DEMAND ANALYSIS OF SUBSIDIZED MORTAGAGE LOANS IN EAST JAVA

Natasha Claudia Ambarita[1], Sishadiyati[2]

[1,2]Universitas Pembangunan Nasional "Veteran" Jawa Timur, Indonesia
E-mail Correspondence: natashaambarita09@gmail.com

Abstract

To serve the housing needs of low-income people, the government provides a Subsidized Mortgage Loans program. Demand for subsidized mortgage loans in East Java is relatively low, while the population is growing every year. This is inseparable from the influence of several external factors. The purpose of the study is to analyze how the influence of Non Performing Loan (NPL), Inflation and Per Capita Income on Demand for subsidized mortgage in East Java. This research uses a quantitative approach in the form of time series from 2010-2023. In this study, multiple linear regression was used to test the effect of independent variables (NPL, Inflation and Per Capita Income) on the dependent variable (demand for subsidized mortgage loans in East Java). So the research results obtained that simultaneously the independent variables (NPL, Inflation and Per Capita Income) affect the dependent variable (demand for subsidized mortgage loans in East Java). Partially, only the NPL and per capita income variables have a positive and significant effect on the demand for subsidized mortgage loans in East Java, while the inflation variable has no significant effect on the demand for subsidized mortgage loans in East Java.

1. INTRODUCTION

A house is a basic human need that must be fulfilled, because it serves as a place to live. However, there are still many people who do not have a private home. This is because it is very difficult for people with low income to fulfill their housing needs. Meanwhile, the demand for houses continues to increase every year. The need for houses for people in East Java continues to increase every year, which is followed by an increase in the population. This increasing population can cause people to have difficulty in obtaining a decent house at an affordable price. To ensure that everyone, especially those with low incomes have access to decent housing, the government has launched a program called the Subsidized Mortgage Loans that offers credit options to low-income people who want to own a home (Rahima, 2021). Subsidized Mortgage Loans is a program specifically designed for the lower middle class, which helps them in fulfilling their housing needs (Simatupang, 2021). This subsidized mortgage offers a lower interest rate than other mortgage programs, which is 5% with a term of 20 years. Based on the Ministerial Decree of PUPR No.552/KPTS/M/2016, the subsidized mortgage will be intended for people with an income of 4 million to 7 million per month, with the highest selling price of Rp150 million in Java (except Jabodetabek), with a down payment assistance subsidy of 4 million.

Demand for subsidized mortgages in East Java based on the Public Housing Savings (Tapera) has increased over the past 4 years. In 2020, the demand for subsidized KPR units amounted to 1 trillion, in 2021 it increased to 1.7 trillion, in 2022 it increased again to 1.9 trillion and in 2023 it increased again to 2 trillion. To ensure that the demand for mortgage loans continues to increase, it is important to maintain a balance between the high public demand for mortgages and the ability of the public to extend credit. So that in order to achieve this, it must carefully consider various factors that can affect mortgage demand, namely the Non Performing Loan (NPL) factor, inflation, and Per Capita Income. First, Non Performing Loan (NPL) is a ratio used to assess the percentage of loans that have difficulty repaying. A lower NPL indicates less credit risk for the bank, while a higher NPL results in a reduction in the amount of credit provided by the bank (Wenten, 2021). East Java NPL in 2020-2023 experienced fluctuations. In 2020 the East Java NPL was 3.79%, in 2021 it increased to 4.05%, while in 2022 to 2023 it decreased to 3.85% and 3.32%.

International Journal of Social Sciences, Education, Economics, Agricultural Research and Technology (IJSET)
E-ISSN: **2827-766X | WWW.IJSET.ORG**

1658

DEMAND ANALYSIS OF SUBSIDIZED MORTAGAGE LOANS IN EAST JAVA

Natasha Claudia Ambarita[1], Sishadiyati[2]

Second, Inflation is an increase in the circulation of the amount of money in society which results in price increases. High inflation results in people's ability to buy goods decreasing, and this leads to a decrease in demand for subsidized housing (Triwidyastuti, 2023). Inflation in East Java in 2020-2023 experienced fluctuations. In 2020, East Java inflation was 1.44%, in 2021 it increased to 2.45%, in 2023 it increased again to 6.52%, and while in 2023 it decreased to 2.92%. Third, per capita income is income obtained through the comparison between national income and the population of a region. Increased per capita income is a sign that the welfare of the average person has increased. Therefore, this increase in per capita income allows individuals to have excess funds to buy a house (Najib, 2021). East Java's per capita income in 2021-2023 increased every year. In 2020, East Java's per capita income was 39 billion, in 2021 it was 40.8 billion, in 2022 it was 42.7 billion, and in 2023 it was 44.5 billion.

