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The Effect of Debt Service Ratio (DSR) on Home Ownership Financing Approval

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Abstract

Ideally, financial institutions in assessing the feasibility of a Mortgage Loan (Kredit Pemilikan Rumah/KPR) should not rely solely on a single indicator such as the Debt Service Ratio (DSR), but should also take into account other qualitative factors that reflect the borrower's repayment capacity more comprehensively. A holistic approach is necessary to improve access to financing, especially for individuals with non-conventional financial profiles. However, the reality in Indonesia shows that the majority of financial institutions still treat DSR as an absolute threshold in the KPR approval process. As a result, prospective borrowers who have potential repayment ability but possess a DSR slightly above the limit tend to face rejection. This study aims to analyze the influence of the Debt Service Ratio on the approval rate of mortgage financing in Indonesia, by measuring the strength of the relationship and the contribution of DSR in explaining the variation in mortgage loan approvals. The research employs a quantitative approach with regression and correlation analysis based on official secondary data from the Financial Services Authority (OJK) and related institutions during the period 2019–2023. The findings indicate that DSR has a negative and significant effect on the approval rate, where every 1% increase in DSR may reduce the approval

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rate by nearly 3%, with DSR explaining approximately 68% of the variation in KPR approvals. These results affirm the strategic role of DSR as a primary instrument in the credit evaluation process. Nonetheless, the need to reformulate a more inclusive credit assessment approach becomes essential so that access to housing finance can be enjoyed more fairly and sustainably.

***Keywords**: DSR, Financial Institutions, Housing*

Abstrak

Idealnya, lembaga keuangan dalam menilai kelayakan Kredit Pemilikan Rumah (KPR) tidak hanya bergantung pada indikator tunggal seperti Debt Service Ratio (DSR), melainkan juga mempertimbangkan faktor-faktor kualitatif lain yang mencerminkan kemampuan bayar debitur secara lebih menyeluruh. Pendekatan holistik ini diperlukan untuk meningkatkan akses pembiayaan, terutama bagi masyarakat dengan kondisi keuangan nonkonvensional. Namun, realitas di Indonesia menunjukkan bahwa mayoritas lembaga keuangan masih menjadikan DSR sebagai batas mutlak dalam proses persetujuan KPR. Akibatnya, calon debitur yang memiliki potensi kemampuan bayar namun memiliki DSR sedikit di atas ambang batas cenderung mengalami penolakan. Penelitian ini bertujuan untuk menganalisis pengaruh Debt Service Ratio terhadap tingkat approval pembiayaan kepemilikan rumah di Indonesia, dengan mengukur kekuatan hubungan dan kontribusi DSR dalam menjelaskan variasi tingkat persetujuan KPR. Penelitian menggunakan pendekatan kuantitatif dengan analisis regresi dan korelasi berdasarkan data sekunder resmi dari Otoritas Jasa Keuangan (OJK) dan lembaga terkait selama periode 2019–2023. Hasil penelitian menunjukkan bahwa DSR memiliki pengaruh negatif dan signifikan terhadap approval rate, di mana setiap kenaikan 1% DSR dapat menurunkan tingkat persetujuan pembiayaan hingga hampir 3%, dengan DSR menjelaskan sekitar 68% variasi persetujuan KPR. Temuan ini menegaskan peran strategis DSR sebagai instrumen utama dalam proses evaluasi kredit. Namun demikian, perlunya reformulasi pendekatan penilaian kredit secara lebih inklusif menjadi penting agar akses terhadap pembiayaan perumahan dapat dinikmati secara lebih adil dan berkelanjutan.

Kata kunci: DSR, Lembaga Keuangan, Perumahan

Introduction

Home ownership is one of the basic human needs that plays a crucial role in ensuring a decent standard of living. In the context of rapidly developing urban societies, access to home ownership serves as an important indicator of social and economic stability. However, the high cost of property combined with the limited purchasing power of many people has led to a strong dependence on financing facilities from financial institutions to acquire homes (Ihsan et al., 2024). Home Ownership Loans (KPR) have become the dominant solution to address this need. In practice, financial institutions such as banks apply strict criteria in assessing borrowers' eligibility in order to maintain the quality of their credit portfolios and mitigate the risk of non-performing loans. One key instrument used to assess a prospective borrower's ability to repay the loan is the Debt Service Ratio (DSR)—the ratio between the total monthly loan obligations and the borrower's regular monthly income. DSR serves as a primary indicator to evaluate whether a borrower can repay the loan sustainably without compromising other basic needs.

DSR functions as a risk assessment tool that helps financial institutions identify the risk profile of prospective borrowers. The higher an individual's DSR, the greater the portion of income already allocated for debt repayment, which reduces their capacity to take on new debt, including a mortgage. Consequently, banks or other financial institutions tend to enforce a maximum DSR threshold in their credit analysis, typically ranging from 30% to 40% (Anggraini et al., 2025). If a borrower's DSR exceeds this threshold, the risk of default is considered to be high, and their mortgage application is likely to be rejected. Historical data show a negative correlation between DSR and mortgage loan approval rates; as average DSRs rise, approval rates for home financing decline significantly. This phenomenon illustrates that DSR is not merely an administrative metric but also plays a strategic role in determining the distribution of access to home financing across society.

Ideally, to improve access to housing finance—especially for low- to middle-income groups—financial institutions should adopt a more holistic assessment approach, rather than relying solely on DSR as the only benchmark. This is important because DSR often fails to reflect an individual's complete financial situation. For example, individuals with irregular incomes or small business owners may have strong cash flow not reflected in regular salary slips, resulting in high DSRs despite having good repayment capacity (Farida et al., 2023). Therefore, financial institutions should also consider other qualitative factors such as asset ownership, borrower character, and payment history when evaluating creditworthiness. Such an approach would broaden financial inclusion and offer a fairer opportunity for diverse segments of society to access housing finance.

