor_Character	,748	1,000			
X2	<	Debtor_Character	,724	1,042	,131	7,935	***
X3	<	Debtor_Character	,745	1,041	,132	7,890	***
X4	<	Debtor_Character	,729	1,006	,130	7,707	***
X5	<	Debtor_Character	,700	,990	,134	7,393	***
X30	<	Failure_Risk	,783	1,000			
X31	<	Failure_Risk	,783	,974	,120	8,120	***
X32	<	Failure_Risk	,711	,878,	,121	7,240	***
X6	<	Financial_Factor	,896	1,000			
X7	<	Financial_Factor	,908	1,018	,065	15,642	***
X8	<	Financial_Factor	,895	1,077	,071	15,162	***
X9	<	Financial_Factor	,824	,974	,076	12,753	***
X10	<	Financial_Factor	,831	,964	,075	12,885	***
X11	<	Financial_Factor	,795	,933	,079	11,785	***
X14	<	Management_ Factor	,855	1,010	,082	12,350	***
X26	<	Marketing_Factors	,789	1,000			
X27	<	Marketing_Factors	,744	,905	,107	8,458	***
X28	<	Marketing_Factors	,835	,995	,107	9,340	***
X29	<	Marketing_Factors	,767	,908	,107	8,481	***
NPL	<	Failure_Risk	,298	,043	,015	2,985	,003
X13	<	Management_ Factor	,228	,274	,112	2,456	,014
X12	<	Management_ Factor	,216	,260	,111	2,329	,020,
X15	<	Management_ Factor	,794	,927	,085	10,876	***
X16	<	Management_ Factor	,722	,828,	,088	9,357	***
X17	<	Management_ Factor	,776	,905	,087	10,429	***
X18	<	Management_Factor	,875	1,000			

X25	<	Operational_Factor	,042	,072	,181,	,398	,691
X24	<	Operational_Factor	,060	,092	,161,	,569	,569
X23	<	Operational_Factor	-,062	-,103	,175	-,591	,554
X22	<	Operational_Factor	,724	1,000			
X21	<	Operational_Factor	,675	,985	,162	6,094	***
X20	<	Operational_Factor	,686,	1,024	,171	5,987	***
X19	<	Operational_Factor	,641	,906	,160	5,675	***

Source: Processed primary data, 2020

Analysis of Factor Weights

The analysis of the factor weight value is carried out by analyzing the standardized estimate value and the probability value with the following test criteria: (1) If the standardized estimate value > 0.6 with a probability value < 0.05, it means that the indicator is the right measuring tool to reflect the estimated variable; (2) If the standardized estimate value < 0.6 with a probability value > 0.05, it means that the indicator is not the right measuring tools, to reflect the estimated variable.

Factor weighting analysis was conducted on six research variables which were unobserved variables, namely debt character factors, financial factors, management factors, operational factors, market, and marketing factors as well as default risk.

The following are the results of the analysis carried out on the value of the weight factor of the indicator used as a measuring tool for each research variable. (1) Debt character factors. The measurement of the debt character factors variable is carried out using five indicators which include Character (X1), Capacity (X2), Capital (X3), Collateral (X4), and Condition of economy (X5). The five indicators produce a weight factor value of > 0.6 with a significance value of < 0.05, meaning that the Character (X1), Capacity (X2), Capital (X3), Collateral (X4), and Condition of economic (X5) indicators are indicators that appropriate to be able to measure the variable debt character factors. (2) Financial factors. Financial factors are measured using six indicators, namely: debt (X6), net income (X7), selling expenses (X8), administrative costs (X9), bad debts (X10), and concentrated receivables (X11). The

