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Abstract

Since its introduction in the 1970s, securitization practices have evolved to facilitate various funding needs for projects with potential cash flows. Derived from traditional lending, securitization is conducted through a re-engineering scheme that separates institutional risk from the risk of the underlying assets. Generally, assets that can be securitized are those with potential future cash flows, such as mortgages, auto loans, credit card receivables, royalties, and others. In Indonesia, securitization practices began to develop in the 2000s. Although institutional infrastructure is not yet fully in place, the increasing funding needs to drive economic growth, amidst the limitations of traditional funding sources (bank credit), have prompted various parties to initiate the use of non-traditional financing sources. One such source is asset securitization. This study seeks to examine and identify several issues faced in the asset securitization process in banks, including regulatory, institutional, infrastructure, and ecosystem aspects. The research is expected to complement existing references on securitization practices in Indonesia. Additionally, some recommendations proposed are expected to drive initiatives to complete and refine various aspects necessary in the securitization process.

Keywords: asset securitization, housing finance, financial market deepening, regulation, Indonesia

JEL Classifications: A11, B11, C11, D11, F11

1. Introduction

1.1 Background

Under Law No. 23 of 1999 concerning Bank Indonesia, as last amended by Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector, Article 7 states that the objectives of Bank Indonesia are to achieve rupiah value stability, maintain Payment System stability, and contribute to maintaining Financial System Stability in order to support sustainable economic growth. Furthermore, Article 8 stipulates that to achieve these objectives, Bank Indonesia has, among other duties, the task of formulating and implementing monetary policy in a sustainable, consistent, and transparent manner. The Elucidation of Article 10 paragraph (7) states that Bank Indonesia's monetary operations may be conducted through, among others, outright purchases and sales of government securities and other high-quality securities in the secondary market, as well as repo and reverse repo transactions involving government securities and other high-quality securities. Furthermore, Article 11 paragraph (2) states that in liquidity management, Bank Indonesia may conduct outright purchases or sales and/or repo transactions of government securities and/or other high-quality securities in the secondary market to support sustainable economic growth.

In carrying out its mandate under the Law, Bank Indonesia has issued policies to promote national development financing, particularly housing finance. One such policy is the expansion of underlying assets for Bank Indonesia Repo transactions to include other high-quality securities. This expansion covers securities issued by PT Sarana Multigriya Finansial (Persero) (SMF), as a quasi-government entity in housing finance. These securities include, among others, corporate bonds, corporate sukuk, asset-backed securities (EBA), and Sharia EBA, introduced in stages. Bank Indonesia has revised the timeline for expanding repo underlying assets beyond government securities under BPPU 2030, moving the initial target from 2028 forward to 2025. Although implemented through financial market instruments, this decision aligns with the policy of the Government of the Republic of Indonesia, which has set a target of constructing three million housing units each year as part of efforts to meet national housing needs.

Market conditions for securities indicate that SMF's corporate bonds have a larger outstanding value compared with EBA (IDR 22.4 trillion vs. IDR 1.19 trillion), with the banking sector holding IDR 9.68 trillion of SMF corporate bonds. Based on this situation, Bank Indonesia has decided that the expansion of BI repo underlying assets will be implemented in two stages: 1) the initial stage, using SMF corporate bonds and corporate sukuk; and 2) the subsequent stage, using EBA and Sharia EBA, with implementation of the initial stage planned for the fourth quarter of 2025. The policy to expand BI repo underlying assets to include EBA and Sharia EBA (subsequent stage) is one of the main factors driving the urgency of developing securitization instruments going forward. The eligibility of SMF's EBA as underlying assets for BI Repo transactions is expected to support money market and foreign exchange market (PUVA) deepening, encourage market activity, and enhance liquidity in the securitization market. As the issuer, PT SMF is encouraged to increase EBA issuance and expand its investor base, both through increased bank ownership and greater participation from retail investors.

The prospect for issuing securitization instruments is believed to be significant, given that the estimated annual housing need is around 800,000 units, with a cumulative deficit reaching 15 million units (Sekretariat Jenderal DPR RI, 2022). To date, the availability of housing continues to experience a substantial deficit. A considerable gap persists between housing demand and supply. If this gap continues

and widens, it is feared that it may hinder the achievement of national development targets.

Historically, housing development in Indonesia has been financed by two primary sources: the government budget and the banking sector. Due to the limited government allocation for subsidized housing development, the number of subsidized houses built by the Government is also limited. On the other hand, although banks have greater capacity in terms of financing, they remain cautious in providing housing development loans, considering the potential risks they face related to funding capacity and liquidity requirements that must be maintained at certain levels, while housing loans are typically long-term in nature (Mangeswuri, S.E., M.Si, 2016).

Given the various constraints faced by both the Government and the banking sector, policy breakthroughs are needed to accelerate housing development for the public. One such breakthrough is the development financing instruments that expand access to funding sources and enhance the sustainable capacity of housing development. In this context, the development of asset securitization instruments becomes one of the strategic solutions that can be considered.

In principle, asset securitization provides an opportunity for non-bank investors to participate in housing finance while facilitating the distribution of housing assets to investors. Asset securitization enables banks to convert illiquid assets, such as mortgage loans, into additional liquidity through tradable securities in the capital market (Azaria, 2014). Through securitization mechanisms, banks can also transfer credit risk to investors (as a risk mitigation technique) while strengthening their capital structure without significantly increasing leverage. If implemented effectively, asset securitization can expand banks' financing capacity while broadening funding sources for housing development and other productive sectors.

In global financial markets, securitization instruments have become one of the financial instruments that have grown and are widely traded in developed countries such as the United States and Europe. Asset securitization in the United States financial market has, since the 1970s, played an important role in increasing liquidity and housing sector financing (Fabozzi et al., 2024). Meanwhile, securitization instruments in the European financial market have been used to strengthen public and private sector financing and to expand access to capital markets (The EBA Report on Synthetic, 2015).

In contrast to developed countries, the development of securitization instruments in Indonesia's financial market remains relatively slow and has not fully matured. The issuance of securitization instruments faces various challenges, not only related to regulatory complexity, but also the low level of practitioner and investor literacy regarding securitization mechanisms, as well as limitations in capital market infrastructure where securitization instruments are traded. Reports by Bank Indonesia indicate that although the potential of securitization as a long-term financing instrument is substantial, regulatory barriers and the lack of market participant education remain major constraints on the development of the securitization market. Various studies show that the key challenges in issuing securitization instruments lie in regulatory complexity, limited secondary market infrastructure, the absence of an active investor ecosystem, taxation issues, and the limited understanding of market participants regarding the structure and risks of structured finance products (Lip et al., 2024).

This study aims to comprehensively examine the potential of bank asset securitization, particularly securitization with underlying assets in the form of mortgage loans (KPR), as a means to obtain additional funding sources for

development financing in Indonesia. In addition, this study also aims to identify the main obstacles in issuing securitization instruments and to formulate effective policy recommendations to strengthen the role of securitization in supporting sustainable and inclusive long-term financing.

1.2 Problem Statement & Research Question

Inclusive and sustainable national development requires long term financing that is stable, affordable, and diversified. The main sources of development financing have so far come from the government through national and regional budgets and from the banking sector. On the banking side, although the sector has considerable potential, its financing capacity cannot be fully optimized because banks must comply with various regulations related to liquidity, credit risk, and capital adequacy ratios.

As a financial instrument, asset securitization is an alternative source of funding that is neither debt nor equity. The mechanism of asset securitization allows banks to obtain additional liquidity by converting illiquid assets such as mortgage loans, consumer receivables, or utility bills into securities that can be sold to investors in the capital market. In addition, through asset securitization, banks can transfer credit risk from their balance sheets to investors through the role of a Special Purpose Vehicle, expand their funding sources, and increase their capacity to extend new credit.

In the United States and Europe, asset securitization has become an important part of bank balance sheet management and capital allocation strategies. In contrast, in emerging markets including Indonesia, the development of securitization instruments faces a range of challenges related to prudential and accounting principles, uncertainty in risk recognition within the Basel capital framework, and regulatory limitations along with limited understanding of how to implement synthetic securitization schemes that meet risk transfer criteria recognized by the regulator. As a result, banks do not receive optimal incentives when conducting asset securitization. At the same time, low investor literacy among both institutional and retail investors regarding securitization mechanisms leads to limited interest in securitization instruments.

With this background, this study seeks to answer three main questions. First, what is the potential of bank asset securitization in Indonesia. Second, what are the main challenges in carrying out asset securitization. Third, what policy strategies can be implemented to encourage the development of securitization instruments as part of national development financing.

1.3 Research Objectives

Based on the issues examined in this study, the research objectives are as follows.

1. To analyze the potential of bank asset securitization, particularly with mortgage loans as the underlying assets, in expanding sources of development financing in Indonesia.
2. To identify the main constraints and challenges that hinder the development of bank asset securitization in Indonesia.
3. To formulate strategies that can be implemented by banks, regulators, and capital market participants to promote the development of asset securitization.

1.4 Research Benefits

As stated in the research objectives, this study is expected to summarize and analyze the potential of bank asset securitization, identify the constraints and

challenges encountered in the securitization process, and recommend strategies that can be implemented by banks, regulators, and capital market participants to promote the development of asset securitization. This study is also expected to serve as an entry point for formulating strategic and collaborative actions among authorities and regulators to encourage broader and more applicable development of asset securitization instruments in the national financial system.

More specifically, this study is expected to provide several benefits. First, for academics, it can serve as a reference for conducting research and studies related to the financial system and financial markets in Indonesia. This study is expected to provide a foundation for the development of theoretical frameworks and empirical studies on asset securitization, particularly securitization with mortgage loans as underlying assets in the context of housing development financing. The analytical results in this study are expected to serve as empirical evidence that enriches scientific knowledge and supports the development of further research in the field of finance and capital markets.

Second, for authorities and regulators, the findings of this research can be used as additional information that complements existing analyses, forming a basis for developing policy recommendations for the advancement of asset securitization instruments and financial market deepening while strengthening the regulatory and supervisory framework for securitization transactions in Indonesia's financial market.

Third, for the banking sector, the findings can serve as a reference on the practices and regulations of asset securitization in the Indonesian financial market, including the use of securitization for liquidity management, enhanced financing capacity, and optimization of capital structure. Various data and information presented in this study can be used as additional inputs in designing business strategies and managing risks in bank balance sheets.

Fourth, for investors and capital market participants, this study can serve as a reference and a source of knowledge to broaden understanding of alternative investment instruments with interest income and principal repayment structures that differ from other debt instruments such as bonds or commercial paper. A broader and deeper understanding of the various aspects of asset securitization among institutional and retail investors can ultimately increase participation in securitization instruments and encourage the deepening of the domestic financial market.

2. Literature Review

2.1. Structured finance

2.1.1 History of Structured Finance

Structured financing began in the early 1970s with mortgage securitization in the U.S., a response to the funding shortages faced by savings and loan institutions during the Great Depression. To address this, Congress passed the National Housing Act of 1934, establishing a secondary mortgage market. In 1938, Fannie Mae was created to provide liquidity by buying and selling mortgages. In 1957, the Federal Home Loan Bank Board introduced regulations allowing the buying and selling of participation interests in mortgage loans.

By 1970, Ginnie Mae began issuing mortgage-backed pass-through securities, allowing investors to purchase partial ownership in mortgage pools. These pools, with similar characteristics like credit quality, maturity, and interest rates, were transferred to a trust and sold to investors.

The scope of securitization expanded beyond residential mortgages to include auto loans, credit card receivables, and future cash flows from various sources. Any asset with a predictable cash flow could be securitized. Special Purpose Vehicles (SPVs) repackaged these assets into structured claims, which were then rated and sold to the public.

2.1.2 Structured finance

Corporate financing traditionally relies on equity or debt securities, both dependent on a company's ability to meet obligations. In financial distress, these obligations may be delayed. Structured finance offers an alternative by separating assets and cash flows from the company's general revenues.

Structured finance mitigates risk by pooling similar-risk assets and selling them to investors with matching risk appetites. Cash flows are allocated through trenching, making certain tranches safer than the underlying assets (Fender and Mitchell, 2005). This repackaging often leads to high credit ratings (Coval et al., 2009).

A Special Purpose Vehicle (SPV) with a bankruptcy-remote structure handles asset pooling and cash flow allocation. Through a true sale, assets are separated from the originator's estate. The SPV issues debt securities and uses proceeds to repay investors, allowing originators to access funding without increasing liabilities and reducing capital requirements.

Structured finance transfers credit risk to others, like credit default swaps, but trenching introduces varying risks. Subordinated tranches can be riskier than similarly rated bonds, with investors relying heavily on credit ratings (Fender and Mitchell, 2005).

While complex, structured finance helps address market segmentation and adverse selection (Fender and Mitchell, 2005). For banks, it expands funding access while meeting regulatory capital requirements.

2.1.3 Aspects of Structured Finance

Structured finance instruments have three key characteristics. First is asset pooling, either cash based or synthetic. Second is the separation of credit risk from the originator by transferring the underlying assets to a Special Purpose Vehicle. Third is the use of tiered claims or trenching based on cash flows. Trenching allows the creation of debt classes with higher credit ratings than the average quality of the underlying assets, supported by credit enhancement mechanisms that shape different risk and return profiles.

A common structure consists of senior, mezzanine, and junior tranches. The junior tranche absorbs first losses, followed by the mezzanine tranche, while the senior tranche carries the lowest risk. This hierarchy protects senior investors unless losses become severe. Another important feature is value creation, which arises from separating the credit risk of the underlying assets from the originator. Because cash flows of the underlying assets are more predictable than overall company revenues, securitization provides benefits like credit enhancement.