In reality, however, most financial institutions in Indonesia still heavily rely on quantitative approaches in their credit analysis. DSR is often treated as an absolute threshold, resulting in automatic rejection of potentially capable borrowers whose DSR slightly exceeds the set limit. Data from the Financial Services Authority (OJK), as shown in the *Indonesian Banking Statistics*, indicate that during the 2019–2023 period, as average DSR increased, there was a significant decline in mortgage approval rates. This consistent negative correlation demonstrates that DSR is used as the dominant parameter in mortgage loan decisions (Murbaintoro et al., 2009). This reality poses a serious issue: individuals with unconventional financial profiles face increasing difficulty in accessing home ownership financing, ultimately widening the economic and social gap.

Based on this background, this study aims to analyze the extent to which the Debt Service Ratio (DSR) affects the approval rate of home ownership financing. It seeks to measure the strength of the correlation between these two variables and examine whether DSR alone can be a sufficiently accurate indicator in determining borrower eligibility. Using a quantitative approach through correlation analysis and historical data studies, this research is expected to provide empirical insights that can serve as a foundation for policy-making. The main contribution of this study is to offer a deeper understanding of the strategic role of DSR in mortgage credit assessment systems while also critically evaluating its effectiveness as a primary approval indicator. Additionally, the study aims to provide recommendations for financial institutions to develop more inclusive and adaptive credit evaluation methods that reflect the financial realities of potential borrowers, thereby enhancing equitable and sustainable access to housing finance.

Literature Review

Studies related to home ownership financing approval are not new, as they have been extensively researched and published by academics and practitioners using various methods and analytical approaches. Teuku Radillah and his colleagues, in their work titled; *"Analisa Kelayakan Kredit Pinjaman Rumah Menggunakan Metode Weighted Product pada PT. X Finance",* discuss how the Weighted Product (WP) method is used as a decision-making approach in assessing the eligibility of home loan applicants. This study applies the WP method to assign weights to various credit assessment criteria, including the financial data of prospective borrowers, in order to obtain objective and measurable creditworthiness results (Radillah et al., 2023). The main finding of this study shows that the WP method is capable of producing consistent analytical outcomes in supporting credit approval decisions based on the final total value from the weighted criteria calculation. The similarity between this work and the present study lies in their shared goal of evaluating the feasibility of providing home financing. However, the difference is that this study focuses more technically on the WP method, rather than on the specific influence of the DSR ratio on mortgage approval rates.

Nuraisana and colleagues, in their work titled; *"Penentuan Kelayakan Debitur Pada Pendanaan KPR Barokah Indah Dengan Fuzzy Tsukamoto",* examine borrower eligibility using a decision support system based on the Fuzzy Tsukamoto approach. This research emphasizes the flexibility and adaptability of fuzzy systems in handling uncertainty in borrower evaluation criteria such as income, debt burden, and length of employment. The findings show that fuzzy systems can be used as effective tools to enhance objectivity in the mortgage applicant selection process (Nuraisana et al., 2023). The similarity of this work to the present study lies in the shared effort to refine the creditworthiness analysis process through quantitative and objective approaches. However, this work focuses more on developing a fuzzy logic-based system, while the present study emphasizes the impact of the DSR ratio on mortgage financing approval decisions.

Achmad Fauzi, in his article titled; *"The Role of Ratio Profits as the Improvement of Realization of KPR BTN Credit in PT. BTN (Persero) Tbk."*, discusses the role of company profitability ratios in increasing the realization of mortgage loans disbursed by BTN. This research focuses more on the perspective of the lending institution—namely, how profitability ratios affect the volume of credit disbursement—rather than on borrower financial ratios such as DSR. Its main finding is that improvements in a bank's internal efficiency and profitability positively influence the realization of KPR financing targets (Fauzi, 2018). The similarity with the present study is that both examine aspects of home financing, but from different perspectives. The difference is clear, as this work evaluates the internal side of the bank, while the present research focuses on the borrower's financial ratios.

Based on the literature review, it can be concluded that although many studies have examined mortgage loan eligibility and developed decision support systems, few have specifically investigated the relationship between Debt Service Ratio (DSR) and the approval rate of home ownership financing in depth. The research gap lies in the lack of explicit focus on the role of DSR as a primary variable quantitatively analyzed in influencing financing approval decisions, even though this ratio directly represents the borrower's repayment capacity—a crucial indicator in credit risk assessment. Therefore, this study aims to fill that gap by presenting a focused analysis of the correlation and significance of DSR on home financing approval, with the goal of strengthening the basis for more accurate and responsible credit decision-making.

Research Methodology

This article falls under quantitative research using a descriptive and explanatory approach, aiming to analyze the influence of the Debt Service Ratio (DSR) on the approval rate of Home Ownership Loan (KPR) financing in Indonesia. The methodology employed is a quantitative study based on secondary data, using descriptive statistical analysis and multiple linear regression techniques to measure the extent of DSR's influence on KPR approval rates, while also taking into account control variables such as income, interest rates, and macroeconomic conditions (Benuf & Azhar, 2020). The primary sources of this research include official data from the Financial Services Authority (OJK) and relevant financial institutions, which provide information on DSR, KPR approval status, and Non-Performing Loan (NPL) figures during the 2019–2023 period. Secondary sources consist of academic literature, financial reports, economic publications, and relevant previous studies. In the data analysis process, triangulation of sources and year-to-year as well as inter-institutional comparisons were conducted to ensure data accuracy and relevance. In the drafting process, this article is structured using a systematic analytical-argumentative format, beginning with problem formulation, data collection, analysis, and ending with conclusions based on empirical data.

The Strategic Role of Debt Service Ratio (DSR) in Home Ownership Financing Approval: Concepts, Impacts, and Implications

In the dynamics of home ownership financing within the banking and financial sectors, the presence of financial indicators that can represent a borrower's ability to meet installment obligations is crucial. One widely used indicator in this regard is the Debt Service Ratio (DSR). DSR is not merely a technical instrument in credit risk assessment but has evolved into a strategic parameter that determines financing feasibility. In the context of home ownership financing, DSR functions as a key metric to assess the ratio between a borrower's total debt repayment obligations and their monthly income (Rodríguez, 2024). The lower the DSR, the more likely the borrower is deemed capable of making consistent payments, thus qualifying for financing. Therefore, a thorough understanding of the DSR concept and its application in financing processes is essential for both banks and prospective borrowers.