results of the analysis show that the six indicators have a weight factor value of > 0.6 with a significance value of < 0.05. Thus, it can be concluded that the indicator is the right indicator for the financial factors variable. (3) Management factors. Seven indicators are used to measure management Change factors which include: management structure (X12), Change in ownership (X13), Lack of regeneration (X14), Failure in business planning (X15), Failure in business development (X16), Violation of agreement (X17), and Misuse of credit (X18). In the X12 indicator regarding changes in the management structure and X13 concerning changes in ownership, the factor weight value is < 0.6 so that cannot be used as a measuring tool for management factors variables. Thus the management factor is only measured using five indicators, namely the absence of regeneration (X14), failure of business planning (X15), failure of business development (X16), breach of agreement (X17), and credit abuse (X18). (4) Operational factors. Operational factors in this study were measured using seven indicators, namely Slowing inventory turnover (X19), Deteriorating relationships with suppliers (X20), Deteriorating relationships with consumers (X21), Delays in supply (X22), Procurement of production machines (X23), System efficiency operation (X24), and Disruption of product distribution (X25). As a result, indicators X23 on Procurement of production machines, X24 on operating system efficiency, and X25 on Disruption of product distribution are not able to meet the criteria as good indicators. Based on the results of the analysis, the measurement of operational factors is carried out using four indicators, namely X19, X20, X21, and X22. (5) Market and marketing factors. Measurement of market and marketing factors variables using four indicators, namely sales decline (X26), level of competition (X27), business networks (X28), and promotions (X29) meet the required criteria to be the right indicators of market and marketing factors variables. (6) Default risk. The measurement of default risk is carried out using three indicators which include Unable to pay fines/administration fees (X30), Unable to pay interest (X31), and Unable to pay loan principal (X32). The resulting factor weight values for the three indicators meet the required criteria so that it can be concluded that the measurement of the default risk variable is carried out using the three indicators in question.

Reliability Construct and Variance Extracted

The construct reliability and variance extracted tests were carried out to determine the consistency of the measurement results carried out by the indicators. The criteria for this test require the reliability construct value > 0.7 and the variance extracted > 0.5 to be able to state that the measurements provide consistent results.

Table 5
Reliability and Variance Extract

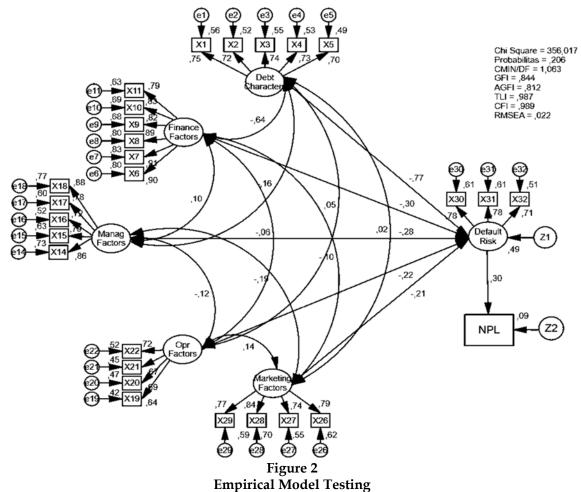
Variable	Reliability	Variance		
	Construct	Extracted		
Karakter	0,851	0,533		
Debitur				
Financial	0,944	0,739		
Factor				
Management	0,903	0,651		
Factors				
Operational	0,776	0,500		
Factors				
Marketing	0,864	0,615		
Factors				
Default Risk	0,803	0,577		

Source: Primary Data Processed, 2020

Based on the calculation results shown in table 5, it is known that all latent variables can meet the reliability criteria and variance extract. So it can be concluded that the observed indicators can reflect the factors analyzed and together are able to reflect the existence of an unidimensionality.

Testing the goodness of fit (GOF) research model

Goodness of fit evaluation was conducted to analyze the ability of the model to predict the population. This stage is carried out by testing SEM assumptions, namely: (a) Assuming sufficient sample. The sample that must be met in modeling is a minimum of five times the number of estimated parameters, and is more acceptable if the sample size has a ratio of 10:1. (b) Assumption of normality. The statistical value for testing normality is called the z value (critical ratio or c.r. in the AMOS output) of the skewness and kurtosis size of the data distribution. The critical value can be determined based on a significance level of 1% (two tailed), which is ± 2.58. (c) Assuming outliers. Outliers are data that have unique characteristics that appear very much different from other observations and appear at extreme values for both the single variable and the combination variable. In multivariate analysis, the presence of outliers can be tested by chi square $(\chi 2)$ for the Mahalanobis distance squared value at a significant level of 0.001 with the degrees of freedom of a number of constructs used in the study. If there are observations that have a Mahanobis distance square value that is greater than the chi square then these observations are excluded from the analysis. (d) Evaluate GOF performance. In SEM analysis, there is no single statistical test tool to test the hypothesis about the model. There are various fit indices used to measure the degree of fit between the model and the data presented. Goodness-offit can be categorized into three groups, namely absolute fit measures, incremental fit measures, and parsimony fit measures.