Although valuable, trenching adds complexity. It helps address imperfect market conditions such as adverse selection and market segmentation by offering instruments suited to different investor risk appetites. Less informed investors prefer senior tranches, while more informed investors or originators often hold the junior tranche which offers higher returns. Trenching also helps meet investment mandates that require specific credit ratings, thereby increasing the variety of investment options.

However, dividing claims may also create governance challenges. Junior investors may seek higher risk for higher returns, while senior investors prioritize stability. This can complicate cash flow management, especially during defaults. Moral hazard may arise if asset managers also hold certain tranches, creating conflicts of interest.

Structured finance can also have implications for financial stability. While it shifts risk away from the banking system, it may transfer it to institutions that are less resilient. Risk may become concentrated, and hedging strategies depend heavily on market liquidity. In times of stress, liquidity may dry up and volatility may increase. Limited transparency in credit risk markets also complicates the ability of central banks and supervisors to monitor risk distribution and assess financial stability.

2.1.4 Complexity of Structured Finance

1. Involvement of Rating Agencies and Rating Methodologies

Structured finance issuers seek high credit ratings for their instruments to attract investors, and rely on independent third-party rating agencies to assess these risks. Rating agencies play a key role in ensuring that all potential risks in the structured finance scheme are identified and verified. However, this also raises concerns about conflicts of interest and the challenges of applying traditional debt rating methodologies to the specific features of structured finance, such as tiered claims. These ratings are typically "ex ante" (prospective), unlike traditional "ex post" ratings, where issuer input has less impact.

2. Risk Evaluation and Tranching

The pooling and tranching of assets, while creating value, also introduces complexity. Evaluating the risk and return of structured finance debt requires advanced models to distribute losses, particularly when underlying assets are heterogeneous. Instead of focusing solely on potential losses, models must also account for the distribution of cash flows from underlying assets to different tranches, based on specific features. This can create non-default risks, where the risk arises not from the failure of underlying assets, but from how these risks are allocated among the tranches.

3. Determining the Source of Repayment

Structured finance relies on the assumption that the purchased receivables have predictable cash flows. These payments are used to repay principal and interest on securities issued by the SPV. Two main risks exist: (i) slow pay, where debtors delay payments, and (ii) no pay, where debtors default due to financial problems. To mitigate slow pay risk, the receivable pool must be large enough to ensure cash flows can cover individual delays. For no pay risk, a large number of debtors is necessary to diversify default risk. However, if a small group of debtors contributes significantly to payments, their default could disrupt payments to investors, creating obligor concentration risk.

Default risk can also be mitigated by adjusting the sale price of receivables or through credit enhancement, such as guarantees or the purchase of subordinated tranches by third parties. Legal issues, such as the originator's bankruptcy, can complicate repayment if the receivables are not deemed a true sale. If the court reclassifies the transfer as a loan, the SPV may only have a security interest, not ownership, in the receivables.

4. Separating Payment Sources from the Originator

The payment source must be isolated from the originator to ensure that originator problems or bankruptcy do not affect repayment. This involves two steps: (i) ensuring the SPV is bankruptcy remote from the originator, and (ii) ensuring the transfer of receivables is a true sale, not a loan.

1. SPV Bankruptcy Remoteness

To ensure bankruptcy remoteness, conflicts of interest must be managed, and the SPV must be isolated from the originator's bankruptcy. If the SPV is controlled by the originator, the originator could force the SPV into voluntary bankruptcy. Therefore, the SPV is typically structured with at least two classes of shares, where both classes must agree to a bankruptcy filing. Alternatively, an independent third party can control the SPV to prevent bankruptcy initiation by the originator.

Moreover, limitations on creditor intervention to prevent involuntary bankruptcy must be in place. These limits can include restricting the SPV's debt and creditor base, and contractual provisions can prevent creditors from filing bankruptcy petitions. While such protections are critical, courts may still order substantive consolidation of the SPV's and originator's assets in certain situations, although this is rare.

2. Ensuring True Sale

For true sale, the transfer of receivables must be legally binding, and the originator must not retain control. If a bankruptcy court deems the transfer as a loan rather than a sale, the SPV may only have a secured interest. Key factors in determining true sale include recourse, retained rights, pricing mechanisms, and the administration of receivables. Recourse, such as the originator's obligation to buy back receivables, can undermine true sale, but limited recourse for certain guarantees is generally acceptable. Additionally, pricing that reflects funding costs and is not adjusted retrospectively supports true sale, as does the right of the SPV to control receivable collection processes.

2.1.5 Benefits of Structured Finance

There are four main benefits of structured finance instruments for issuers and investors: (i) it allows for the separation and trading of credit risk; (ii) it provides a cost-effective funding tool for financial institutions, corporations, and governments; (iii) it serves as a technique for balance sheet management; and (iv) it offers a risk-return profile tailored to investor needs. With the aid of credit derivatives, synthetic structured finance significantly enhances credit risk management and pricing. Asset managers and their clients also benefit from expanded investment opportunities and improved risk management tools.

2.1.6 Risks of Structured Finance

1. Risk of Default from Underlying Assets

Credit ratings, as indicators of default risk in debt instruments, are based on expected loss (EL) or probabilities of default (PD). The estimation of EL or PD for a tranche in structured finance depends on its size and position in the loss distribution of the underlying assets. To assess this, credit risk models for the underlying assets must be combined with information on the specific structure of the transaction and the tranches involved. The three main factors influencing the loss distribution in a portfolio are:

- 1) The probability of default of each debtor in the asset pool.
- 2) Recovery rates after defaults.
- 3) The correlation of default timing among debtors in the asset pool.

The approach to calculating losses depends on the asset pool's characteristics, such as the number and homogeneity of assets, debtor classification, and historical performance. Structured finance methods differ from traditional asset-backed securities (ABS) in that they must account for the correlation of defaults and the heterogeneity of the asset pool.

2. Differences in Risk Rating

Traditional ABS portfolios usually consist of large, highly diversified, and homogeneous asset pools (e.g., residential mortgages or credit card receivables), with minimal individual exposure. As a result, idiosyncratic risk in ABS is much lower than in instruments with less diversified pools. ABS ratings generally use actuarial methods, assuming stable loss and recovery patterns. In contrast, collateralized debt obligations (CDOs) involve less granular structures with fewer, more heterogeneous assets. This influences both idiosyncratic and systematic risks, which are critical to asset performance. The calculation of loss distribution for CDOs differs, especially regarding default correlations among assets. Lower default correlation leads to a bell-shaped loss distribution, while higher correlation shifts the probability mass to the tails, increasing risk for senior tranches.

3. Rating and Nature of Tranche Risk

The credit rating, when accurately reflecting EL or PD, helps investors understand the risk of structured finance instruments with tranches. Tranches in structured finance can have leverage effects, where the smaller the tranche and the closer it is to the senior position, the greater the risk of significant loss. Different risk profiles in tranches can lead to substantial variations in unexpected losses and timing of losses, even for instruments with the same EL or PD. Therefore, structured finance products with tranches may have vastly different risk characteristics compared to traditional bonds with similar ratings. Over-reliance on credit ratings may expose investors to higher risk, especially in cases of tail events.

4. Differences in Rating Stability Between Structured Finance and Bonds

The ratings of structured finance instruments and bonds differ not only conceptually but also in terms of rating stability over time. Structured finance instruments, due to their asset-backed nature, tend to have higher average rating stability, with lower volatility compared to corporate bonds. However, structured finance instruments experience larger rating changes when they do occur, likely due to higher leverage. Empirical data shows that the rating downgrades for certain asset classes in structured finance can be more frequent than for bonds, primarily due to the complexity of assessing risk, especially regarding default correlation among underlying assets, which impacts pricing. Thus, one credit rating alone does not fully capture the risk profile of structured finance, and investors need to understand the limitations of credit ratings when making investment decisions.

2.2. Securitization

2.2.1 History of Securitization

Securitization was first introduced in the U.S. in 1970 as a government initiative to support mortgage financing through mortgage-backed securities (MBS). By the 1980s, securitization expanded to non-mortgage assets like credit card receivables, auto loans, and student loans, leading to the creation of Asset-Backed Securities (ABS). Initially, mortgage financing in the U.S. was handled by the Federal National Mortgage Association (Fannie Mae), established in 1938 to address the housing crisis after the Great Depression. However, Fannie Mae's business model, based on the buy-and-hold system for FHA loans, was inefficient and limited in expanding homeownership access.

To address these issues, Freddie Mac was created as a complement to Fannie Mae, introducing a new business model of securitizing mortgage loans by purchasing them from banks and bundling them into MBS. This allowed Freddie Mac to convert illiquid FHA loans into liquid, tradable securities, improving liquidity and enabling more mortgage lending. The growth of the MBS market, especially residential MBS (RMBS), was driven by government support through subsidies (tax incentives and low interest rates) and favorable regulations, allowing Fannie Mae and Freddie Mac to widely securitize mortgages.

Global Financial Crisis 2007-2008: Turning Point for Securitization

Securitization reached its peak before the 2007-2008 global financial crisis, driven by subprime MBS and synthetic CDOs. The crisis stemmed from the U.S. housing bubble, fueled by aggressive subprime lending and weak risk controls. Financial institutions securitized high-risk loans into MBS and CDOs, which were highly rated despite poor underlying assets. This, combined with unrealistic property price expectations and poor risk management, led to systemic risk, collapsing the securitization market and causing a global panic. Major banks, like Lehman Brothers, failed, and others, such as Bear Stearns and AIG, neared bankruptcy due to exposure to MBS-based derivatives.

The crisis froze global liquidity, halted interbank lending, and shattered confidence in financial institutions. The U.S. financial system neared collapse, and capital markets failed, affecting the real economy. The IMF (2009) described this as the worst crisis since the Great Depression. In response, the U.S. government implemented radical measures, stabilizing the system and strengthening the regulatory framework.

Post-crisis, the U.S. nationalized Fannie Mae and Freddie Mac through the FHFA, ensuring the stability of MBS and preventing wider systemic damage (Frame et al., 2015). The government also launched TARP, worth USD 700 billion, to purchase troubled assets, injecting liquidity and restoring confidence. The Federal Reserve's QE1 bought over USD 1 trillion in MBS, lowering long-term interest rates and stimulating housing markets (Gagnon et al., 2011). This marked MBS as both a market instrument and a tool for monetary policy.

The Dodd-Frank Act (2010) introduced the "skin in the game" principle, requiring originators to bear some risk, reducing moral hazard. The creation of the CFPB and enhanced SEC authority improved governance and MBS transparency. By 2012, the MBS market recovered, with Ginnie Mae as a leading issuer of fully government-backed MBS. Post-crisis studies (Acharya et al., 2013; IMF, 2014) highlight the role of government intervention in rebuilding trust and establishing robust regulations. Securitization remains a key tool in structured finance, converting illiquid assets into tradable securities, broadening financing access, and transferring credit risk to external investors (Fabozzi and Davis, 2012). The process involves asset pooling, tranching, and placement in a Special Purpose Vehicle (The EBA Report on Synthetic, 2015).

2.2.2 Assets Used as Collateral

After the development of securitization using housing credit in the United States, ABS expanded to include a wider range of underlying assets. Some of these assets include intellectual property rights (IPR), such as copyrights and patents. Examples of securitization involving these assets include:

- Music royalties: David Bowie, Candies LP (Iconix), Royalty Finance, MLA Multibrand Holdings, KCP IP;
- Film royalties: Fox, Universal, Destination, etc.;

- Brand licensing receivables: Universal Credit, Candies LP (Iconix), Guess? Royalty Finance, etc.;
- Patent royalties: Biopharma Royalty Trust, Royalty Pharma Finance Trust, etc.;
- Franchise royalties: Arby's Franchise Trust, Athlete's Foot IP Holdings, etc.

In addition to intellectual property, other assets used as underlying assets for ABS in the U.S. include student loan debt payments, credit card receivables, leasing, and more.

2.2.3 Types of Securitization

Securitization is classified based on risk transfer mechanisms, asset ownership structure, and the type of underlying assets. Understanding these classifications is essential to align securitization instruments with the financing needs and risk profiles of financial institutions and investors.

1. Traditional Securitization (Cash Securitization)

Traditional securitization involves the physical transfer of assets from the originator to an independent Special Purpose Vehicle (SPV), removing them from the originator's balance sheet and enabling financing through securities issued by the SPV. These securities consist of various tranches with different risk and return profiles (Fabozzi and Davis, 2012). This model provides legal certainty and reduces regulatory capital requirements but comes with complexities and high transaction costs.

2. Synthetic Securitization

In synthetic securitization, underlying assets are not physically transferred. Instead, credit risk is transferred through credit derivatives like credit default swaps or credit-linked notes (Candidate et al., 2016). The originator retains the assets but shifts the risk to external investors, optimizing capital usage and lowering regulatory capital needs. Synthetic securitization offers greater flexibility, especially for portfolios difficult to securitize traditionally, though it presents challenges like counterparty risk and regulatory compliance.

3. Asset-Backed Securities (ABS)

ABS are backed by non-mortgage assets, such as credit card receivables, trade receivables, and consumer loans. This diversity offers risk diversification and financing opportunities for various sectors (Lip et al., 2023). ABS uses pooling and tranching to allocate risk and return based on investor preferences, with performance depending on the quality of underlying assets and the originator's risk management.

4. Mortgage-Backed Securities (MBS)

MBS are securitized by mortgage loans, divided into Residential (RMBS) and Commercial (CMBS) categories. They play a key role in financing housing and commercial properties in developed countries (Gorton & Metrick, 2012). MBS use a tiered claim structure, with credit ratings assigned to different tranches, and have high liquidity, making them vital for monetary policy and housing sector development.