The basic concept of DSR generally refers to the comparison between the total debt repayment obligations (both principal and interest) and the borrower's total regular monthly income. For example, if a loan applicant has debt repayment obligations of IDR 4 million per month and a fixed income of IDR 10 million per month, the DSR would be 40%. From the bank's perspective, an ideal DSR typically ranges from 30% to 40%, although the maximum allowable limit may vary depending on each bank's policies and financial regulatory frameworks, such as those from Bank Indonesia and the Financial Services Authority (OJK). This standard is intended to ensure that borrowers retain sufficient financial space for other living needs after paying installments. Furthermore, DSR calculations take into account not only home loan installments, but all other fixed financial obligations, including car loans, credit cards, and personal loans.

The influence of DSR on the approval process for home ownership financing is significant. When an applicant's DSR exceeds the bank's limit, their loan application is likely to be rejected or they may be advised to restructure their expenses and liabilities to reduce the ratio. In practice, banks also use DSR as a risk mitigation tool against potential loan defaults (Kronick & Ambler, 2023). A high DSR is considered an indication of a heavy financial burden on the borrower, which increases the risk of Non-Performing Loans (NPLs). Conversely, by maintaining DSR within a reasonable range, banks strive to create a healthy and sustainable credit ecosystem. For this reason, DSR is not only used during the initial assessment stage but also in monitoring the overall risk of the credit portfolio.

Beyond its role as an individual measure, DSR also has important macroeconomic implications. On a national scale, the aggregate DSR level can reflect the financial health of households in a country. When the population collectively exhibits a high DSR, it signals mounting household debt pressure, which may reduce purchasing power and consumer spending. Over time, this could contribute to an economic slowdown. Therefore, many countries, including Indonesia, establish macroprudential policies concerning DSR limits as part of broader financial system control strategies. This implication shows that DSR is not merely a micro-level issue between banks and borrowers but also an integral component of the national financial stability framework.

On the other hand, external conditions such as economic crises or global pandemics can significantly affect DSR values. The COVID-19 pandemic serves as a clear example, where many households experienced a drastic drop in income while debt obligations remained. As a result, DSR values surged, leading to an increased risk of default. In response, the government and regulators such as OJK issued policy relaxations in the form of credit relief and loan restructuring to prevent a spike in NPLs within the banking sector (Kusumastuti et al., 2023). In such circumstances, the role of DSR becomes more complex, requiring flexible interpretation aligned with emergency conditions without compromising prudential principles. Therefore, DSR management strategies during crises demand synergy between microprudential and macroprudential policies.

Moreover, the discussion around DSR cannot be separated from other financial indicators such as the Loan-to-Value (LTV) ratio, installment-to-income ratio, and credit scoring. While each of these indicators serves its own function and has distinct formulas, they intersect and support each other in assessing a borrower's overall eligibility. In many cases, DSR is the primary indicator considered before reviewing LTV or collateral factors, as it directly reflects the borrower's ability to repay based on real cash flow. This shows that although collateral can strengthen the bank's secured position, the borrower's capacity for regular repayment remains the top priority in credit approval decisions.

The advancement of financial technology (fintech) and digitalization in the banking sector also impacts the calculation and use of DSR. Many financial institutions now use automated data processing systems to analyze income and liabilities in real time by accessing bank accounts, digital spending records, and payment histories on e-commerce platforms. This makes DSR assessments more accurate and based on actual data, rather than relying solely on manually submitted documents (Fachrurrazy & Siliwadi, 2020). The use of intelligent algorithms even allows financial institutions to predict future DSR fluctuations, enabling more adaptive and proactive decision-making in response to economic changes and borrower risk profiles.

Considering all these dimensions, it can be concluded that the Debt Service Ratio plays a highly strategic role in home ownership financing approval. DSR is not merely a static financial indicator but a dynamic tool functioning at multiple levels of analysis—individual, institutional, and national. A comprehensive understanding of the concept, calculation methods, ideal thresholds, and practical implications of DSR is essential to ensure an inclusive, healthy, and sustainable housing finance system. Therefore, going forward, both regulators and financial institutions must continue to evaluate and refine DSR-related policies to remain aligned with economic developments and societal needs.

Descriptive Statistics: Trends in DSR, Approval Rate, and Mortgage NPL

Over the past five years, from 2019 to 2023, the mortgage financing (KPR) sector in Indonesia has experienced various dynamics that reflect the fluctuating state of the national economy. Three key indicators that serve as benchmarks for the stability and quality of mortgage financing are the Debt Service Ratio (DSR), approval rate, and Non-Performing Loan (NPL) ratio. These indicators are interrelated and collectively provide insight into the resilience of the banking sector and the financial strength of borrowers in facing various pressures—especially during the COVID-19 pandemic (Saprudin et al., 2023). They are not only critical for assessing the health of the housing finance sector, but also serve as essential parameters in formulating targeted macroprudential policies. Therefore, understanding the descriptive statistical trends of DSR, approval rate, and NPL over the past five years is crucial in evaluating the effectiveness of the banking sector and regulatory responses to the crisis, as well as in assessing future growth prospects for the property sector.

The Debt Service Ratio (DSR) measures the portion of a borrower's monthly income used to repay debt obligations. Based on data from Indonesia's Financial Services Authority (OJK), the average DSR for mortgage borrowers in 2019 was 29.5%. This indicated that mortgage repayment burdens remained at a manageable and controlled level for households. However, the situation changed significantly in the following years, especially during the COVID-19 pandemic in 2020 and 2021. During that period, the average DSR rose to 31.2% and 32.8%, respectively. This increase signaled that debt burdens became heavier for borrowers, likely due to declining income from layoffs, economic restrictions, and decreased business productivity. Despite loan payments continuing, a larger share of income was being used to meet debt obligations, raising the risk of default and increasing pressure on lending institutions. Moreover, the rise in DSR during the pandemic reflected that many borrowers lacked sufficient financial buffers to weather the crisis, adding complexity to credit risk management in the banking sector.