So it can be concluded that the rise and fall of the Non Performing Loan value can affect the demand for Subsidized Mortgages, because prospective debtors become hesitant to apply for loans. In addition, the rise and fall of inflation affects people's purchasing power, where when inflation is high it can cause the price of goods to increase, so that it can cause a decrease in people's purchasing power, and vice versa. And the last is per capita income which plays the most important role, where high per capita income will reflect the welfare of the community, so that it can meet its needs for housing. It is known that the lower middle class has an interest in subsidized mortgages, especially the people of East Java. So the purpose of this study is to determine the effect of NPL, Inflation, and Per Capita Income factors on the Demand for subsidized mortgages loans in East Java.

2. LITERATURE REVIEW
2.1 Subsidized Mortgage Loans
KPR Subsidi is a form of credit designed specifically for Low Income Communities (MBR) that has a function to fulfill the desire to own a house or renovate a house. This subsidized mortgage has the benefit of offering goods at lower prices, which is expected to increase the production of goods due to higher demand from the public. The provision of subsidies for the general public is intended to improve the welfare of the community which will participate in the economic growth of a region (Parmadi, 2018).

2.2 Non Performing Loan
Non-performing loan is a credit risk also known as default risk that occurs when a customer fails to pay interest and principal installment payments. This risk becomes higher if the bank fails to increase or improve its credit quality. According to Mudrajat (2011), bad debts that increase drastically will affect the demand for credit, where there is a reduction in the amount of credit to be given.

2.3 Inflation
Inflation is a sustained increase in the prices of goods and services over a period of time. As an important economic measure, the growth rate of inflation is carefully managed to keep it low and stable, so that it will not destabilize the economy. High inflation can cause the prices of goods and raw materials to soar, resulting in higher production budgets (Wijayanti, 2018).

2.4 Per Capita Income
Per capita income is the average income earned by individuals living in a particular region over a certain period, usually one year. The value of per capita income can be used to measure the level of economic progress obtained and the growth of annual per capita income serves as an indicator of community welfare. To calculate per capita income is to compare the sum of national income and the population of a region (Muchtolifah, 2010).

3. IMPLEMENTATION METHOD

In this research, the methods used are literature studies, document studies and internet research using IBM SPSS Statistics 25 analysis tools. The research data used is secondary data which is time series with a period of 14 years (2010-2023) in annual form. Data is obtained through agencies or institutions such as the Ministry of PUPR, Tapera website, East Java BPS website, and Bank Indonesia website. This research is a quantitative study with the aim of applying multiple linear regression analysis methods to determine the effect of NPL variables, Inflation and Per Capita Income on Demand for Mortagage Loans in East Java. According to KBBI, quantitative means quantity or quantitative direction. The quantitative approach is a scientific method whose scientific characteristics are rational, specific / empirical to systematic have been fulfilled (Amruddin, 2022).

The research was conducted from November 2023 to July 2024. The location of the research was located in East Java. The activity begins with the collection of various information that will be used and processed in the IBM SPSS Statistics 25 application in order to produce results in accordance with the research objectives. The data source used in this study is secondary data obtained from literature studies, articles and related journals through the PUPR Website and the Tapera Website, the East Java BPS website, the East Java economic report from the Bank Indonesia website. Data collection techniques using the method 1) Literature study to collect basic data in the form of books, articles, journals, and appropriate writings. 2) Document study to collect data from reading, studying and analyzing data in the form of documents, articles, ministerial decrees, institutional regulations and websites of related agencies. 3) Internet research to obtain various information that has been published through websites related to the problem under study.

4. RESULTS AND DISCUSSION
4.1 Results
4.1.1 Autocorrelation Test

Table 1. Autocorellation Test Result

Durbin-Watson
1,719

Source: Author, SPSS 25

Table 1 above is the result of the autocorrelation test using the Durbin Watson test, the value is 1.719 which is between -2 and +2, so with this it is concluded that there is no autocorrelation.