5. Special and Hybrid Securitization

Beyond the common types, specialized and hybrid securitizations involve assets like infrastructure receivables, insurance claims, and future cash flows, blending cash and synthetic securitization. These flexible structures cater to specific financing needs and risk profiles of institutions and investors (Candidate et al., 2016),

becoming increasingly important in sustainable financing and infrastructure investments.

2.2.4 General Principles and International Practices

1. General Principles in Asset Securitization

Securitization allows institutions to raise funds by issuing securities based on cash-flow generating assets. Key principles include:

- True Sale ensures assets are fully transferred to an SPV, preventing recall even in bankruptcy (Gorton & Metrick, 2012).
- Risk Transfer shifts credit risk from the originator to investors, allowing more funding (Fabozzi, 2008).
- Credit Enhancement improves the credit quality of securities via guarantees or tranching, offering different risk-return profiles (Jobs, 2008).
- Risk Diversification combines diverse assets like mortgages and credit debt, reducing investor risk (Fabozzi & Davis, 2012).
- Transparency and Disclosure ensure adequate investor information on assets, structure, and risk management (Fabozzi, 2008).

2. International Practices in Asset Securitization

Countries have developed policies aligned with these principles:

- United States: Securitization has supported housing and consumer credit since the 1970s. Post-2008, the Dodd-Frank Act tightened regulations with enhanced disclosures and "skin-in-the-game" rules (Gorton & Metrick, 2012).
- European Union: The 2017 Securitization Regulation aimed to improve transparency and manage risks, ensuring securitization doesn't add systemic risk (The EBA Report on Synthetic, 2015).
- Developing Countries: Countries like Brazil, Mexico, and India use securitization, particularly future flow securitization, to fund large infrastructure projects, diversifying financing options without relying on conventional debt.

2.2.5 Securitization Practices in Various Countries

Securitization has significantly evolved across countries, adapting to improve access to financing and enhance market liquidity. While it offers substantial benefits, it also presents challenges, particularly after the 2008 global financial crisis. The development of securitization in both developed and developing nations provides valuable insights for markets like Indonesia.

1. United States: Market Dominance and Crisis Impact

Securitization in the U.S. grew rapidly in the 1980s with the issuance of Mortgage-Backed Securities (MBS) by Fannie Mae and Freddie Mac. By 2006, annual securitization volumes reached nearly USD 450 billion (IFC, 2004). The 2008 financial crisis exposed significant flaws in securitization, especially with subprime MBS. In response, the Dodd-Frank Act (2010) introduced stricter regulations, including transparency improvements and "skin-in-the-game" rules, which required financial institutions to retain part of the securitized products to ensure accountability for the risks they originated (Gorton & Metrick, 2012). While the U.S. securitization market has begun to recover, its volume remains much lower than pre-crisis levels.

2. Europe: Post-Crisis Regulation and Enhanced Transparency

Europe's securitization market started in the late 1980s, with mortgage and consumer receivables. By 2008, the European market reached nearly EUR 1.1 trillion, with mortgages and consumer assets being dominant. However, the 2008

crisis revealed weaknesses in European securitization, causing a sharp decline in volumes. In response, the EU introduced the Securitisation Regulation 2017 to improve transparency and risk management, requiring issuers to provide clearer information about the underlying assets and the transaction structure. The European market is slowly recovering, focusing on Asset-Backed Securities (ABS) in sectors like automotive, housing, and trade, though securitization for infrastructure and public sectors is still developing (The EBA Report on Synthetic, 2015).

3. Asia: Limited Growth with Significant Potential

Securitization in Asia began in the early 1990s but expanded more widely in the 2000s. Countries like Japan, South Korea, and China used securitization for housing, vehicle, and infrastructure financing. Japan's securitization market grew with government support, while South Korea saw rapid growth, particularly in ABS for consumer credit and mortgage loans. However, Asia faces challenges such as limited regulation and market infrastructure, especially in China, where the securitization regulatory framework remains underdeveloped, and in India, where there is a lack of understanding of the mechanisms and risks involved (Jobs, 2008).

4. Securitization in Developing Countries

In developing countries, securitization has grown slowly, though it holds significant potential for financing large projects. In Brazil, securitization is used for public infrastructure projects, while in Mexico, it finances housing. Developing countries often rely on government-backed securities to stimulate securitization growth but face barriers such as underdeveloped regulations and limited market understanding of securitization. In Portugal, the 1999 Securitisation Law allowed companies to secure financing through asset-backed securitization, though it has been amended to address transparency and effectiveness issues. Similarly, in Spain, securitization has been used to finance infrastructure and real estate through Royal Decree 926/1998, which, despite limiting the types of assets eligible for securitization, has facilitated rapid development in public financing.

2.2.6 Risk Aspects of Securitization

One major risk in securitization is credit risk, which remains even after many risks are transferred to investors. This is particularly evident in securitization products with residual interest, where the final payments heavily depend on the performance of the underlying assets (Gorton & Metrick, 2012). Market and liquidity risks are also common, especially in underdeveloped securitization markets or during times of high economic uncertainty.

Risk management in securitization depends on the quality of the underlying assets and the structure of the transaction, including tranche arrangements and the use of credit enhancement to improve the credit quality of the securitization. As a result, in many countries, supervisory bodies and regulators such as Basel II and Basel III have introduced specific rules for securitization, defining how risks should be managed and how capital should be allocated to maintain market stability.

2.2.7 Tax Treatment of Securitization

Taxes on financial instruments significantly impact the development financial markets. They affect decisions on consumption, savings, and investment, influencing savings rates, demand for financial assets, and investment. Higher tax rates on stocks compared to bonds lead companies to favor debt over equity financing, making their capital structure more debt-heavy. Different tax treatments on bonds and bank deposits also impact competition between financial institutions. In some countries,

favorable tax treatments for long-term savings have boosted pension and mutual funds, reshaping the financial industry.

Tax authorities focus on protecting state revenue, while financial regulators aim to build a liquid, integrated capital market and support a tax system that doesn't hinder savings and investment. A tax system should align with market development principles while adhering to tax rules. Tax neutrality minimizes market distortions, ensuring efficiency and preventing fragmentation. Fragmentation occurs when different tax treatments are applied to transactions with the same economic outcome, including double taxation. Governments should design tax regimes that treat various capital structures and income equally, regardless of the investment type or location.

The core principle in securitization tax treatment is tax neutrality, meaning securitization should not create additional or accelerated tax obligations. However, in practice, securitization transactions may incur tax costs. It's important for these costs to be clear upfront, allowing the originator to evaluate them against the commercial benefits. Certainty regarding the tax burden for the issuer is essential to avoid unexpected tax liabilities.

3. Methodology

3.1. Empirical Design

This study adopts a mixed-method approach, combining both qualitative and quantitative analysis to gain a comprehensive understanding of the development of asset securitization in banking as a financing instrument. Qualitative analysis is conducted through focus group discussions (FGD) and case studies on Asset-Backed Securities (ABS) issued in Indonesia. Meanwhile, quantitative analysis is carried out using descriptive statistical techniques to evaluate trends, market structure, and characteristics, including investor profiles, underlying asset types, and issuance volume dynamics.

3.2. Data

This study uses both primary and secondary data gathered through quantitative and qualitative approaches to analyze the potential and challenges of asset securitization in Indonesia. Quantitative data is sourced from official channels, covering characteristics of Asset-Backed Securities (ABS), investor profiles, and indicators related to development financing. Qualitative data is obtained through case studies and Focus Group Discussions (FGD) with key stakeholders, including authorities, market participants, and securitization issuers.

3.3. Methodology

This study adopts a mixed-method approach to gain a deep understanding of the potential and effectiveness of asset securitization in banking as a financing instrument. The approach examines both the structure and dynamics of the securitization market, as well as institutional and regulatory challenges in Indonesia. Quantitative analysis uses secondary data on Asset-Backed Securities (ABS) products, including issuance value, coupon rates, ownership composition, and credit rating changes over time. It also analyzes the composition of investors in debt instruments such as ABS, MTN, and corporate bonds, covering both domestic and foreign investors. Descriptive statistical techniques, including ownership proportion analysis, year-on-year trend analysis, and correlation identification, are used to study financing patterns and long-term credit growth, especially in housing and infrastructure sectors.

Qualitative analysis focuses on case studies to explore the application of securitization products in Indonesia, such as those based on digital income (e.g., ShopeePay) and infrastructure assets (e.g., Jasa Marga). This analysis examines transaction structures, credit enhancement mechanisms, and implementation challenges. Additionally, Focus Group Discussions (FGD) with key stakeholders, including regulators, underwriters, investment managers, and market participants, are conducted to explore perceptions on risk, return, and policy implementation affecting the securitization market.

3.4. Research Framework

This study is based on the framework that asset securitization is a mechanism to expand development financing sources by transforming illiquid assets, such as mortgage loans, infrastructure receivables, and future income streams, into tradable financial instruments. Through securitization, financial institutions, particularly banks, can enhance capital efficiency, expand intermediation capacity, and transfer credit risk to investors without directly increasing balance sheet liabilities.

Structurally, asset securitization involves several key actors: the originator, who owns the underlying assets; the Special Purpose Vehicle (SPV), a bankruptcy-remote entity; investors, who purchase securities; and supporting parties such as arrangers, rating agencies, collection agents, and legal consultants. Each entity plays an interdependent role in ensuring the transaction's feasibility, product credibility, and compliance with legal and regulatory requirements. The complexity of relationships among these actors is a central focus in the analytical framework of this research.

In Indonesia, the development of the securitization market faces challenges such as the lack of an active secondary market, a limited investor base, and uncertainty in accounting and regulatory treatment of true sale transactions and credit risk. Additionally, limited fiscal incentives and the suboptimal integration of capital market policies and the financial system pose further obstacles. This framework is used to assess not only the technical effectiveness of transaction structures but also the institutional and policy factors affecting the feasibility of securitization products in the domestic market.

The study focuses on three main areas:

- **Securitization Structure:** How transaction structures affect market appeal and stability.
- **Market Performance:** Analyzing the development of the securitization market, investor participation, and secondary market liquidity.
- **Regulation and Policy:** Assessing how regulations and fiscal policies (such as POJK and tax incentives) support securitization as an efficient financing instrument.

4. Results / Analysis

4.1. Development of Securitization in Various Countries

Currently, the securitization market is growing not only in the United States but also in Europe and Asia. Europe is the second-largest continent in terms of outstanding volume and issuance of securitization products.

4.1.1 Development of Securitization in Europe

In the past two years, the issuance of Asset-Backed Securities (ABS) in Europe has significantly increased. In 2024, ABS issuance reached EUR 244.9 billion, a

14.9% increase from EUR 213.3 billion in 2023. Residential Mortgage-Backed Securities (RMBS) dominate the collateral for ABS issuance and outstanding volume, accounting for 46.8% of total ABS outstanding in 2024. The UK had the largest ABS outstanding in 2024, with EUR 226.4 billion, or 18.5% of Europe's total. RMBS also dominated the UK market, making up 60.6% of its total outstanding at EUR 137.2 billion (as shown in Appendix A.1 & A.2).

4.1.2 Development of Securitization in US

Similar to Europe, ABS issuance in the U.S. is dominated by MBS, which totaled USD 1,595 billion, making up 80% of total securitization issuance in 2024, as shown in Appendix A.3 & A.4. The U.S. MBS market is split into two categories: agency MBS, which are issued or guaranteed by government or quasi-government entities like Fannie Mae, Freddie Mac, and Ginnie Mae, and non-agency MBS, which are issued by private entities without government backing. Agency MBS typically have higher credit ratings due to government support, while non-agency MBS are based on loans that may not meet institutional standards. The secondary MBS market in the U.S. is also dominated by agency MBS, with an average daily trading volume of USD 309 billion, a 21.6% increase from USD 254.7 billion in 2023.

4.1.3 Development of Securitization in Canada

The Canadian government actively supports mortgage securitization through the Canada Mortgage and Housing Corporation (CMHC), which guarantees payments on Mortgage-Backed Securities (MBS) issued by verified financial institutions. This allows banks to pool eligible residential mortgages, converting them into tradable securities and creating a sustainable financing cycle by using MBS sales proceeds to fund more mortgages. Securitization in Canada is based on two main complementary programs: NHA Mortgage-Backed Securities (NHA MBS) and Canada Mortgage Bonds (CMB). These programs allow financial institutions to transfer mortgage risk to investors while CMHC guarantees payments, ensuring market stability. CMHC plays a key role in managing systemic risk by guaranteeing timely principal and interest payments to MBS holders.

NHA MBS involves pooling insured mortgages and issuing MBS backed by CMHC guarantees. The cash flows from mortgage payments are passed directly to MBS holders, after management fees are deducted. The MBS typically have a high credit rating (AAA/Aaa). The CMB program, issued by the Canada Housing Trust (CHT), provides additional liquidity by using funds raised from CMB bonds to purchase eligible NHA MBS. CMB bonds offer access to international bond markets for Canadian financial institutions, have a AAA rating, and are tax-free for non-resident investors, making them attractive globally. As of December 31, 2023, CMHC reports that the value of guarantees for CMB and NHA MBS reached CAD 508 billion (as shown in Appendix A.5) demonstrating the effectiveness of a well-governed state intervention in creating a reliable, sustainable securitization market that strengthens the domestic financial system.

4.1.4 Development of Securitization in Japan

In Japan, mortgage securitization began with the Government Housing Loan Corporation (GHLC), later restructured into the Japan Housing Finance Agency (JHF) in 2007. JHF shifted from direct lending to facilitating long-term financing by purchasing mortgage portfolios and issuing Residential Mortgage-Backed Securities (RMBS). These securities, guaranteed by JHF, are vital for the housing market. As shown in Appendix A.6, despite a decline in issuance volumes, the market remains active, with new issuances planned for April 2025.