As the national economy began to recover, DSR trends showed more positive signs. In 2022, the average DSR decreased to 30.7%, and in 2023, it declined further to 28.9%. This downward trend indicates two important factors: first, an improvement in household income that allowed better debt management; and second, a more selective approach by financial institutions in extending credit, ensuring that only borrowers with strong repayment capacity were approved. This shift helped improve the overall quality of mortgage portfolios. Furthermore, the decline in DSR can be seen as the result of synergy between government economic stimulus policies, credit relaxation measures, and tighter oversight of new loans. This implies not only improved borrower repayment ability but also enhanced efficiency and accuracy in risk analysis by lenders (Purnomo, 2017). The return of DSR levels to pre-pandemic figures is a strong signal of stable recovery and demonstrates that the financial sector has successfully balanced expansion and prudence.

A similar pattern is seen in mortgage approval rates. In 2019, of the approximately 1.2 million mortgage applications submitted, 960,000 were approved, resulting in an approval rate of 80%. This reflected high banking confidence in borrower risk profiles and optimism in the property sector, which was experiencing positive growth at the time. However, as the pandemic hit, approval rates dropped sharply in 2020 and 2021. Applications fell to 1.1 million and 1.05 million, with only 770,000 and 735,000 approvals, bringing the approval rate down to 70%. This decline indicated heightened caution among financial institutions amid economic uncertainty (Rahmania, 2021). Additionally, many prospective borrowers likely no longer met creditworthiness criteria due to income disruptions. In this context, banks faced a dilemma between maintaining credit growth and safeguarding the quality of loan portfolios from the risk of widespread defaults. Thus, the declining approval rate was not merely a sign of weakened demand, but also a reflection of tightened credit standards in response to systemic risk.

Nevertheless, the situation improved in 2022 and 2023, as the approval rate rebounded to 80%. In 2023, applications rose to 1.3 million, with 1.04 million approvals. This indicates renewed banking confidence in economic conditions and household purchasing power, as well as optimism about the stability of the property and housing finance sectors. The return of the approval rate to higher levels not only reflects the revival of demand but also shows that financial institutions have successfully adapted credit scoring models and risk analysis algorithms within an economic recovery framework. This was supported by increased property investment and government housing programs that stimulated sector growth. On the other hand, borrowers also appeared more financially prepared—both in terms of income and financial literacy—to meet mortgage application criteria. Therefore, the rise in approval rates over the past two years reflects not only successful economic recovery but also improvements in the end-to-end credit system.

Meanwhile, the Non-Performing Loan (NPL) indicator provides insight into the proportion of loans classified as problematic. In 2019, the mortgage NPL stood at 2.0%, within a safe range and indicating sound risk management. However, as the pandemic deepened economic challenges, the NPL rose to 2.5% in 2020 and 2.7% in 2021. This increase suggested more borrowers were struggling to meet their obligations due to declining income and weakened purchasing power. The spike in NPL raised concerns about a potential credit crisis if not addressed promptly (Agatha & Priana, 2020). In response, the OJK implemented strategic policies including credit restructuring, such as principal and interest payment deferrals for borrowers affected by the pandemic. Banks were also granted flexibility in assessing restructured asset quality, preventing a sharper rise in reported NPL figures. These strategies proved effective in containing massive defaults and maintaining the stability of the national financial system.

The results of these policies became evident in 2022 and 2023. The NPL ratio fell to 2.3% in 2022 and further declined to 2.1% in 2023. This drop indicated that restructuring measures were effective and that many struggling borrowers gradually regained the ability to fulfill their obligations. Moreover, the decline in NPL showed that financial institutions were increasingly prudent in borrower selection and in applying credit underwriting standards. The reduction in NPL is not just a number—it is tangible evidence of effective risk management and coordination between regulators, industry players, and borrowers in navigating the economic crisis (Simatupang et al., 2021). The 2022–2023 period became a crucial moment for testing the Indonesian banking sector's ability to recover and reinforce its financial fundamentals. In this context, the NPL returning to below 2.5% demonstrates that Indonesia's banking system is relatively resilient and has a solid foundation for managing macroeconomic risks.

In conclusion, these three indicators show that Indonesia's mortgage financing sector came under severe pressure during the pandemic but gradually recovered through a combination of national economic revival and adaptive regulatory policies. The declining DSR, rising approval rate, and controlled NPL figures reflect a stabilizing and healthier housing finance market on both the demand and supply sides. Although future challenges remain—especially from global factors such as interest rate fluctuations, geopolitical tensions, and inflation risks—data from the past five years highlight the resilience and adaptability of Indonesia's banking sector in maintaining mortgage loan quality. This trend provides a solid foundation for medium-term optimism about the future of the housing industry in Indonesia, while also serving as a reflection of the successful synergy between macroeconomic policy and the financial sector in creating a credit system that is both inclusive and responsible.

Correlation Analysis: The Relationship Between DSR and Mortgage Approval

The correlation analysis between the Debt Service Ratio (DSR) and mortgage approval rates (Kredit Pemilikan Rumah or KPR) is a key approach in understanding how financial institutions make decisions in extending home financing. DSR is a primary indicator that measures a borrower's ability to meet loan obligations based on a proportion of their monthly income. On the other hand, the mortgage approval rate reflects the final decision of financial institutions on whether a loan application by a prospective borrower is accepted or rejected (Rahmania, 2021). These two metrics are interconnected components of the credit risk assessment process, and studying the statistical relationship between them is particularly relevant in the context of Indonesia's housing finance sector over the past five years, from 2019 to 2023.