4.1.2 Multicollinearity Test
Table 2. Multicollinearity Test Results

	Collinearity Statistics	
	Tolerance	VIF
Variable		
Non Performing Loan	0,950	1,053
Inflation	0,718	1,393
Per Capita Income	0,690	1,450

Source: Author, SPSS 25

Table 2 above is the output of the multicollinearity test, which shows that all variables have a VIF value < 10 with Tolerance > 0.1, which means it shows the absence of multicollinearity.

International Journal of Social Sciences, Education, Economics, Agricultural Research and Technology (IJSET)
E-ISSN: **2827-766X | WWW.IJSET.ORG**

1660

DEMAND ANALYSIS OF SUBSIDIZED MORTAGAGE LOANS IN EAST JAVA

Natasha Claudia Ambarita[1], Sishadiyati[2]

### 4.1.3 Heteroscedasticity Test

Table 3. Heteroscedasticity Test

Variable	Sig. (2-*tailed*)
Non Performing Loan	0,805
Inflation	0,692
Per Capita Income	0,876

Source: Author, SPSS 25

Table 3 above is the result of the heteroscedasticity test using the Spearman Rank test, obtained the Sig value. (2-tailed) of all variables is more than 0.05. So it can be interpreted that there are no symptoms of heteroscedasticity.

4.1.4 Normality Test

Figure 1. Normality Test (P-Plot) Results
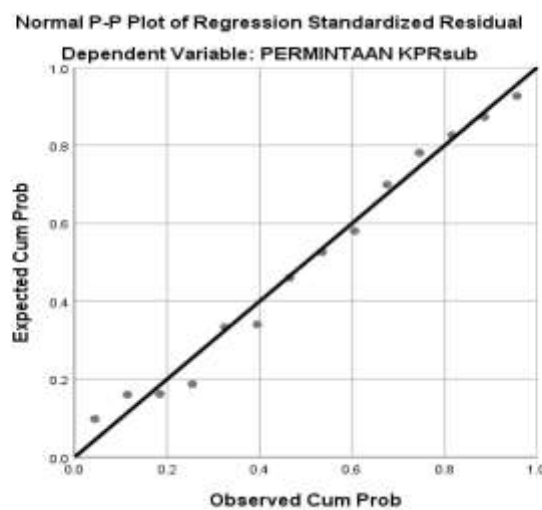
Source: SPSS 25

Figure 1 shows the normal P-Plot graph, where it can be explained that the data points are scattered around or close to the direction of the diagonal line, therefore it can be concluded that the data is normally distributed.

4.1.5 Multiple Linear Regression Analysis

Table 4. Regression Test Results

Model	Unstandardized Coefficients B
(Constant)	-3,323
Non Performing Loan	4,040
Inflation	5,840
Per Capita Income	78308,389

Source: Author, SPSS 25

In the regression results shown in Table 4 above, the regression equation is obtained, namely:

Demand For Mortagage Loans=-3.323+ 4.040NPL+5.840Inflation+78308.389PerCapita Income+u

From the regression model above, it can be interpreted as follows:

β_0 = Indicates if NPL (X1), Inflation (X2) and Per capita income (X3) are constant, then the demand for subsidized mortgages will decrease by 3.323 billion rupiah.

β_1 = 4.040 means that the NPL variable has a positive effect on the demand for subsidized mortgages. So it can be interpreted that if NPL decreases by 1%, then the demand for subsidized mortgages will decrease by 4.040 billion rupiah.

β_2 = 5.840 means that the Inflation variable has a positive influence on the Demand for subsidized mortgages. So it can be interpreted that if Inflation decreases by 1%, then the demand for subsidized mortgages will decrease by 5.840 billion rupiah.

β_3 = 78308.389 means that the per capita income variable has a positive influence on the demand for subsidized mortgages. So it can be interpreted that if per capita income decreases by 1 billion rupiah, then the demand for subsidized mortgages will decrease by 78308.389 billion rupiah.

4.1.6 Coefficient of Determination (R^2)

Table 5. R^2 Test Results

R	R Square
0,934	0,872

Source: Author, SPSS 25

Table 5 above is the result of the coefficient of determination (R^2), the R Square value is 0.872, which means that the ability of the NPL, Inflation and Per capita income variables to influence the demand for subsidized mortgages variable is 87.2%. Meanwhile, the remaining 12.8% is influenced by other variables besides the research variables.