Japan's securitization market includes JHF MBS and Tokutei Mokuteki Kaisha (TMK). JHF purchases mortgages, creates MBS, and guarantees payments, ensuring high credit ratings. The pass-through mechanism directs mortgage payments to MBS holders. TMK structures securitize a range of assets, including mortgages, corporate debt, and receivables, with credit enhancements to reduce risk. The Japanese government promotes securitization with pass-through principles, ensuring transparency and reducing double taxation. The Financial Services Agency (FSA) oversees compliance, ensuring market stability. Japan's stable RMBS market and strong government support underscore the importance of governance and transparency in maintaining investor confidence.

4.1.5 Development of Securitization Instruments as Monetary Operations Instruments

Internationally, tax neutrality is a core principle in securitization, ensuring that tax burdens are applied to investors rather than to SPVs or trusts. Various jurisdictions have designed tax systems to differentiate between income taxes on entities and investors, cross-border withholding, and indirect taxes on securities transactions to maintain transaction efficiency.

In Canada, the Canada Housing Trust (CHT) issues Mortgage-Backed Securities (MBS) with clear tax implications for non-resident investors. MBS interest is exempt from non-resident withholding tax, crucial for global investors (Bonds & Lynch, 2025). Indirect taxes on financial services are generally exempt, but services like management and arranging are taxable under GST/HST, ensuring tax efficiency and transparency in securitization structures.

In Japan, trusts are typically pass-through entities, with tax applied to the beneficiaries, avoiding double taxation (Nagashima Ohno & Tsunematsu, 2024). The Tokutei Mokuteki Kaisha (TMK) structure, a special-purpose vehicle, is subject to domestic tax but can use dividends paid deduction (DPD) to shift tax to investors. Japan also offers tax exemptions for non-residents holding bonds through book-entry systems (QFI/JASDEC).

In the U.S., Real Estate Mortgage Investment Conduits (REMICs) are structured to avoid entity-level tax, with income taxed at the stakeholder level if qualifying conditions are met. The Portfolio Interest Exemption (PIE) provides tax relief on interest paid to non-residents, promoting cross-border investment in MBS (Gorton & Metrick, 2012).

The U.K. has a permanent tax regime for securitization companies, taxing only retained profits, ensuring tax neutrality at the entity level. For cross-border transactions, interest payments on quoted Eurobonds are exempt from withholding tax (HMRC Corporate Finance Manual).

In Singapore, the GST Act differentiates between financial instruments and supporting services. Financial instruments, such as bond issuance, are exempt from GST, while services like arranging and advisory are taxable, with provisions for input-tax recovery in securitization structures.

4.1.6 Tax Treatment of Securitization in Different Countries

International practices generally prioritize tax neutrality in securitization, where taxes are applied to the ultimate beneficiaries based on cash flow characteristics (interest/dividends) rather than to the SPV/trust itself. Different jurisdictions have established specific tax regimes for entities and investors, addressing withholding tax obligations for cross-border investors and indirect taxes on financial instrument sales and supporting services to keep transaction costs efficient and predictable.

In Canada, mortgage securitization through Canada Mortgage Bonds (CMB) and National Housing Act MBS (NHA MBS) involves clear tax rules, with non-resident investors exempt from Canadian withholding tax and capital gains tax on bond sales (Bonds & Lynch, 2025). Similarly, Japan's tax regime for trusts is designed as pass-through, avoiding double taxation, while Tokutei Mokuteki Kaisha (TMK) entities use dividends paid deduction (DPD) to reduce fiscal profit tax and shift the tax burden to investors. Japan also offers tax exemptions for non-residents holding bonds under specific book-entry procedures.

In the United States, Real Estate Mortgage Investment Conduits (REMIC) are treated as pass-through entities for tax purposes, ensuring no tax at the entity level as long as requirements are met. The U.S. also provides a Portfolio Interest Exemption (PIE) for non-resident investors on certain portfolio interest, exempting withholding tax under specific conditions.

The UK has a permanent regime for securitization companies under The Taxation of Securitisation Companies Regulations 2006 (TSCR), which taxes SPVs only on residual profits, ensuring tax neutrality. Similarly, Singapore's GST Act classifies financial services as exempt supplies, but fees for facilitating these services are taxable, ensuring clarity in the tax treatment of securitization-related transactions.

4.2. Asset Securitization as a Form of Financial Market Deepening

Asset securitization plays a key role in deepening financial markets, particularly in emerging economies aiming to build market-based financial intermediation. By converting illiquid long-term assets such as mortgages, consumer receivables, and infrastructure project payments into tradable securities, securitization enhances liquidity, risk distribution, and market efficiency. It addresses limitations in banking intermediation and strengthens financial system stability, provided there is a robust governance framework.

Securitization also opens new investment channels for institutional and retail investors, offering fixed-income instruments with measured risk profiles. Asset-Backed Securities (ABS) diversify financial products, support secondary market development, and enrich market infrastructure, including rating agencies and trading platforms. As noted by the World Bank (2021), when applied prudently, securitization can help finance priority sectors like housing, education, and SMEs, which face credit access constraints due to limited banking capital. This positions securitization as part of inclusive finance and sustainable development strategies.

However, the effectiveness of securitization in deepening financial markets depends on institutional and regulatory infrastructure that ensures transparency, accountability, and risk mitigation. The 2008 global financial crisis highlighted that without adequate reporting standards and risk structures, securitization can lead to systemic instability. Therefore, modern approaches emphasize mechanisms like skin-in-the-game, regular performance disclosures, and risk-based oversight. A well-governed securitization system can act as a pillar for a stable and adaptive financial market. In Indonesia, strengthening securitization instruments as part of the national development financing mix will be crucial for the future of the financial market.

Bank Indonesia plays a strategic role in creating a stable and efficient financial ecosystem. By supporting the development of secondary markets for asset-backed instruments, Bank Indonesia aims to enhance policy transmission, expand funding access, and improve financial system resilience. The development of secondary securitization markets aligns with Indonesia's financial stability goals as outlined in the Financial Sector Development and Strengthening Act (UU P2SK). With active

secondary market instruments, investor participation in development financing increases, offering clear exit strategies and reducing reliance on direct budget financing. Securitization markets also contribute to financial system resilience by redistributing risks to institutional investors more equipped to manage them.

4.3. Potential of Securitization in Indonesia

4.3.1 Condition of the Financial Market in Indonesia

Indonesia's financial market has shown positive growth, with improvements in product offerings, market participants, pricing, and infrastructure. The money market has seen significant growth, with repo transactions increasing 30-fold, from IDR 500 billion in 2020 to IDR 15 trillion in 2025 (as shown in Appendix A.7). Repo transactions are secure, backed by underlying securities.

Bank Indonesia has introduced the compounded *INDONIA* and *INDONIA* index to replace *JIBOR*, which will be phased out by January 2026. The money market has also advanced through the establishment of *APUVINDO*, a self-regulatory organization that collaborates with Bank Indonesia. Additionally, Bank Indonesia is implementing the *Main Dealer PUVA* in May 2024, further consolidating market participants and supporting monetary policy operations.

The development of financial infrastructure is reflected in the authorization of *PT LSEG Transaction Services Indonesia* and *PT Antara Elektronik Transaksi Pratama* as transaction facilitators, and *PT Kliring Penjaminan Efek Indonesia (KPEI)* as the Central Counterparty (CCP) in 2024. Moreover, Bank Indonesia and eight banks have injected capital to strengthen the *CCP-PUVA*, enhancing the stability of the market.

Bank Indonesia's *Blueprint for the Development of the Money Market (BPPU 2025)* and the new *Blueprint for the Deepening of the Money Market (BPPU 2030)* aim to accelerate repo market development. The expansion of repo types, participants, and underlying securities will diversify financing sources and drive economic growth.

Concept of Securitization and Its Development in Indonesia

In Indonesia, asset securitization is regulated under various Financial Services Authority (OJK) regulations. The concept of *Efek Beragun Aset (EBA)* is used, with two main forms: *EBA-SP* and *KIK-EBA*. *EBA-SP* is limited to residential mortgages (KPR) for purchasing ready-to-occupy homes, while *KIK-EBA* can securitize a wider range of assets such as building leases, consumer receivables, and renovation loans. Each instrument has different characteristics regarding liquidity, legal protection, and risk structure, which require alignment with investor profiles.

Pricing of EBAs is based on discounted future cash flows from underlying assets, considering asset quality, ratings, coupon rates, and market liquidity. The issuance process involves several parties, including originators, issuers (like *SMF* for *EBA-SP*), investment managers, custodians, servicers, trustees, and rating agencies. The key to successful issuance lies in clear governance and roles.

For the infrastructure of EBA issuance, trading platforms, clearing and settlement systems, and custodians play crucial roles. The *Bursa Efek Indonesia (BEI)* provides trading facilities, while *KPEI* and *KSEI* manage clearing and settlement, ensuring transparency and compliance with regulations. The *C-BEST* system in *KSEI* supports the secure, electronic management of EBA ownership and transactions.

As shown in Appendix A.8, the EBA market in Indonesia is still developing, with outstanding EBA securities reaching IDR 4.2 trillion (0.04% of total outstanding

securities in 2025). While EBA-SP is suitable for housing finance, the limited issuance and regulatory complexity present challenges for scaling this financing option.

4.3.2 Potential of Securitization in Indonesia

1. Mortgage Loans (KPR)

Kredit Pemilikan Rumah (KPR) presents significant potential as an underlying asset for asset securitization due to its long-term stability and predictable cash flows. As of April 2025, total KPR disbursed by banks reached IDR 803.86 trillion, growing 8.49% year-on-year (As shown in appendix A.9), with KBMI 3 banks holding 61% of the market share (as shown in Appendix A.10). KPR loans with longer tenures (>3 years) also grew 8.51%, representing 99.41% of the total.

PT Sarana Multigriya Finansial (SMF), a state-owned enterprise under the Ministry of Finance, plays a key role in optimizing KPR as an underlying asset by purchasing KPR receivables from banks and securitizing them into Efek Beragun Aset-Surat Partisipasi (EBA-SP) for institutional investors. SMF ensures the quality of KPR receivables and enhances their credit rating through structuring, subordination, overcollateralization, and cash reserves.

However, banks are reluctant to sell KPR receivables due to concerns over losing long-term interest income, insufficient regulation, and the high cost and complexity of issuance. Selling KPR receivables results in a loss of future interest income, impacting profitability, particularly if the Net Interest Margin (NIM) is high. Additionally, banks' liquidity conditions, as reflected in the high AL/DPK ratio of top KPR distributors 18.44% (as shown in Appendix A.11), discourage seeking additional funding sources.

2. Credit Cards

Credit cards, as revolving short-term credit, generate stable, predictable cash flows and offer high risk diversification due to diverse cardholder demographics. They are managed through risk mitigation techniques like credit scoring and real-time monitoring, making them ideal for securitization.

However, risks include deteriorating payment performance and early amortization, which can disrupt cash flow structures, as seen with NextBank. Additionally, asset quality declines may lead to rating downgrades, as experienced by First Consumers Credit Card Trust. In Indonesia, despite an 8.9% annual growth, credit card NPLs exceeded 2% in 2025. Investor participation is limited due to unsecured credit risk.

Credit card securitization has grown in the U.S. since the 1980s, with active markets in Western Europe and East Asia. In Indonesia, however, it is still in its early stages, with challenges in legal infrastructure, SPV regulations, and a limited investor market.

3. Motor Vehicle Loans (KKB)

Motor Vehicle Loans (KKB) have significant potential as an underlying asset for asset securitization in Indonesia. As of May 2025, total KKB disbursed reached IDR 142.72 trillion, growing 5.15% year-on-year (as shown in Appendix A.12). Banks in the KBMI 4 group dominate the market, holding 55% of the total KKB portfolio.

KKB loans are typically long-term (3-5 years) and secured by vehicles, which provides high liquidation value, offering additional protection against credit risk in securitization. With a low non-performing loan (NPL) rate of 1-2%, KKB is a stable and predictable cash flow asset (as shown in Appendix A.13 & A.14).

Globally, KKB has been securitized in markets like the U.S. through Auto Loan ABS by major institutions such as Ford Credit and GM Financial. China, Japan, and Australia have also developed vehicle financing and credit securitization, incorporating digital technologies like blockchain and big data for efficiency and transparency.

According to S&P Global Ratings (2020), KKB has strong prospects, especially in the context of global automotive financing transformation. New financing models, such as for electric vehicles and short-term leasing, are gaining attention. While Indonesia has significant opportunities, strengthening market infrastructure and regulations is key for successful KKB securitization.

4. Micro, Small, and Medium Enterprise (UMKM) Loans

UMKM loans are key assets for securitization, providing stable, periodic cash flows and risk diversification across sectors. However, most are unsecured or have flexible collateral, requiring strong risk management through credit scoring, feasibility analysis, and monitoring.

In Indonesia, UMKM loans reached IDR 1,500 trillion by May 2025, though growth slowed to 2.17% YoY due to rising risks (as shown in Appendix A.15). Challenges to securitizing UMKM loans include poor financial reporting standards, information asymmetry, and volatility in cash flows, affecting investor confidence (as shown in Appendix A.16).

Globally, UMKM loan securitization supports financing access and financial stability. In the U.S., it strengthens income stability, redistributing regional risks (Board of Governors of the Federal Reserve System, 2021). In India, it helps shift credit risk to investors, improving capital allocation (Reserve Bank of India, 2021), while in China, it supports macroprudential goals and inclusive financing (PBOC Annual Report, 2022).