Source: Processed primary data, 2020

Testing the empirical model as shown in Figure 2 on the influence of debtor character variables, financial factors, management factors, operational factors, marketing factors on default risk and the effect of default risk on non-performing loans (NPL) shows the index value results for the goodness of fit model as presented in table 6.

The index values for the goodness of fit model resulting from data processing are presented in table 6. Testing the research model resulted in a calculated Chi Square value of 356.017 < Chi Square table of 378.682 with a significance value of 0.206 > 0.05. These results indicate that the empirical model developed in this study with theoretical justification and relevant previous studies is the right model to be able to explain the

determinant factors related to business development in the estimated population.

Research Hypothesis Testing

After conducting a confirmatory analysis and testing the goodness of fit of the model, the next step is to test the hypothesis. Hypothesis testing is presented in the following table 7.

Testing the research hypothesis is carried out by analyzing the Critical Ratio and probability values with the following test criteria: (a) If CR > 1.98 or a probability < 0.05, it means that the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected; (b) If CR < 1.98 or a probability > 0.05, it means that the Alternative Hypothesis is rejected and the Zero Hypothesis is accepted.

Goodness of Fit Indeks Cut off Value **Evaluation Model** Result Chi-Square (df = 335) Kecil (< 378,682) 356,017 Good Probability 0,206 Good ≥ 0.05 CMIN/DF $\leq 2,00$ 1,063 Good GFI ≥ 0.90 0,844 Marginal Marginal AGFI ≥ 0.90 0,812 TLI Good 0,987 \geq 0,95 Good CFI ≥ 0.95 0,989 RMSEA 0,022 Good ≤ 0.08

Table 6
Goodness of Fit Model Evaluation

Source: Processed Primary Data, 2020

Table 7
Research Hypothesis Testing

			Std Estimate	Estimate	S.E.	C.R.	P
Failure_Risk	<	Debtor_Character	-,772	-,893	,180	-4,97 3	***
Failure_Risk	<	Financial_Factor	-,298	-,255	,108	-2,352	,019
Failure_Risk	<	Management_ Factor	-,275	-,191	,068	-2,831	,005
Failure_Risk	<	Marketing_Factors	-,213	<i>-,</i> 157	,072	-2,167	,030
Failure_Risk	<	Operational_Factor	-,224	-,203	,092	-2,202	,028
NPL	<	Failure_Risk	,298	,043	,015	2,984	,003

Source: Primary data processed, 2020

The following are the research findings based on the results of hypothesis testing:

Testing the Effect of Debtor Character on Default Risk

Testing on the variable debtor character and risk of default yields a CR value of -4.973 > CR table of 1.98 and a probability of 0.000 < 0.05. Referring to these results, it can be concluded that the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected, meaning that the debtor's character is statistically proven to have a significant negative effect on the risk of default. The better the debtor character, the lower the default risk.

Testing the Influence of Financial Factors on the Default Risk

Testing on the variable financial factors and the risk of default resulted in a CR value of -2.352 > CR table of 1.98 and a probability of 0.019 < 0.05. Referring to these results, it can be concluded that the Alternative

Hypothesis is accepted and the Zero Hypothesis is rejected, meaning that the financial factor is statistically proven to have a significant negative effect on the risk of default. The better the financial condition of the business, the lower the risk of default.

Testing the Influence of Management Factors on Default Risk

Tests on the variable management factors and risk of default resulted in a CR value of -2,831 > CR table of 1.98 and a probability of 0.005 < 0.05. Referring to these results, it can be concluded that the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected, meaning that the management factor is statistically proven to have a significant negative effect on the risk of default. The better the management or business management, the lower the default risk will be.