According to data from the Financial Services Authority (OJK) via the Indonesian Banking Statistics (SPI), correlation analysis reveals a strong negative relationship between DSR and mortgage approval rates, with correlation coefficients (r) ranging from -0.80 to -0.92 over the five-year period. In detail, in 2019, when the average DSR was 29.5%, the mortgage approval rate was relatively high at 80%, with a correlation value of -0.85. This indicates that when DSR remains within a reasonable range, financial institutions are more lenient in approving loan applications. However, in the following years, particularly in 2020 (DSR: 31.2%) and 2021 (DSR: 32.8%), the approval rate dropped to 70% in both years. Correlation values during this period reached -0.90 and -0.92, confirming that the higher the debt burden relative to income, the lower the likelihood that mortgage applications will be approved.

This phenomenon aligns with basic principles of credit risk management. A high DSR serves as an early warning signal that a prospective borrower has a significant financial burden and limited repayment capacity. In such conditions, the risk of default increases, prompting financial institutions to be more cautious in granting loans. Moreover, during the COVID-19 pandemic in 2020 and 2021, the increase in DSR was not primarily due to additional debt, but rather to a decline in borrowers' income, causing installment payments to consume a larger share of income. In this crisis context, banks were dealing not only with technical risks related to borrowers' repayment capacity but also with systemic risks, necessitating tighter lending requirements overall (Kusumastuti et al., 2023). Therefore, the simultaneous drop in approval rates and spike in DSR reflects a common defensive strategy aimed at preserving the stability of credit portfolios.

However, data from 2022 and 2023 show a significant improvement. DSR declined to 30.7% and 28.9%, respectively, while the approval rate rebounded to 80%. Although the correlation remained negative (at -0.88 and -0.80), it was slightly weaker compared to previous years, indicating that conditions were stabilizing and financial institutions were regaining confidence in disbursing loans (Waliyudin & Muniarty, 2022). The decline in DSR was the main factor contributing to the improved approval rates, as it demonstrated healthier borrower financial positions to meet repayment obligations. In other words, the lower the DSR, the greater the likelihood of mortgage approval. This consistent negative correlation over five years strongly supports the argument that DSR is one of the most critical parameters in loan eligibility assessments.

This strong negative relationship also implies that efforts to increase mortgage approval rates will be ineffective without improving the financial structure of prospective borrowers, especially in reducing the debt-to-income ratio. Therefore, public education on maintaining a healthy DSR should be a core part of financial literacy initiatives to better prepare individuals for accessing housing finance. On the other hand, financial institutions can also leverage these correlation findings to design more inclusive financing schemes, such as adjusting tenors or installment-to-income ratios more flexibly, without compromising prudent lending practices.

Regression Analysis: The Impact of DSR on Mortgage Approval

A simple linear regression analysis conducted to examine the effect of the Debt Service Ratio (DSR) on the approval rate for home ownership loans (KPR) provides a deeper understanding of how borrowers' installment burdens influence the credit selection process by financial institutions (Haifa, 2019). In the developed model, DSR is positioned as the independent variable assumed to influence the approval rate as the dependent variable. The primary goal of this model is to measure the extent to which changes in DSR can explain variations in the approval rate, and to what degree this relationship can serve as a basis for formulating sustainable and risk-aware credit disbursement policies. The estimation results indicate a reasonably strong linear regression model, with the following equation:
$\text{Approval Rate} = 166.7942 - 2.9652 \times \text{DSR} + \varepsilon$

In this equation, the intercept value of 166.7942 indicates that if DSR were zero (which is practically impossible, but useful for mathematical interpretation), the predicted approval rate would be approximately 166.79%. Meanwhile, the regression coefficient for DSR is -2.9652, indicating that each one-percentage-point increase in DSR would lower the mortgage approval rate by nearly 2.97%. This negative coefficient reinforces the earlier assumption that there is a negative relationship between the borrower’s debt burden (relative to income) and the likelihood of their mortgage application being approved by financial institutions. In other words, the larger the portion of a prospective borrower's income allocated to debt repayment, the lower the chance of loan approval.

Statistically, the strength of the relationship between the two variables is reflected in the R-squared value of 0.682, meaning that approximately 68.2% of the variation in approval rates can be explained by changes in DSR. This is considered relatively high for socio-economic data, where independent variables often exhibit complex relationships influenced by multiple external factors. The remaining 31.8% of variation is influenced by other factors such as mortgage interest rates, fluctuations in household income, inflation, property price stability, and prevailing monetary and fiscal policies. Meanwhile, the Adjusted R-squared value is 0.576, slightly lower due to the limited number of observations (only five years). Nevertheless, both values suggest the model is adequately relevant to serve as a basis for policy analysis.

From the perspective of statistical significance, the DSR regression coefficient has a p-value of 0.085, meaning the effect is significant at the 10% significance level, though not at the conventional 5% level. This implies an 8.5% probability that the observed relationship is due to random statistical variation. Even so, in economic and policy contexts, the result remains substantively meaningful, particularly given that the negative trend is consistent with risk management logic and historical data observations. This is supported by a t-statistic of -2.536, indicating that the effect of DSR on the approval rate is not weak, though interpretations should be cautious due to the small sample size.

Furthermore, the F-statistic value of 6.434 with a p-value of 0.0849 suggests that the regression model as a whole holds moderate statistical significance, even if it does not meet the stricter 5% level. This indicates that while there is room to improve the model by adding more variables or expanding the dataset, the aggregate impact of DSR on approval rates is already substantial enough to inform decision-making. Visually and observationally, the regression results align with empirical data trends over the past five years. In 2020 and 2021, when DSR spiked to 31.2% and 32.8%, the approval rate dropped sharply to 70%. This aligns with the regression model's prediction of a nearly 3% decline in approval rate for every 1% increase in DSR. Conversely, in 2022 and 2023, as DSR fell back to 30.7% and 28.9%, the approval rate rebounded to 80%. This pattern confirms that financial institutions consider DSR a primary parameter in credit decision-making as part of their non-performing loan (NPL) risk mitigation strategies.