In Indonesia, UMKM loan securitization is underdeveloped, with challenges like limited credit data infrastructure, unclear asset quality standards, and inadequate investor incentives.

4.3.2 Potential of Securitization in Indonesia

Regulations and Provisions on Securitization in Indonesia

1. Applicable Regulatory Framework

There are two main types of securitization recognized in Indonesia:

- **Asset-Backed Securities** - Surat Partisipasi (EBA-SP): Regulated by POJK No. 23/POJK.04/2014 and POJK No. 20/POJK.04/2017, these guidelines provide mechanisms for issuing EBA-SP, focusing on residential mortgages. EBA-SP must meet asset quality criteria, including performing loans and compliance with the true sale principle, and regular reporting to OJK.
- **Kontrak Investasi Kolektif** - Efek Beragun Aset (KIK-EBA): Under POJK No. 65/POJK.04/2017, KIK-EBA allows greater flexibility, enabling securitization of various asset types such as mortgages, vehicle loans, credit card receivables, and MSME financing. This provides a broader asset base for securitization compared to EBA-SP.
- **Special Purpose Vehicle (SPV) and Trusts**: The Financial Sector Development and Strengthening Law (P2SK) allows the creation of SPVs and Trusts, which could replace roles in securitization structures, though detailed regulations on their operation are still pending.

2. Additional Provisions Affecting Securitization

Several provisions influence the issuance and attractiveness of asset securitization:

- **Maximum Credit Exposure (BMPK):** POJK No. 38/POJK.03/2019 limits bank exposure to one party or related group, potentially restricting banks from holding large amounts of EBA.
- **Liquidity Coverage Ratio (LCR):** According to POJK No. 42/POJK.03/2015, EBA is classified as HQLA Level 2B for residential mortgages, with a cap of 15% of total HQLA, potentially limiting banks' willingness to hold large amounts of EBA.
- **Taxation:** Income from EBA-SP and KIK-EBA is subject to income tax, set at 5% until 2020, and 10% from 2021 onwards (PP No. 55/2019). This taxation reduces the yield, leading to increased competition with other investment instruments.

For more details, Appendix A.17 provides the Table on Regulations Related to Asset Securitization in Indonesia.

4.4. Potential of Securitization in Indonesia

The asset securitization market in Indonesia remains underdeveloped and faces several challenges, including technical, operational, regulatory, and market-related issues. One major challenge is credit risk mitigation. Despite transferring this risk to arrangers and attaching it to underlying assets, investors often question the credibility of these structures and whether their investments will be honored. Legal frameworks also raise concerns about the prioritization of claims and the ability of investors to claim future income from these assets.

Liquidity risk is another challenge, as transactions are typically conducted over the counter (OTC), limiting transparency in pricing and the ease of transferring ownership. This makes it difficult for investors to evaluate the market or select investments efficiently. Additionally, pricing is often influenced by market conditions, with little differentiation between long- and short-term instruments.

Despite these challenges (shown in Appendix A.18), securitization offers significant potential for financing and investment diversification. Addressing these issues requires collaboration among arrangers, issuers, and investors, along with stronger regulatory support. A transparent structure and reliable legal frameworks will improve market liquidity and investor confidence, driving the growth of the securitization market.

4.4.1 Originator Challenges

1. Banks' Reluctance to Sell Quality Assets as EBA Underlying Assets

Currently, assets used as underlying for EBA-SP are of high quality, such as performing mortgages (KPR), which must meet strict criteria from the Otoritas Jasa Keuangan (OJK) and receive a high credit rating (idAAA) from PT Pemeringkat Efek Indonesia (PEFINDO). Despite the benefits, banks are reluctant to sell these quality assets due to a lack of high-quality assets to replace them in the market. Some originators, like Bank Mandiri and BTN, propose non-true sale or hybrid EBA issuance to retain asset ownership, but this approach shifts the credit risk to the originator.

2. High Issuance Costs

The stringent regulations and requirements for originators and issuers, as well as the involvement of various professionals such as trustees, custodians, accountants, and rating agencies, lead to higher costs for EBA issuance compared to other asset classes like corporate bonds or medium-term notes (MTNs).

3. Low Investor Interest in Securitization Instruments

Despite offering higher yields than traditional investments, investor interest in EBA remains low (as shown in Appendix A.19 & A.20). Many institutional investors prefer more stable, liquid, and easily understood instruments like corporate bonds or government debt, which poses a challenge for the growth of the securitization market.

4.4.2 Arranger Challenges

1. Lack of Regulations on Special Purpose Vehicle (SPV) or Financial Instrument Management Entity (BPIK)

The absence of regulations regarding the establishment of SPVs/BPIK, as mandated by the Financial Sector Development Law (UU PPSK), creates uncertainty about who qualifies as an SPV and its operational role, including whether PT SMF can be classified as one.

2. High Issuance Costs

The costs of issuing EBA are higher than other asset classes due to stringent regulations, involving multiple parties like custodians, legal consultants, and rating agencies, leading to expensive processes compared to bonds or MTNs.

3. Limited Investor Interest

Investor interest in EBA is limited due to its complexity, which requires a deep understanding of asset risks and tranche structures, making it less attractive compared to simpler instruments like corporate bonds. As a result, securitization instruments are primarily favored by institutional investors, including pension funds, insurance companies, banks, and financial firms, who possess the expertise to assess risks, understand trends in the domestic financial market, and manage liquidity needs over longer periods (as shown in Appendix A.21).

4. Illiquid Secondary Market

The average, median, highest, and lowest closing prices for EBA products have consistently remained stable at a recorded level of 1.00 across all categories, indicating minimal price fluctuations and low volatility as shown in Appendix A.22). However, the lack of liquidity in the secondary market has made investors hesitant, as they are uncertain about their ability to sell the instrument when needed. Additionally, the absence of transparency and a lack of understanding of EBA further discourage investor participation.

5. Complex and Costly Securitization Process

The complex process of securitization, including due diligence, structuring, and legal documentation, increases costs and delays issuances (as shown in Appendix A.23). The need for asset validation further adds to expenses, reducing its attractiveness, especially for smaller banks.

4.4.3 Investor Challenges

1. Limited Understanding of Risk & Return in Securitized Asset Products

Currently, EBA investors are primarily corporations and insurance companies, with retail investors and securities firms accounting for just 2% (as shown in Appendix A.24 & A.25). This low proportion is due to a lack of awareness regarding the features of EBA, such as its high yield and AAA rating. Despite a significant increase in retail investors, from 3.8 million in 2020 to 16.2 million SID in April 2025 (a 426% increase), the number of EBA investors remains stagnant. Additionally, many investors are unaware of the risks associated with EBA, particularly prepayment risks. The early repayment of mortgages may result in returns lower

than expected. To mitigate this risk, investors need to reinvest their holdings in other assets to achieve their desired returns. This highlights the need for enhanced financial literacy to deepen the EBA market, both in primary and secondary markets.

2. Limitations on Banks' Ability to Increase EBA Holdings

Banks face limitations on EBA purchases due to the Maximum Credit Limit (BMPK) regulation. According to POJK No. 38/POJK.03/2019, EBA purchases count towards credit exposure, and the process of identifying underlying assets increases operational risks and costs. As a result, banks limit their EBA purchases. As shown in Appendix A.26, based on core capital calculations for KBMI banks, the potential EBA-SP purchase by banks is Rp4.7 trillion, with KBMI 4 banks accounting for Rp2.2 trillion. However, current EBA holdings are only Rp56 billion, or 1.2% of the potential. To encourage greater ownership, regulatory relaxation is needed to deepen the secondary EBA market. Additionally, establishing an explicit government-backed guarantor for MBS would make EBA more attractive for investment. If PT. SMF, the current EBA-SP issuer, were to act as an explicit guarantor (similar to Ginnie Mae in the US), EBA would be classified as a government-backed asset, which would not count towards BMPK, providing greater investor confidence and making it a high-quality liquid asset (HQLA) with lower tax burdens.

4.5. Strategy

4.5.1 Product

In Indonesia, various Asset-Backed Securities (EBA) products have been issued, with varying transaction structures and underlying assets, including housing loans, commercial receivables, and future project income. As of February 2025, the average issuance of these securitized products reached IDR 13.48 trillion, with IDR 8.63 trillion in outstanding securities. The market for EBA is dominated by investment institutions and financial organizations, with a large share held by banks. The underlying assets for most EBAs consist primarily of high-quality housing loans (KPR), which meet the required standards for issuance and are rated AAA.

Despite this, EBA instruments face significant challenges in attracting investors, mainly due to limited liquidity in the secondary market. The absence of an active secondary market hampers investor confidence and creates a "hold-to-maturity" situation, reducing flexibility. This liquidity issue, along with complex securitization structures, has contributed to a stagnation in new EBA issuances, with only one new product issued in 2024 and none in 2025, as of the first quarter (as shown in Appendix A.27). This decline signals a lack of sustained investor interest, despite the potential of underlying assets in sectors like housing and infrastructure.

In Appendix A.28, shown the decline in EBA issuances contrasts with the more stable growth of other securitization instruments such as EBUS. EBA has not managed to gain consistent market acceptance, largely due to its complexity compared to simpler products like EBUS, which are easier to understand and carry clearer, more predictable risks for investors. This disparity highlights the need for improvements in liquidity and market transparency to encourage wider adoption of EBA as a financing alternative.

4.5.2 Pricing

The pricing of EBA instruments is influenced by various factors such as the risk of underlying assets, transaction structure, costs involved in securitization, and market perception of liquidity. Data on EBA issuances since 2016 shows that these products offer competitive coupons.

1. Coupon and Yield Analysis of EBA Products

Most EBA products in Indonesia offer coupons ranging from 6.5% to 9.75%, which are relatively higher compared to government bonds (SUN). However, EBA products tend to be less popular among investors compared to EBUS or SUN, which offer lower yields. Despite offering coupons in the range of 8.5% to 9.5% in 2024 and 2025, the volume of new issuances has decreased compared to EBUS products.

Comparing EBA products with subordinated bonds, the cash flows offered by both instruments are different. EBA products tend to have decreasing cash flows over time, as the remaining principal decreases along with the reduction in the remaining loan balance and interest income for investors. This is typically seen in mortgage-backed securities (KPR). Although the coupons offered are higher at the beginning, the value received by investors decreases over time due to declining cash flows from the underlying assets.

In contrast, subordinated bonds offer relatively stable cash flows over time, as they provide fixed interest payments with more predictable risk profiles. Subordinated bonds deliver consistent returns to investors, although at relatively lower yields compared to instruments like EBA. This difference in cash flow patterns is key to understanding the nature of both securitized instruments and debt securities, making it an important consideration for investors when choosing an investment that aligns with their risk profile and return expectations.

2. Impact of Securitization Structure on Pricing

The transaction structure in EBA securitization also affects the pricing of the product. As an instrument involving SPVs, tranches, and asset transfer risks, the transaction costs associated with EBA securitization tend to be higher than other financing products. Costs related to transaction design, due diligence, and rating agency fees must be incorporated into the pricing of the securitized instrument. Additionally, more complex tranche structures, such as subordinated tranches, make this instrument riskier compared to simpler instruments like EBUS, which have lower risk profiles. Investing in subordinated tranches means investors face higher risks, requiring arrangers to offer higher coupons to attract them. However, despite the higher coupons offered, liquidity issues and limited understanding make securitization instruments less appealing to investors.

4.5.3 Taxation on Securitization Transactions in Indonesia

The taxation of securitization in Indonesia is primarily influenced by the institutional status of the Special Purpose Vehicle (SPV), which is represented by the Collective Investment Contract (KIK). The regulation of KIK under Indonesian tax law impacts the tax treatment of investment instruments. KIK is considered a legal entity for tax purposes but not a business entity under general law, as outlined in the Income Tax Law (Article 2). KIK is classified as a tax subject under the category of "other entities," which is based on the tax authority's mandate to define tax treatments independently of its legal status. The tax treatment aligns with the goal of optimizing government tax revenues (Eba & Jsmr, 2017).

KIK is also classified as a tax subject due to Indonesia's adoption of the non-transparent entity principle for partnerships. Although KIK does not meet the criteria of a partnership in Indonesia's commercial law, it is treated similarly to partnerships in terms of tax treatment, with both investment managers and custodians playing roles consistent with collective ownership. This tax treatment is intended to provide legal certainty for tax purposes. As per Article 3 of KEP-147/2003, KIK is subject to the same income tax obligations as other entities, including withholding tax. An issue related to withholding tax arises with the income received by KIK-EBA from principal repayment by the originator. According to Article 23, paragraph 4 of the Income Tax

Law, interest income paid to KIK-EBA is subject to withholding tax. However, as KIK-EBA does not qualify as a financing company, it is not eligible for exemptions granted to financial institutions under the Ministry of Finance regulations.

KIK-EBA, as a collective custodian and manager, passes on the income (principal and interest) to investors, resulting in minimal taxable income at the KIK-EBA level. This can lead to overpaid taxes when filing annual tax returns, and claiming a tax refund can be a lengthy process, which impacts the liquidity of KIK-EBA and creates ongoing tax-related issues.

Another concern is the potential for double taxation, where margin income received by KIK-EBA is taxed both at the originator level (15% withholding tax) and again at the investor level (15% final tax on fixed cash flows). This double taxation arises from the nature of the income distribution and poses a challenge to the tax efficiency of the securitization process.

The tax treatment of principal and interest payments as regulated in Government Regulation No. 55 of 2019 is considered inappropriate, as no originator has yet sold financial assets in the form of bonds as the underlying asset to KIK-EBA in Indonesia. While possible, this practice is uncommon in the Indonesian financial market, as bonds can be issued directly by companies or the government without requiring a KIK-EBA issuer. Therefore, the specific tax treatment under this regulation is unlikely to significantly impact KIK-EBA.