Testing the Influence of Operational Factors on Default Risk

Testing on the variable operational factors and risk of default resulted in a CR value of -2.202 > CR table of 1.98 and a probability of 0.005 < 0.05. Referring to these results, it can be concluded that the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected, meaning that operational factors are statistically proven to have a significant negative effect on the risk of default. The better the business operating conditions, the lower the default risk.

Testing the Influence of Marketing Factors on Default Risk

Testing on the variable marketing factors and the risk of default resulted in a CR value of -2.167 > CR table of 1.98 and a probability of 0.030 < 0.05. Referring to these results, it can be concluded that the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected, meaning that the marketing factor is statistically proven to have a significant negative effect on the risk of default. The better the business marketing conditions, the lower the default risk.

Testing the Effect of Default Risk on Non-Performing Loans (NPL)

The test on the risk of default on the NPL variable resulted in a CR value of 2.984 > CR table of 1.98 and a probability of 0.003 < 0.05. Referring to these results, it can be concluded that the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected, meaning that the risk of default is statistically proven to have a significant positive effect on NPL. The lower the default risk, the lower the NPL will be.

Discussion

The results of the empirical test of this study indicate that the occurrence of NPLs is triggered by a high risk of default. The default risk according to the findings of this study can be explained by the character of the debtor, financial factors, management factors, operational factors, and marketing

factors. This research supports the results of 2014), (Arinta, (Hanis research Nursyamsi, 2013), (Widayanthi, 2012), and (Haron et al., 2013) but is not in line with the results of research from (Muslim, 2012). These five factors need to be considered so that the default risk can be minimized. The credit taken by the customer creates an obligation for the customer. Therefore, the banking sector needs to evaluate or analyze which according to the results of this study include debtor character, financial factors, management factors, operational factors, and marketing factors.

The character of the customer appears as a triggering factor for the default risk. This customer character is related to the nature of a wasteful lifestyle, immature investment planning, unclear financial goals, and improper financial management or utilization. A customer with an extravagant lifestyle will tend to have a consumptive nature. This consumption often ignores financial posts that have been scheduled, including agendas for credit payments. Therefore, financial institutions need to anticipate debtor character factors so as not to have an impact on the occurrence of NPLs. The results of statistical tests show that the debtor character factor does not have a significant effect on NPL. This condition is because financial instituteons have anticipated the impact of customer character on NPLs by making regulations related to credit collateral. This collateral will later become a guarantor factor when the customer cannot fulfill obligation, the financial institution has a guarantee for the credit that has been taken.

Financial factors are directly related to liabilities because financial factors make it possible or not financially possible for customers to make payments of their obligations on credit. Financial institutions that need to pay close attention to debtor financial factors include an increase in customer debt, an imbalance in assets and debt, a decrease in net income, and an increase in costs. The management factor itself is related to business management starting from business

planning such as planning the amount of production, market targets or sales to evaluation (target achievement). Inappropriate management results in business activities not being able to run. Operational factors relate to processes or activities to convert inputs (production resources) into outputs (products). Constraints that occur and ineffective and inefficient processes that occur in operational factors cause a decrease in the ability of businesses to produce products. Marketing factors are related to the delivery of business products to consumers. This marketing factor determines the ability of a business to generate profits. Products that are not sold cause the business to suffer losses. Financial, management, operational, and marketing factors that do not go well cause the business to have a high default risk, which in turn triggers NPLs.

CONCLUSION AND SUGGESTION Conclusion

This study finds that the inability of the business sector to meet it is loan obligations, which a financial context is referred to as NPL. The occurrence of NPLs can be deceived by the default risk which has also increased due to the worsening health situation (Covid-19) both nationally and globally. The higher default risk in this study can be proven by factors of debtor character, financial factors, management factors, operational factors, and worsening marketing factors in business institutions.