4.1.7 F-Test

Table 6. F-Test Results

Model	df	F	Sig.
Regression	3	22,686	0,000
Residual	10		
Total	13		

Source: Author, SPSS 25

Table 6 above is the result of the F test, the calculated F value is 22.686, while the F table value is 3.71. Thus, the calculated F value is more than the f table and with a Sig. value of 0.000 less than 0.05. Based on the provisions of the F test, it can be concluded that the NPL, Inflation and Per Capita Income variables have an influence on the demand for subsidized mortgages variable.

4.1.8 t-Test

Table 7. t-Test Results

Model	t	Sig.
(Constant)	-4,726	0,001
Non Performing Loan	5,372	0,000
Inflation	1,317	0,217
Per Capita Income	4,719	0,001

Source: Author, SPSS 25

Figure 9 above is the result of the t test, so it can be interpreted as follows:
1. Influence of Non Performing Loan (NPL) on Subsidized Mortgage Demand:
   The value of t-count = 5.372 > t-table = 2.22814 with a value of Sig. 0.000 < 0.05, finally it is concluded that NPL partially has a significant effect on Subsidized Mortgage Demand.
2. Influence of Inflation on Subsidized Mortgage Demand:
   The value of t-count = 1.317 < t-table = 2.22814 with Sig value. 0.217 > 0.05, finally it is concluded that Inflation partially has no significant effect on Subsidized Mortgage Demand.
3. Influence of Per Capita Income on Subsidized Mortgage Demand:

International Journal of Social Sciences, Education, Economics, Agricultural Research and Technology (IJSET)
E-ISSN: **2827-766X | WWW.IJSET.ORG**

1662

DEMAND ANALYSIS OF SUBSIDIZED MORTAGAGE LOANS IN EAST JAVA

Natasha Claudia Ambarita[1], Sishadiyati[2]

The value of t-count = 4.719 > t-table 2.22814 with a Sig value. 0.001 <0.05, finally it is concluded that per capita income partially has a significant effect on subsidized mortgage demand.

4.2 Discussion
4.2.1 The Influence of Non Performing Loan on Subsidized Mortagage Demand

Based on the results of the t test, it states that partially the NPL variable has an effect on Subsidized KPR Demand, where t-count = 5.372 > t-table = 2.22814 with a significant value of 0.000 < 0.05, so it can be said that NPL has a positive influence on Subsidized Mortagage Demand. Which means that when NPL increases, the demand for subsidized mortgages in East Java will also increase. This is because banks in East Java still maintain the health of the bank, namely by maintaining the NPL ratio below 5% during 2010-2023, even though the demand for credit has increased.

4.2.2 The Influence of Inflation on Subsidized Mortagage Demand

Based on the results of the t test, it states that partially the inflation variable has no effect on the demand for subsidized mortgages, where t-count = 1.317 < t-table = 2.22814 with a significant value of 0.217 > 0.05, so it can be said that inflation cannot affect the demand for subsidized mortgages. Which means that when inflation increases, it cannot affect the demand for subsidized mortgages in East Java. This is because the inflation rate in East Java is still classified as low inflation, which is below 10% during the period 2010-2023.

4.2.3 The Influence of Per Capita Income on Subsidized Mortagage Demand

Based on the results of the t test, it states that partially the per capita income variable has an influence on the demand for subsidized mortgages. The result is tcount = 4.719> ttable 2.22814 with a significant value of 0.001 <0.05, with this it can be said that per capita income has a positive and significant effect on demand for subsidized mortgages. Which means that when per capita income increases, the demand for subsidized mortgages in East Java will also increase. Where if the per capita income of a region experiences high growth, it will have an effect in increasing people's purchasing power, one of which is the need for a house.

5. CONCLUSION

Based on the findings and analysis that has been done, it can be concluded that Non Performing Loan, Inflation and Per capita income together have a positive influence on the demand for subsidized mortgages in East Java. Partially, the Non Performing Loan and per capita income variables have a positive effect on the demand for subsidized mortgages in East Java, while inflation has no effect on the demand for subsidized mortgages in East Java.