4.6. Macroprudential Policy Support

As the central bank, Bank Indonesia aims to maintain financial system stability and support sustainable economic growth through macroprudential policies (Law No. 4 of 2023). These policies focus on three key areas: 1) promoting balanced, quality, and sustainable intermediation; 2) mitigating and managing systemic risk; and 3) enhancing financial and economic inclusion, as well as sustainable finance.

Bank Indonesia has at least nine macroprudential policy instruments, including the Liquidity Management Policy (LMP), the Macroprudential Intermediation Ratio (MIR), the Countercyclical Capital Buffer (CCyB), Loan to Value/Financing to Value (LTV/FTV) for mortgages and car loans, the Foreign Loan Ratio (FLR), Net Foreign Assets (NFA), the Macroprudential Liquidity Buffer (PLM), the Short-Term Liquidity Loan (PLJP), and the Macroprudential Inclusive Financing Ratio (RPIM).

In relation to EBA, macroprudential policies can be expanded to leverage EBA in supporting these three pillars. For intermediation, EBA can act as an alternative financing source, improving liquidity and expanding intermediation options for banks and the domestic market. One potential utilization is through the strengthening of the MIR, allowing EBA to be considered as a component of high-quality liquid assets (HQLA).

Regarding systemic risk mitigation, EBA can enhance bank liquidity resilience through the PLM and PLJP instruments. EBA, as a high-quality Rupiah-backed security, could be developed to serve as collateral for OM and included in the PLM. Similarly, EBA could qualify as collateral for PLJP, enabling short-term liquidity support to banks facing liquidity issues.

For financial and economic inclusion, EBA plays a role in the RPIM, encouraging credit growth, particularly to MSMEs and low-income individuals. EBA, as a high-quality security, has been included in the Inclusive Financing Securities (SBPI) component, fostering inclusive and sustainable finance. The strengthened use of EBA by banks can increase the bank's RPIM, further promoting sustainable financing for projects like infrastructure, housing, and MSMEs (more details are provided in Appendix A.28).

To strengthen macroprudential policy instruments and the use of EBA, close collaboration between ministries, regulators, and stakeholders is required to ensure the stability of the financial system. The Ministry of Finance could coordinate policies regarding the guarantee of issued securities, and the OJK could support EBA's HQLA Level 2A classification and provide exemptions from BMPK regulations. These steps will strengthen the role of EBA in financing major projects and contribute to sustainable development goals while enhancing economic competitiveness and financial system resilience.

5. Implication / Policy Recommendation

5.1. Monetary Policy Recommendations

The role of Bank Indonesia in supporting the development of the securitization market is crucial, particularly in the context of maintaining financial stability and ensuring sustainable economic growth. The following recommendations for monetary policy are designed to promote the effective use of securitization instruments, especially Efek Beragun Aset (EBA), in Indonesia.

Short-term:

To address the immediate need for enhanced market liquidity, it is recommended that Bank Indonesia focus on facilitating the absorption of high-quality corporate bonds issued by SMF. By prioritizing these bonds, Bank Indonesia can ensure efficient risk management and contribute to the stabilization of the money market. The absorption of high-quality corporate bonds will support the liquidity of originators and enhance the overall stability of Indonesia's financial system.

Long-term:

In the long term, the expansion of EBA usage should be prioritized. The flexibility to choose a diverse range of EBA instruments will be crucial in fostering a resilient financial system and supporting sustainable economic growth. By creating a more varied and inclusive range of EBA products, Indonesia can enhance its financial infrastructure, promote investment diversification, and foster long-term economic stability.

5.2. Securitization Support

Institutional Support

For institutional improvements, the creation of BPIK (Badan Pengelola Instrumen Keuangan) or Special Purpose Vehicles (SPV) is essential for enabling the smooth execution of securitization transactions in Indonesia. The government should consider taking a more active role in guaranteeing mortgage-backed securities (MBS), similar to the practices in Canada and Japan. The establishment of such an institution would ensure stability in the market and further encourage investment in Indonesian financial instruments.

Guarantees

A guarantee system, as practiced by Canada and Japan, could be implemented to mitigate the risks associated with securitization. By involving guarantee consortiums such as PT. Jamkrindo and PT. Jamkrida, Indonesia can reduce the default risks associated with asset-backed securities (ABS). The presence of a government guarantee would ensure more predictable cash flows for investors, making these securities more attractive and fostering confidence in the market.

Liquidity

To support the deepening of the financial market, Bank Indonesia has expanded its repo transactions to include high-quality assets, such as bonds issued

by SMF. This initiative directly addresses concerns regarding liquidity risk in the EBA market. By incorporating EBA as part of the High-Quality Liquid Assets (HQLA) framework, the market will benefit from greater liquidity, making EBA more attractive for investors.

Regulations

The regulatory framework must be aligned with international standards to facilitate the efficient issuance of securitization instruments. In particular, the regulations should allow for the securitization of a wider range of assets while maintaining prudent risk management practices. Clear regulations are needed to ensure that the sale of assets and the bankruptcy-remote nature of the underlying assets are legally protected.

Taxation

The taxation of securitization instruments, such as EBA, remains a significant issue. The taxation framework in Indonesia has certain ambiguities, especially concerning the treatment of margin income and double taxation. It is recommended that the government review and potentially eliminate redundant taxes on income from EBA to avoid double taxation and streamline the tax regime for these instruments.

6. Conclusion and Further Research

Development of Securitization

Securitization is no longer dominated by the United States but has expanded significantly in Europe, Canada, and Asia, including Japan. In the United States, the ABS market is dominated by Mortgage-Backed Securities (MBS), with issuance reaching \$1.595 trillion in 2024. There are two main types of MBS: agency MBS (government-backed) and non-agency MBS (private-backed). The daily trading volume in the secondary MBS market reached \$309 billion, increasing by 21.6% from 2023. In Canada, through the active role of the Canada Mortgage and Housing Corporation (CMHC), the issuance of MBS is highly liquid and credible, with total guarantees-in-force reaching CAD508 billion by the end of 2023. The Canadian government's policy to guarantee ABS products has created a stable and trusted securitization market.

Although not as large as the US, the ABS market in Europe reached €244.9 billion in 2024, up 14.9% from the previous year. Residential Mortgage-Backed Securities (RMBS) dominate both in issuance and outstanding volumes. In the UK, ABS issuance reached €226.4 billion, with 60.6% of that in RMBS, making the UK the largest holder of outstanding ABS in Europe.

In Japan, the transition from the Government Housing Loan Corporation (GHLC) to the Japan Housing Finance Agency (JHF) reshaped the country's role from a lender to a facilitator of long-term funding, boosting the issuance of RMBS. JHF purchases mortgages from financial institutions and issues fixed-rate RMBS. Although issuance has decreased in recent years, stability and credibility have remained intact, with the most recent issuance in April 2025.

Financial Market Deepening

Securitization is a vital financial innovation for deepening financial markets, especially in developing countries. By converting illiquid assets like home loans or project receivables into tradable instruments (such as ABS), securitization improves liquidity, diversifies funding, and spreads risks across sectors. It opens up access to both institutional and retail investors, strengthens secondary markets, and promotes financial infrastructure development. If implemented carefully with strong

governance, securitization can be a solution for financing priority sectors like housing, education, and MSMEs. However, its effectiveness depends on transparent regulation and governance. Lessons from the 2008 financial crisis highlight the importance of reporting standards, asset performance transparency, and the "skin in the game" principle to prevent systemic risks. Bank Indonesia plays a strategic role in promoting the development of a secondary market for asset-backed instruments, collaborating with other financial regulators to ensure financial stability. This also aligns with the mandates of the Financial Services Authority (OJK) to foster a robust and transparent secondary market, reduce reliance on the state budget, and help develop long-term financing strategies.

Securitization Potential

Indonesia's financial market continues to grow, as evidenced by the increase in transactions and strengthening of the 3P+I (product, participant, pricing, infrastructure) aspects. Repo transactions have surged from Rp500 billion in 2020 to Rp15 trillion in 2025. Bank Indonesia has also introduced the INDONIA reference rate, which will replace JIBOR by 2026. Financial infrastructure is improving with initiatives like the establishment of APUVINDO, mandatory Primary Dealer for PUVA, and the CCP-PUVA clearing system.

Indonesia has two types of EBA instruments: EBA-SP (Surat Partisipasi) and KIK-EBA (Kontrak Investasi Kolektif). While the EBA market shows promising potential, its development remains constrained by regulatory complexities and limited investor participation. Despite strong growth in underlying assets like mortgages and infrastructure, the EBA market faces challenges in liquidity, investor interest, and regulatory hurdles.

The largest potential for EBA lies in asset classes such as KPR (home loans), KKB (motor vehicle loans), and MSME credit. As of April 2025, KPR has grown steadily and contributes 37% of consumer credit, with a total of Rp803.86 trillion. Although SMF (Sarana Multigriya Finansial) frequently issues EBA-SP, challenges like reluctance from banks to sell high-quality mortgage assets and regulatory inadequacies persist.

Credit cards also offer significant potential due to stable cash flow and a diversified debtor base. However, risks such as non-performing loans (NPL) and prepayment risks may discourage investors. Similarly, motor vehicle loans (KKB) have high potential as a securitization asset, with current outstanding loans at Rp142.72 trillion.

In conclusion, Indonesia's securitization market, particularly for KPR, KKB, and MSME loans, holds substantial potential. However, to fully realize this potential, there is a need for enhanced infrastructure, regulation, investor incentives, simplified issuance processes, and a stronger secondary market for securitization instruments.

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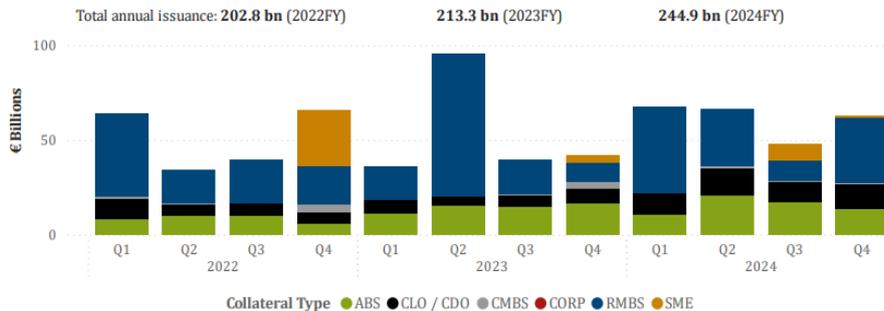
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Appendix

A.1 Securitization Issuance in Europe



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Q1	115.2	64.3	32.7	19.9	35.8	57.0	39.7	58.4	32.4	39.7	48.8	63.7	35.9	67.6
Q2	67.3	67.7	53.3	99.5	50.3	75.7	73.1	68.1	60.7	49.2	36.4	34.2	95.7	66.5
Q3	57.0	61.9	38.3	37.7	57.8	46.6	49.1	53.9	40.4	39.6	47.3	39.4	39.5	47.8
Q4	137.3	63.9	56.4	59.8	72.7	60.1	74.0	88.4	87.4	66.2	100.7	65.5	42.2	63.0
Total	376.8	257.8	180.7	216.9	216.5	239.4	236.0	268.9	220.9	194.7	233.2	202.8	213.3	244.9



Source: AFME, SIFMA, Bank of America, JP Morgan [Chart 1.2 & Chart 1.3] Non-STIS in Chart 1.2 includes CLO / CDO, CMBS and UK NC RMBS issuance which are ineligible under the STS regime.