Suggestion

Referring to the results of statistical tests, it's show that the Non-Performing Loan (NPL) can be affected by the default risk. The risk of default can be influenced by the character of the debtor, financial factors, management factors, operational factors, and bad management factors. Referring to the results of statistical testing, in order to reduce the non-performing loan (NPL), banks through credit or loan assessments need to have a good system for evaluating debtor character factors, financial factors, manage-

ment factors, operational factors, and marketing factors.

Research Limitations

The risk factors researched and developed in the empirical model of this study are limited from the perspective of the debtor. This research has not included aspects from external factors such as banking institution factors and factors other than banking institutions.

REFERENCES

Arinta, D. Y. 2014. Pengaruh Karakteristik Individu, Karakteristik Usaha, Karakteristik Kredit terhadap Kemampuan Debitur Membayar Kredit pada BPR Jatim Cabang Probolinggo (Studi pada Nasabahn UMKM Kota Probolinggo). *Jurnal Ilmiah Mahasiswa* 3(2): 1-16.

Armiati. 2013. Women Entrepreneurs Serta Faktor-Faktor yang Mempengaruhinya (Kasus pada Pengrajin Sulaman Wanita di Jorong Lundang Kanagarian Panampuang Kab. Agam). Economica, Jurnal Program Studi Pendidikan Ekonomi STKIP PGRI Sumatera Barat 1(2): 19–34.

Dhamayantie, E. and R. Fauzan. 2017. Penguatan Karakteristik dan Kompetensi Kewirausahaan Untuk Meningkatkan Kinerja UMKM. *Matrik: Jurnal Manajemen, Strategi Bisnis dan Kewirausahaan* 11(1): 80–91.

Dipta, I. W. 2012. Memperkuat UKM Menghadapi Masyarakat Ekonomi Asean Tahun 2015. *Jurnal Infokop* 21: 1–12.

Hanis, U. and J. Nursyamsi. 2013. Pengaruh Prasyarat Kredit terhadap Kelancaran Pembayaran Nasabah (Studi Kasus Nasabah pada PT Bank Bukopin Kantor Cabang Pembantu Cilegon). *UG Journal* 7(5).

Haron, H., S. B. Said, K. Jayaraman, and I. Ismail. 2013. Factors Influencing Small Medium Enterprises (SMES) in Obtaining Loan. *International Journal of Business and Social Science* 4(15).

Hati, S. W. and Irawati, R. 2017. Faktor-Faktor yang Mempengaruhi Kinerja

- Usaha Mikro Kecil Menengah (UMKM) Di Kota Batam. *Proceeding of 5th Applied Business and Engineering Conference*: 545–558.
- Moti, H. O., J. S. Masinde, N. G. Mugenda, and M. N. Sindani. 2012. Effectiveness of Credit Management System on Loan Performance: Empirical Evidence from Micro Finance Sector in Kenya. *International Journal of Business, Humanities and Technology* 2(6): 99-108.
- Muslim, K. M. 2012. Analisis Faktor-Faktor yang Mempengaruhi Kredit Macet (Kurang Lancar, Diragukan, dan Macet) pada UMKM Industri Mebel di Kabupaten Jepara Tahun 2012. *Diponegoro Business Review* 1(1).
- Purwidianti, W. 2015. Pengaruh Faktor Internal dan Eksternal Terhadap Kinerja Usaha Industri Kecil dan Menengah di

- Purwokerto Utara. KINERJA 19(1): 149–159
- Firdaus, R. and Ariyanti, M. 2016. *Manajemen Perkreditan Bank Umum*. Alfabeta. Bandung.
- Sijabat, R. 2017. Penguatan Kinerja Pemasaran Melalui Pengembangan Inovasi dan Kreativitas Program Kerja pada Wirausaha Muda di Semarang. *Jurnal Sains Pemasaran Indonesia* 16(1): 26–43.
- Widayanthi, L. I. 2012. Pengaruh Karakteristik Debitur UMKM Terhadap Tingkat Pengembalian Kredit Pundi Bali Dwipa (Studi Kasus Nasabah Pada PT. Bank Pembangunan Daerah Bali Kantor Cabang Singaraja). Jurnal Ilmiah Mahasiswa Fakultas Ekonomi dan Bisnis 1(2): 1–15.