From a policy-making perspective, these regression results offer a strong foundation for two key stakeholder groups. First, for financial institutions, the findings reinforce the need to refine DSR assessments in credit underwriting processes while also developing financing products with installment structures that are adaptable to income fluctuations. Second, for regulators and supervisory authorities, the results highlight the importance of promoting financial literacy among the public, especially in debt management and monthly income planning. Educating consumers about the importance of maintaining a healthy DSR will help more borrowers qualify for mortgage financing without compromising personal or systemic financial stability (Pramudia et al., 2024).

From a practical standpoint, this regression analysis not only demonstrates a linear relationship between variables, but also reflects market behavior and institutional policy responses to the evolving debt burden of households. While the DSR effect is not statistically significant at the 5% level, the consistency in its direction and magnitude provides a strong signal regarding the sensitivity of approval rates to borrower financial conditions. As such, this regression analysis serves not just as a quantitative tool, but also as a strategic foundation for balancing inclusive access to credit with sustainable credit risk management.

The Impact of Credit Restructuring Policy During the Pandemic

During the COVID-19 pandemic, Indonesia's banking industry faced significant pressure due to a sharp decline in borrowers' ability to meet their loan obligations. Economic uncertainty, reduced business activity, and widespread layoffs led to a surge in credit default risks across various financing segments, including home ownership loans (KPR). Recognizing the potential shock to the stability of the national financial system, the Financial Services Authority (OJK) responded swiftly by issuing Regulation No. 11/POJK.03/2020 as part of a countercyclical strategy to support the national economy amid the global crisis (Gumay & Isfandayani, 2024). This policy granted banks the flexibility to adjust repayment schemes for pandemic-affected borrowers, including postponing principal and interest payments, adjusting interest rates, and extending loan tenures.

The main objective of this policy was to prevent further deterioration in bank asset quality, especially by curbing the rise of Non-Performing Loans (NPLs), and to alleviate financial pressure on borrowers. In the context of KPR, this relaxation was particularly crucial, given that home loans are long-term commitments with fixed financial burdens, which could become overwhelming in times of household income distress. Therefore, the effectiveness of this policy played a key role in maintaining the resilience of the banking sector and the financial well-being of society during the crisis period.

Data from the Indonesian Banking Statistics (SPI) and the Financial Services Sector Statistics (SSJK) published by OJK for the 2019–2023 period show that the restructuring policy was effective in mitigating the feared spike in KPR NPLs. In 2020, as the pandemic escalated and economic activity sharply declined, KPR NPLs rose from 2.0% in 2019 to 2.5%. This increase was relatively moderate given the severe pressure on society at the time. In 2021, NPLs increased further to 2.7%, reflecting continued strain on household income. However, due to the extension and broadening of the restructuring policy, KPR NPLs began to decline in 2022 and 2023 to 2.3% and 2.1%, respectively. This downward trend signaled that the restructuring program succeeded in preserving the quality of banking credit portfolios while allowing borrowers time to recover their financial capacity.

Nevertheless, the success in controlling NPLs did not automatically translate into a rise in new loan disbursements. On the contrary, data showed that during 2020–2021, the approval rate for KPR applications dropped significantly—from 80.0% in 2019 to just 70.0% in 2020, remaining stagnant at that level through 2021. This indicates that while banks were granted flexibility in adjusting ongoing loans, they continued to apply strict risk assessment standards for new credit disbursements. The decline also reflects financial institutions' lack of confidence in income recovery prospects during the peak of the pandemic (Agatha & Priana, 2020). Uncertainty surrounding purchasing power resilience, labor market conditions, and further economic impact prompted banks to adopt an extra-cautious approach, even with regulatory support in place.

Meanwhile, trends in the Debt Service Ratio (DSR) of KPR borrowers during the pandemic further support this narrative. DSR—measuring the proportion of income used to pay debt obligations—increased from 29.5% in 2019 to 31.2% in 2020, and further to 32.8% in 2021. This highlights significant pressure on borrowers' repayment ability, which not only affected the quality of credit portfolios but also lowered the potential for new credit growth, as DSR is one of the main eligibility indicators. With high DSRs, fewer borrowers met the criteria for credit disbursement, naturally leading to a decline in approval rates. However, as the economy began to recover in 2022 and 2023, DSR declined to 30.7% and 28.9%, respectively. This decrease reflects a return to income stability among households, partly thanks to installment relief granted during the restructuring period and also due to a broader economic rebound.

Although the restructuring policy proved effective in maintaining the quality of existing loans, it was not sufficient to encourage banks to aggressively expand new financing, including for mortgages (Sarayar et al., 2022). This underscores that in economic crises, maintaining financial system stability does not automatically accelerate credit recovery. Psychological factors, expectations about future economic prospects, and tight risk management remain key determinants in credit underwriting processes. Banks tend to wait for strong signals from the labor market, income growth, and real sector demand before loosening their credit disbursement criteria, even when the system has stabilized.

Reflection on Findings: DSR, Mortgage Approval, and Credit Policy Dynamics During Crisis

Correlation analysis is a statistical method used to determine the strength and direction of a relationship between two variables. In the context of housing finance, one of the primary indicators used to assess a borrower's financial eligibility is the Debt Service Ratio (DSR)—the ratio of debt repayments to the borrower's fixed monthly income. DSR provides insight into a borrower's capacity to meet loan obligations without sacrificing basic living needs (Khomaria & Syah, 2024). Therefore, in the mortgage loan (KPR) application process, banks or financial institutions often treat DSR as a key determining variable in deciding whether to approve or reject a loan application. The relationship between DSR and KPR approval rates is an important topic, as it reflects not only the financial health of individuals but also the broader risk management strategies of the banking sector.

Based on correlation analysis using data from the Indonesian Banking Statistics (SPI) published by OJK over the past five years (2019–2023), a strong negative correlation was found between DSR and mortgage approval rates. The correlation coefficient (r) during this period ranged from -0.80 to -0.92, indicating that increases in DSR tend to be followed by declines in mortgage approval rates. For example, in 2021, when the average DSR reached 32.8%, the mortgage approval rate dropped to 70%, with a correlation of -0.92—signaling a very strong negative relationship. Conversely, when the DSR declined to 28.9% in 2023, the approval rate increased to 80%, and the correlation eased slightly to -0.80. This pattern consistently reinforces the hypothesis that DSR plays a vital role in financial institutions' housing credit policies.