Source: Securitisation Report 2024; Association for Financial Markets in Europe

A.2 Outstanding Securitization in Europe in 2024

All volumes in EUR bn

3.1 Total European Outstandings by Collateral Type

	2024:Q1	2024:Q2	2024:Q3	2024:Q4	2023:Q1	2023:Q2	2023:Q3	2023:Q4
Auto	71.9	75.0	79.3	76.7	78.8	78.9	79.4	74.3
Cards	26.0	25.8	25.5	25.7	24.1	24.8	25.5	25.6
CLO / CDO	235.6	241.0	248.6	260.9	217.1	218.2	223.7	228.8
CMBS	29.8	29.7	29.2	28.4	34.6	33.3	32.5	33.1
Consumer	88.1	92.9	92.9	97.2	82.7	82.8	83.1	87.5
Leases	10.6	10.6	9.8	8.9	8.8	9.6	9.3	11.9
Other	47.1	46.1	41.9	41.6	47.8	47.6	47.1	47.7
RMBS	539.0	562.3	554.4	570.1	522.5	579.1	566.5	554.3
SME ABS	114.4	102.9	107.7	108.1	118.4	119.3	115.6	117.4
Total	1162.4	1186.1	1189.2	1217.6	1134.7	1193.5	1182.6	1180.6

All volumes in EUR bn

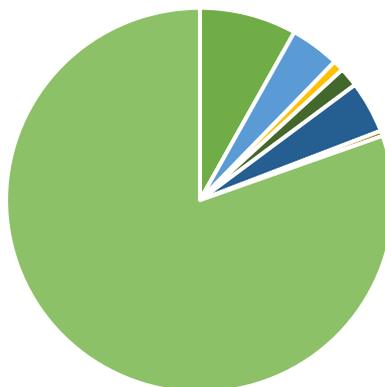
3.5 Total European Outstandings by Country and Collateral Type

2024:Q4	Auto	Cards	CLO / CDO	CMBS	Consumer	Leases	Other	RMBS	SME ABS	Total
Belgium	0.2	0.0		0.0	0.3	0.0	0.0	24.5	32.0	57.1
Eurozone	66.3	3.1		5.7	90.4	8.1	14.8	432.9	107.7	729.0
France	6.7	1.0		0.2	22.7	0.4	0.0	146.3	7.8	185.2
Germany	27.4	0.0		1.2	14.0	1.3	0.0	41.3	3.4	88.6
Greece	0.1	0.5		0.0	0.0	0.5	4.2	0.2	0.7	6.0
Ireland	0.3	0.0		0.1	0.0	0.0	1.8	30.7	0.0	32.9
Italy	13.8	0.0		0.9	38.6	4.5	6.3	31.3	30.5	126.0
Netherlands	2.9	0.0		0.5	0.6	0.0	0.0	77.6	25.3	106.9
Other Europe	3.8	0.0		0.6	1.0	0.0	0.9	0.0	0.0	6.2
Pan European	0.0	0.0	260.9	2.0	0.0	0.0	0.0	3.2	0.1	266.1
Portugal	1.6	0.7		0.0	0.8	0.0	0.8	3.7	0.0	7.7
Spain	9.4	0.9		0.1	12.5	1.4	0.8	74.4	7.9	107.3
Switzerland	1.0	0.4		0.0	0.0	0.0	0.0	0.0	0.0	1.4
UK	9.5	22.2		22.7	6.8	0.8	26.8	137.2	0.4	226.4
EU Total	66.3	3.1	260.9	5.7	90.4	8.1	14.8	432.9	107.7	989.9
Europe Total	76.7	25.7	260.9	28.4	97.2	8.9	41.6	570.1	108.1	1217.6

Source: Securitisation Report 2024; Association for Financial Markets in Europe (AFME, 2021)

A.3 Chart of ABS Issuance in the US in 2024

ABS Issuance in US Market (In USD Billion)



■ Auto ■ CDO/CLO ■ Credit Cards ■ Equipment ■ Other ■ Student Loans ■ MBS

A.4 Average Daily ABS Transaction Volume in the US

Average Daily Volume ABS Trading in US Market (in USD Billion)



Source: US Asset-Backed Securities Statistics; Securities Industry and Financial Markets Association (SIFMA)

A.5 MBS Guarantee CMHC

(in millions, unless otherwise indicated)	Total Guarantees-in-Force (\$ billion)		New Securities Guaranteed (\$ billion)		Guarantee and Application Fees Received ¹	
	2023	2022	2023	2022	2023	2022
National Housing Act Mortgage-Backed Securities (NHA MBS)	254	216	151	147	740	798
Canada Mortgage Bonds (CMB)	254	255	45	40	195	164
Total	508	471	196	187	935	962

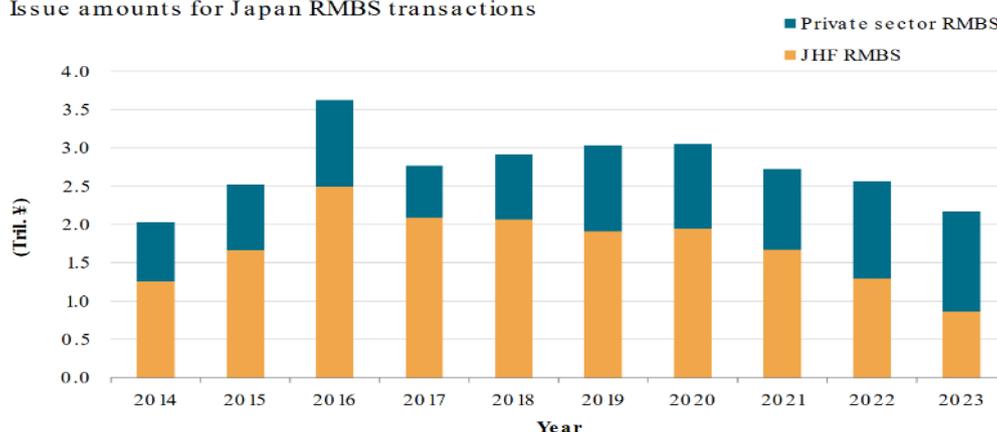
¹ Guarantee and application fees received for NHA MBS; guarantee fees received for CMB.

Source: CMHC 2023 Annual Report

A.6 RMBS Growth In Japan

RMBS issue amount decreasing with growing proportion of floating-rate loans in new loans

Issue amounts for Japan RMBS transactions

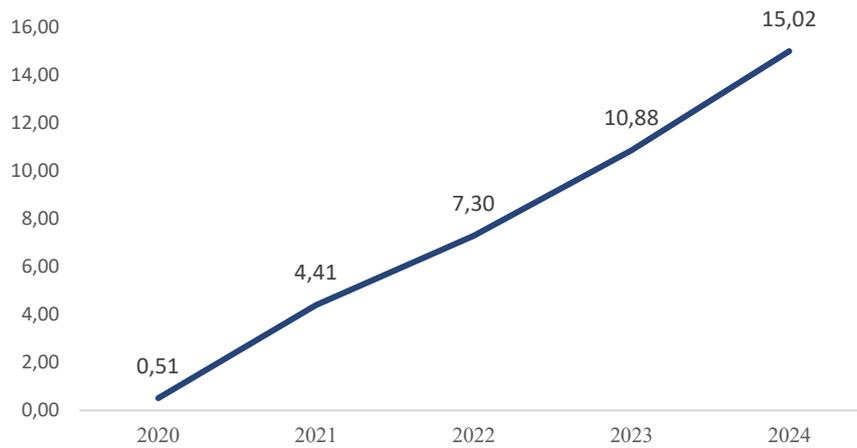


Source: S&P Global Ratings, based on publicly released materials by credit rating agencies.

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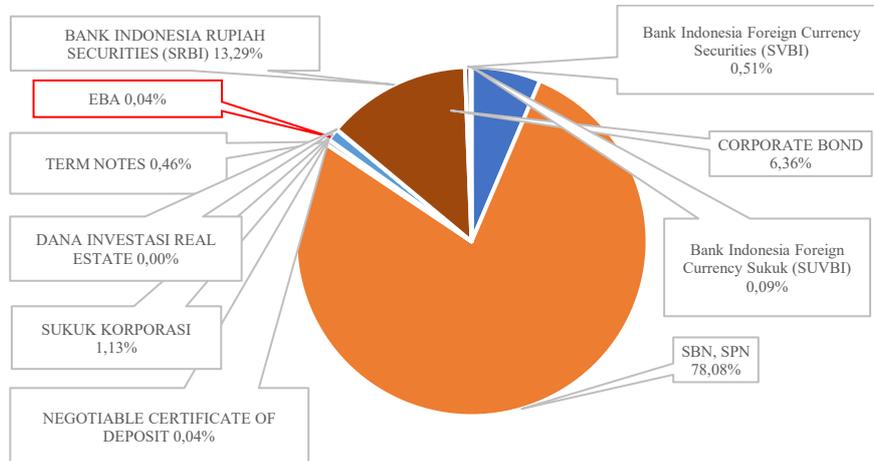
Source: S&P Global Rating

A.7 Development of Repo Transactions



Source: Hartis, processed by Bank Indonesia

A.8 Composition of Outstanding Securities 2025



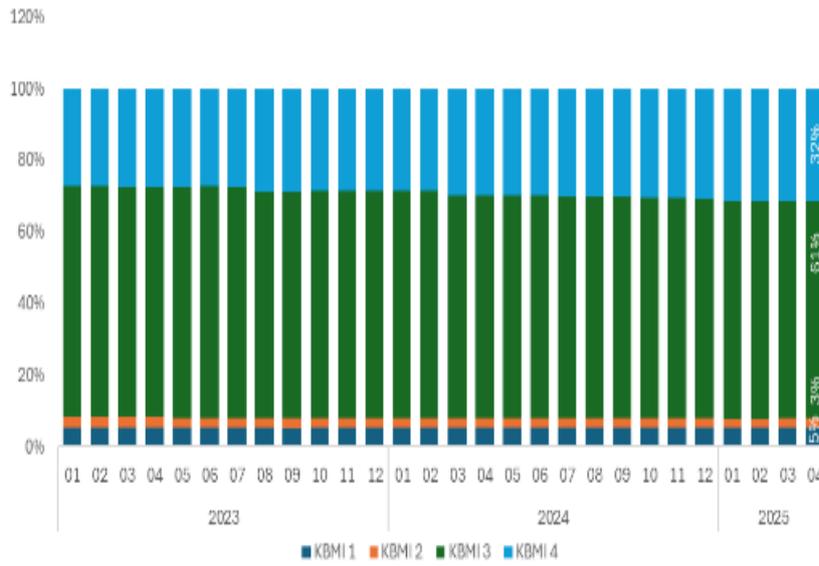
Source: KSEI as of May 27, 2025

A.9 Growth of Mortgage Loans (KPR)