REFERENCES

Amruddin, dkk. (2022). *Metodologi Penelitian Kuantitatif*, Edisi Pertama. Sukoharjo: CV. Pradina Pustaka Grup. https://repository.itspku.ac.id/306/1/NASKAH-METODOLOGI%20PENELITIAN%20KUANTITATIF-SUDAH%20ISBN.pdf

Arianti, R. N., & Abdullah, M. F. (2021). Analisis Pengaruh Suku Bunga, Inflasi Dan PDB Terhadap Jumlah Permintaan Kredit Perbankan Di Indonesia Tahun 2009-2019. *Jurnal Ilmu Ekonomi JIE*, *5*(1), 103–117. https://doi.org/10.22219/jie.v5i2.13901

Bank Indonesia. (2022). Laporan Perekonomian Provinsi. https://www.bi.go.id/id/publikasi/laporan/lpp/default.aspx?Kategori=jawa%20timur&Periode=

BPS Jawa Timur. (2023). Inflasi Tahun ke Tahun (YoY) (Persen). https://jatim.bps.go.id/indicator/3/46/1/inflasi-tahun-ke-tahun-y-o-y-.html

Direktorat Pelaksanaan Pembiayan Perumahan. (2024). Penyaluran Program FLPP, SSB/SSM, BP2BT di Provinsi Jawa Timur. ppp.djpi@pu.go.id (diakses pada 25 Juni 2024)

Ghozali, Imam. (2014). Ekonometrika Teori, Konsep dan Aplikasi dengan IBM SPSS 22. Semarang: Badan Penerbit Universitas Diponegoro

Hutami, Sarah. (2020). Analisis Faktor-Faktor Yang Mempengaruhi Permintaan Kredit KPR Pada Bank Jatim di Jawa Timur (Skripsi, Ekonomi Pembangunan, Fakultas Ekonomi dan Bisnis). Surabaya: UPN Veteran Jawa Timur

Muchtolifah. (2018). *Ekonomi Makro*. *Unesa University Press*. https://opaclib.inaba.ac.id/index.php?p=show_detail&id=2691&keywords=

Najib, Sunaryanti, Basri Bado, and Muhammad Imam. Determinan Permintaan Kredit Pemilikan Rumah (KPR) Pada Himpunan Bank Milik Negara HIMBARA). *Eprints UNM* 0, no. 0 (2020): 1–7. https://eprints.unm.ac.id/19135/1/Jurnal%20Sunaryanti%20Najib%20-%201596141006.pdf

Parmadi, A. A. Ngr Agung Gd. (2018). Implementasi Kebijakan Program Rumah Bersubsidi Di Kecamatan Banjar Kabupaten Buleleng. *Jurnal Administrasi Publik*, *3*(1), 34–45. https://www.ejournal.warmadewa.ac.id/index.php/public-inspiration/article/view/831/564

Rahima, A. (2021). Analisis Faktor Yang Memengaruhi Pertimbangan Konsumen Dalam Menggunakan Fasilitas Kredit Pemilikan Rumah. *Mega Aktiva: Jurnal Ekonomi Dan Manajemen*, *10*(2), 102. https://doi.org/10.32833/majem.v10i2.207

Simatupang, Apriani, Etyca Rizky Yanti, and Nuke Mardila. (2021). "Manajemen Kredit Pemilikan Rumah Untuk Meminimalisir Kredit Macet Pada Pt Bank Tabungan Negara (Persero) Tbk." *AdBispreneur* 6, no. 1 (2021): 13. https://doi.org/10.24198/adbispreneur.v6i1.28185.

Triwidyastuti, N., dkk. (2023). Determinan Permintaan Kredit Pemilikan Rumah di Indonesia. *Jurnal Ekonomika Dan Dinamika Sosial*, 2, 1. https://journal.unhas.ac.id/index.php/jeds/article/view/27218/10444

Wijayanti, C. S. (2018). Pengaruh Variabel Inflasi, BI Rate, *Non Performing Loan*, Suku Bunga Kredit Perumahan Rakyat dan PDRB Terhadap Investasi Sektor Properti di Kota Malang. *Jurnal Ilmiah Mahasiswa FEB Universitas Brawijaya*, *6*(2), 1–14. https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/5162

International Journal of Social Sciences, Education, Economics, Agricultural Research and Technology (IJSET)
E-ISSN: **2827-766X | WWW.IJSET.ORG**

1664