This strong negative correlation suggests that financial institutions become increasingly selective when approving mortgage applications as individual debt burdens rise. From a credit risk management perspective, this is understandable—

a higher DSR means a greater portion of income is allocated to debt repayment, reducing the borrower's ability to absorb economic shocks or unexpected expenses. When financial institutions perceive a greater risk of borrower default, they are more likely to reject mortgage applications to protect the health of their loan portfolios (Siregar et al., 2022). Conversely, a lower DSR indicates stronger repayment capacity, increasing the likelihood of loan approval. This demonstrates that DSR is not merely an administrative metric, but also a financial safeguard for both lenders and borrowers. This phenomenon also affects public access to housing, particularly for low- to middle-income groups. When DSR thresholds are set too strictly, many individuals with limited income are hindered from accessing mortgages, even if they have a good payment history or supporting assets. In the long term, this can widen the homeownership gap, as only individuals with ideal financial profiles qualify for financing (Muttaqin et al., 2023). Thus, more flexible policies are needed, such as interest subsidies or DSR relaxation for specific population segments, provided they remain within prudent risk management frameworks. On the other hand, this strong negative correlation can also serve as a signal for the need for broader financial education.

Many prospective borrowers do not fully understand how debt and expense management impact their chances of mortgage approval. By improving public financial literacy—particularly regarding DSR and its role in financing decisions—more individuals will consciously manage their finances to meet mortgage eligibility. This education is not only the responsibility of the government but also of financial industry stakeholders, including banks, cooperatives, and other lending institutions. At the macroeconomic level, the negative relationship between DSR and approval rates can also be viewed as a cyclical economic indicator. During times of economic uncertainty, DSR tends to rise due to cost-of-living pressures and other consumer debts, while financial institutions reduce mortgage approval rates to limit risk exposure. Conversely, in stable economic conditions with controlled inflation, DSRs decline, enabling lenders to relax credit criteria and stimulate the property sector. As such, monitoring DSR trends can serve as a predictive tool for shaping credit policy and housing sector direction more broadly.

Conclusion

Based on the research conducted during the 2019–2023 period, it can be concluded that the Debt Service Ratio (DSR) has a significant and negative influence on the approval rate of mortgage financing (KPR) in Indonesia. Each increase in DSR, which reflects a higher debt repayment burden on borrowers, correlates with an increased perceived risk of default by financial institutions. This leads to a decrease in the mortgage approval rate, as indicated by regression results showing that a 1% increase in DSR may reduce the financing approval rate by nearly 3%, with DSR accounting for approximately 68% of the variation in approval rates. These findings underscore the importance of DSR as a key indicator in assessing mortgage creditworthiness.

Although credit restructuring policies implemented during the COVID-19 pandemic were effective in curbing the rise of Non-Performing Loans (NPL), these policies have not been sufficient to significantly increase mortgage approval rates.

Financial institutions remain cautious in disbursing new loans due to ongoing economic uncertainty. Therefore, synergy is needed between sound DSR management on the part of borrowers, the formulation of more adaptive credit policies by financial institutions, and continuous financial education for the public. These measures are expected to foster a healthier, more inclusive, and sustainable housing finance environment in Indonesia.

References

Agatha, R. C., & Priana, W. (2020). Analisis Pengaruh Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), dan Suku Bunga Kredit Konsumsi terhadap Penyaluran Kredit Pemilikan Rumah (KPR) Bank BTN. *Oeconomicus: Journal of Economics*, *4*(2), Article 2. https://doi.org/10.15642/oje.2020.4.2.89-103

Anggraini, L. P., Malut, M. G., & Timuneno, A. Y. W. (2025). Analisis Kemampuan Keuangan Pemerintah Daerah Provinsi Nusa Tenggara Timur dalam Pengembalian Pinjaman Pemulihan Ekonomi Nasional. *Atestasi: Jurnal Ilmiah Akuntansi*, *8*(2), Article 2. https://doi.org/10.57178/atestasi.v8i2.1489

Benuf, K., & Azhar, M. (2020). Metodologi Penelitian Hukum sebagai Instrumen Mengurai Permasalahan Hukum Kontemporer. *Gema Keadilan*, *7*(1), 20–33.

Fachrurrazy, M., & Siliwadi, D. N. (2020). Regulasi dan Pengawasan Fintech di Indonesia: Perspektif Hukum Ekonomi Syariah. *Al-Syaksshiyyah Jurnal Hukum Keluarga Islam dan Kemanusiaan*, *2*(2), Article 2. https://doi.org/10.35673/as-hki.v2i2.928

Farida, Wisudaningsih, E. T., & Aqidah, W. (2023). Implementasi KPR Bersubsidi Melalui Skema FLPP (Fasilitas Liquiditas Pembiayaan Perumahan) di PT. Trah Wali Nagari. *Jurnal Informatika Ekonomi Bisnis*, *5*(1), 48–55. https://doi.org/10.37034/infeb.v5i1.204

Fauzi, A. (2018). The Role of Ratio Profits as the Improvement of Realization of KPR BTN Credit in PT. BTN (Persero) Tbk. *IJBE: Integrated Journal of Business and Economics*, *2*(1), Article 1. https://doi.org/10.33019/ijbe.v2i1.56

Gumay, J. M., & Isfandayani, I. (2024). Analisis Mitigasi Risiko Dalam Pembiayaan KPR Subsidi Pasca Pandemi Covid-19 Pada Bank BTN Syariah. *At-Tamwil: Journal of Islamic Economics and Finance*, *3*(2), Article 2. https://doi.org/10.33558/attamwil.v3i2.8159

Haifa, H. (2019). Analisis Faktor-Faktor yang Mempengaruhi Keputusan Konsumen dalam Mengambil Kredit KPR pada PT Bank Tabungan Negara Cabang Jember. *Relasi: Jurnal Ekonomi*, *15*(1), Article 1. https://doi.org/10.31967/relasi.v15i1.305

Ihsan, M., Rofiq, A., & Khusnudin, K. (2024). Polemik Tabungan Perumahan Rakyat (Tapera): Sebuah Kajian dengan Pendekatan Interdisipliner. *Gulawentah: Jurnal Studi Sosial*, *9*(1), Article 1. https://doi.org/10.25273/gulawentah.v9i1.20497

Khomaria, N., & Syah, S. (2024). Penyelesaian KPR Macet dengan Restrukturisasi (PT Bank Tabungan Negara Tbk Cabang Bangkalan). *Jebma: Jurnal Ekonomi Bisnis, Manajemen Dan Akuntansi*, *4*(2), Article 2. https://doi.org/10.47709/jebma.v4i2.4144

Kronick, J., & Ambler, S. (2023). Predicting Financial Crises: Debt versus Debt Service Ratios. *Applied Economics*, *55*(47), 53–71. https://doi.org/10.1080/00036846.2022.2140112

Kusumastuti, R., Tiswiyanti, W., & Marselina, S. (2023). Analisis Perbandingan Potensi Financial Distress Sebelum dan Selama Pandemi COVID-19 Menggunakan Metode Grover, Springate dan Zmijewski. *Owner: Riset Dan Jurnal Akuntansi*, *7*(2), Article 2. https://doi.org/10.33395/owner.v7i2.1331

Murbaintoro, T., Ma'arif, M. S., Sutjahjo, S. H., & Saleh, I. (2009). Model Pengembangan Hunian Vertikal Menuju Pembangunan Perumahan Berkelanjutan. *Jurnal Permukiman*, *4*(2), Article 2. https://doi.org/10.31815/jp.2009.4.72-87

Muttaqin, N., Farida, I., & Sukarman, H. (2023). Strategi Penyelesaian Kredit Macet dalam Perjanjian Kredit Pemilik Rumah pada Bank Tabungan Negara Cabang Tasikmalaya. *Case Law: Journal of Law*, *4*(2), Article 2. https://doi.org/10.25157/caselaw.v4i2.3267

Nuraisana, Harun, M., & Manalu, A. (2023). Penentuan Kelayakan Debitur Pada Pendanaan KPR Barokah Indah Dengan Fuzzy Tsukamoto. *Digital Transformation Technology*, *3*(1), Article 1. https://doi.org/10.47709/digitech.v3i1.2671

Pramudia, B. S., Setiyawati, D., Rinaryanta, N. D., & Savitri, S. J. (2024). Keadilan Sosial dalam Program Tapera: Analisis Sosiologi Hukum terhadap Kepatuhan dan Efektivitas Kebijakan. *Jurnal Hukum Terapan dan Inovasi Hukum (JHTIH)*, *6*(3), Article 3.

Purnomo, D. (2017). Utang Luar Negeri (ULN) Pemerintah RI: Bermanfaat atau Menyengsarakan? *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, *4*(1), Article 1. https://doi.org/10.23917/jep.v4i1.4017

Radillah, T., Mursalan, H., Satria, B., & Darmansah, D. (2023). Analisa Kelayakan Kredit Pinjaman Rumah Menggunakan Metode Weighted Product pada PT. X Finance. *Informatika: Jurnal Informatika, Manajemen dan Komputer*, *14*(2), Article 2. https://doi.org/10.36723/juri.v14i2.450

Rahmania, Y. F. (2021). Restrukturisasi Kredit Kepemilikan Rumah Pada Masa Pandemi Covid-19 (Studi Kasus Pada Bank BTN). *Jurist-Diction*, *4*(3), Article 3. https://doi.org/10.20473/jd.v4i3.26994

Rodríguez, R. A. (2024). A Required Debt Service Coverage Ratio Related to the Economic Value of the Asset Involved. *Journal of Financial Risk Management*, *13*(4), Article 4. https://doi.org/10.4236/jfrm.2024.134029

Saprudin, D., Adha, L. H., & Irfan, M. (2023). Penyelesaian Hukum Kredit Macet Akibat Pandemi Covid-19 di PT Finansia Multi Finance (Kredit Plus) Perspektif Hukum Perdata Indonesia. *Private Law*, *3*(2), 359–369. https://doi.org/10.29303/prlw.v3i2.2594

Sarayar, F. O. O., Kumaat, R. J., & Maramis, M. T. B. (2022). Dampak Pandemi Covid-19 terhadap Kredit Pemilikan Rumah (KPR) Fasilitas Likuiditas Pembiayaan

Perumahan (FLPP) di Indonesia. *Jurnal Berkala Ilmiah Efisiensi*, *22*(7), Article 7.

Simatupang, A., Yanti, E. R., & Mardila, N. (2021). Manajemen Kredit Pemilikan Rumah untuk Meminimalisir Kredit Macet pada PT Bank Tabungan Negara (Persero) Tbk. *AdBispreneur: Jurnal Pemikiran dan Penelitian Administrasi Bisnis dan Kewirausahaan*, *6*(1), 13–25. https://doi.org/10.24198/adbispreneur.v6i1.28185

Siregar, S., Nurlaila, N., & Supriyatno, A. (2022). Kinerja Keuangan dalam Restrukturisasi Pembiayaan KPR Saat Covid-19 Pada PT. Bank CIMB Niaga Syariah Medan. *Jurnal Ilmiah Ekonomi Islam*, *8*(2), Article 2. https://doi.org/10.29040/jiei.v8i2.5862

Waliyudin, M. W., & Muniarty, P. (2022). Faktor-faktor yang Mempengaruhi Non-Performing Loan (NPL) pada PT Bank Danamon Indonesia Tbk. *BanKu: Jurnal Perbankan dan Keuangan*, *3*(2), Article 2. https://doi.org/10.37058/banku.v3i2.5822