Source: LBUT

A.10 Share of Mortgage Loans (KPR) Based on Bank's Core Capital



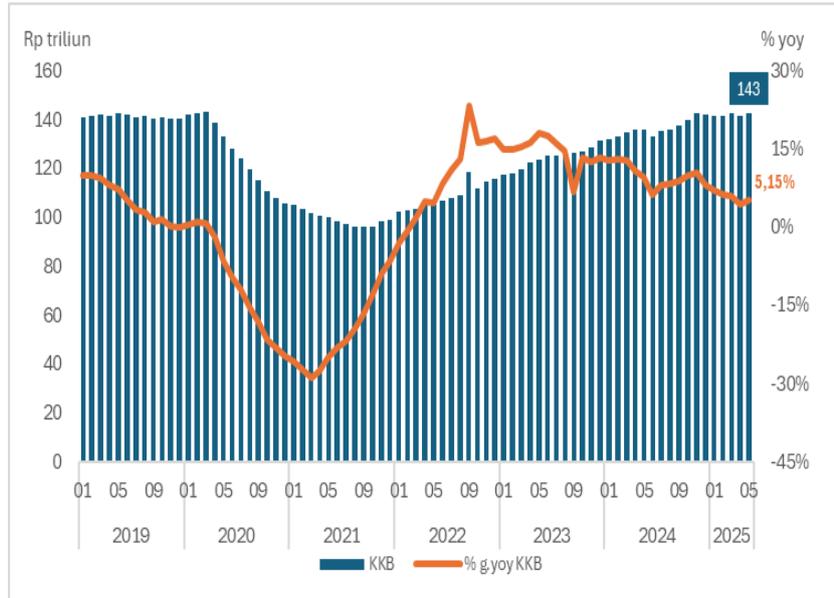
Source: LBUT

A.11 Development of AL/DPK of the 10 Largest KPR Disbursing Banks



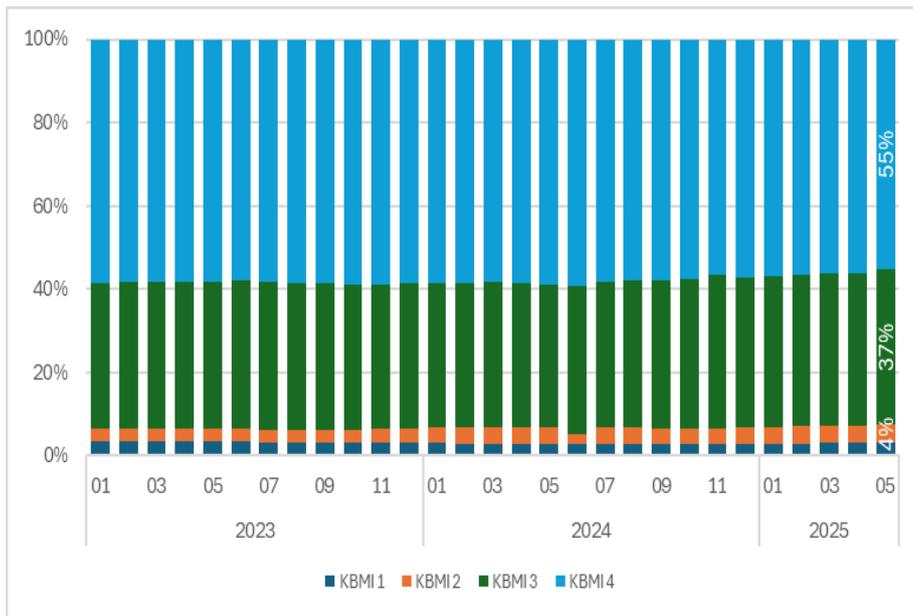
Source: LBUT

A.12 Growth of Motor Vehicle Credit



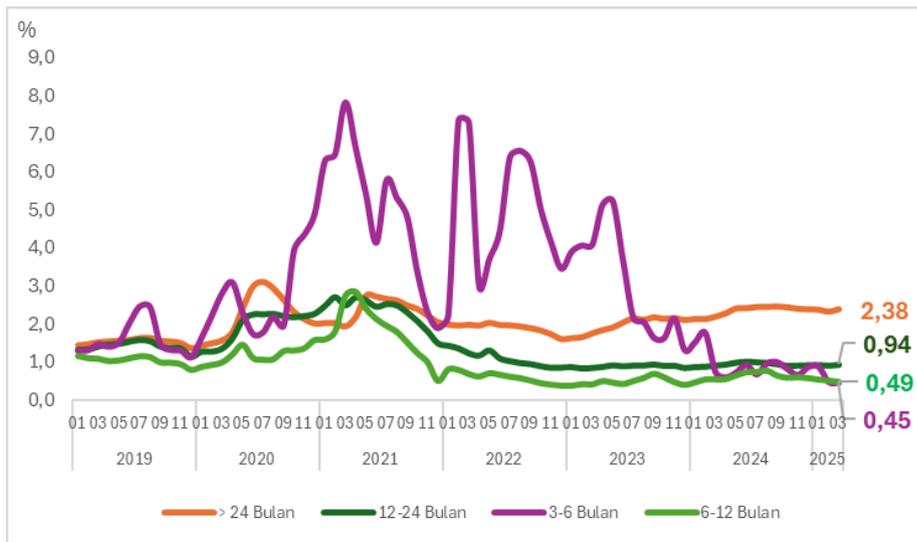
Source: LBUT

A.13 Share of Motor Vehicle Credit Distribution Based on Bank's Core Capital



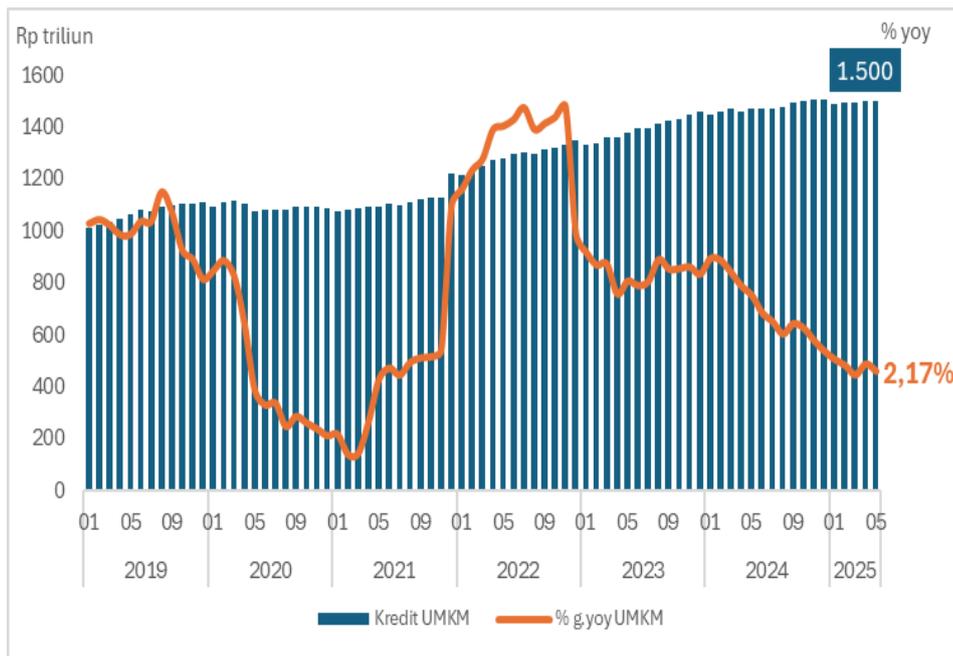
Source: LBUT

A.14 NPL of Motor Vehicle Credit Based on Loan Term



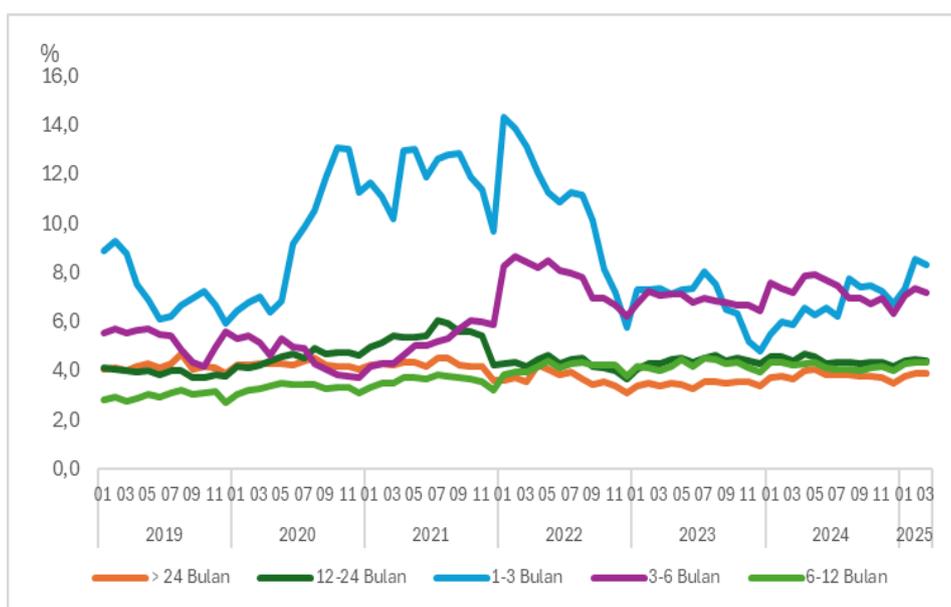
Source: LBUT

A.15 Growth of UMKM Credit



Source: LBUT

A.16 NPL of UMKM Credit Based on Loan Term

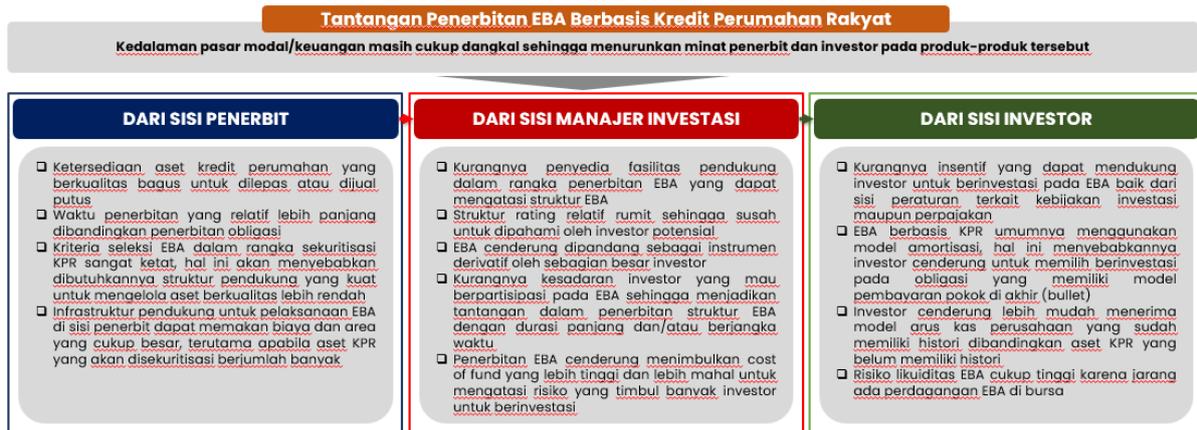


Source: LBUT

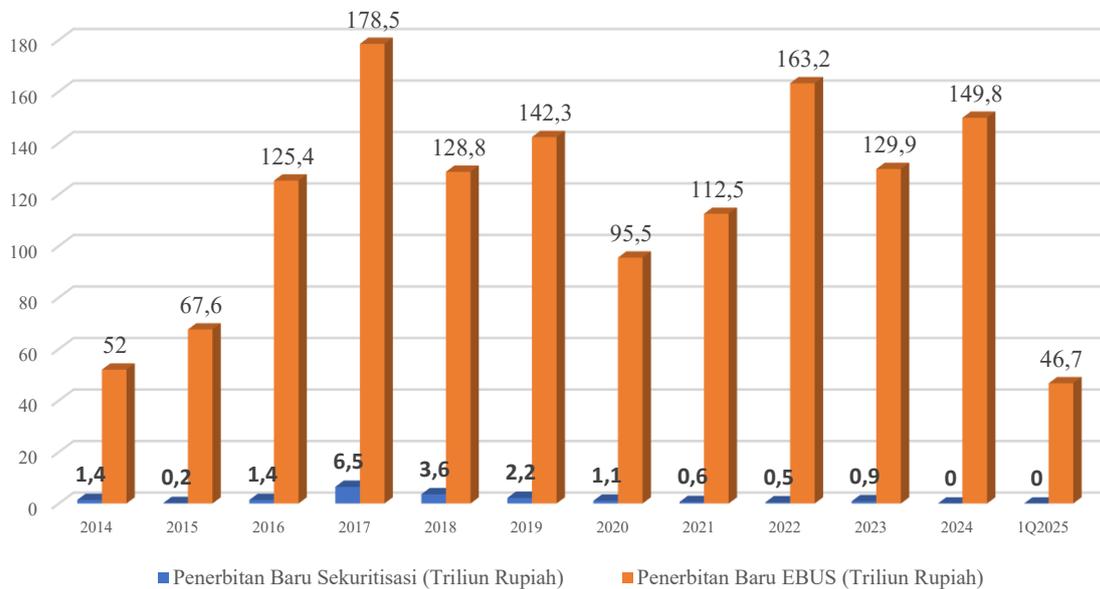
A.17 Regulations Related to Asset Securitization in Indonesia

No.	Regulation	Scope
1	POJK No. 23/POJK.04/2014	Issuance and reporting of EBA-SP
2	POJK No. 20/POJK.04/2017	Amendments to POJK No. 23/2014
3	POJK No. 65/POJK.04/2017	Issuance and reporting of KIK-EBA
4	POJK No. 38/POJK.03/2019	BMPK provisions and limitations on EBA purchases by banks
5	POJK No.42/POJK.03/2015	LCR and EBA classification as HQLA Level 2B
6	UU No. 4 Tahun 2023 (UU P2SK)	SPV and Trust provisions for securitization entities
7	KEP-147/2003	Treatment of KIK-EBA yields as equivalent to bond yields
8	POJK No. 11/POJK.03/2019	Principles of Caution in Asset Securitization Activities for Commercial Banks
9	PP No. 55 Tahun 2019	Tax on income from bonds and similar instruments (including EBA)

A.18 Challenges in Issuing Mortgage-Backed EBA

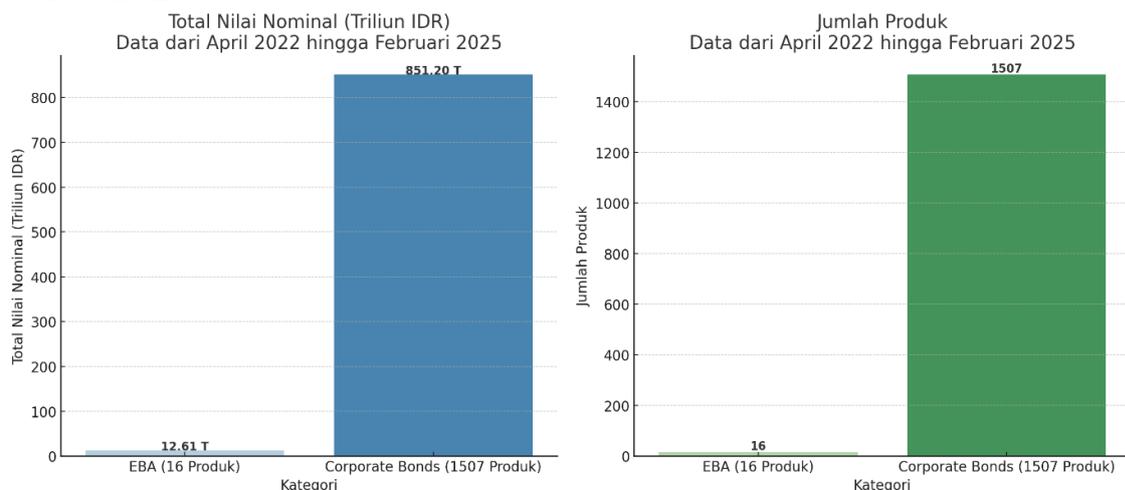


A.19 Comparison of Securitization Instrument and Corporate Bond Issuance



A.20 Comparison of Volume and Number of EBA and Corporate Bonds 2025

Source: KSEI



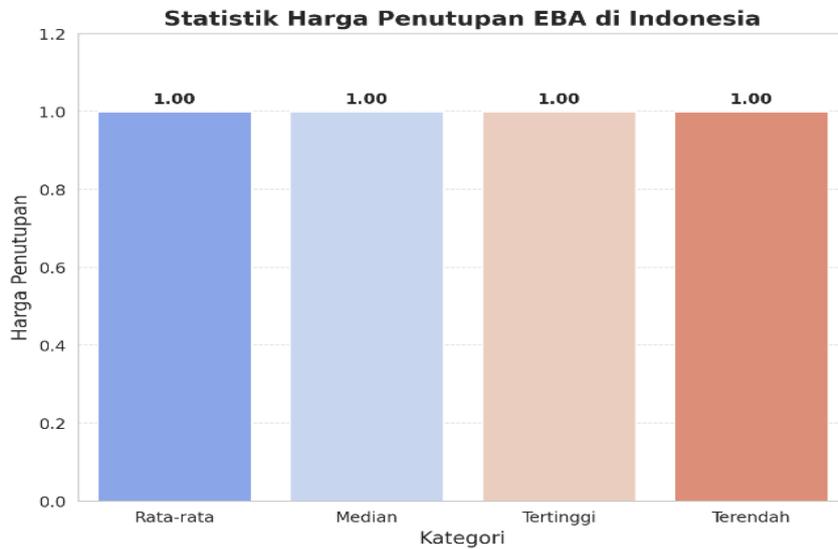
A.21 Ownership of Securitization Instruments in Indonesia

No	Code	Issuer	Amount	Domestic (%)	Foreign (%)
1	SPSMFMRI01A2	EBA-SP SMF-BMRI01	326.290.070.633	100	0
2	SPSMFBTN02A2	EBA-SP SMF-BTN02 KELAS A	502.585.529.844	99,94	0,06
3	SPSMFBTN03A2	EBA-SP SMF-BTN03 KELAS A	713.000.000.000	100	0
4	MJAG01	KIK EBA MANDIRI JSMR01-SURAT BERHARGA HAK ATAS PENDAPATAN TOL JAGORAWI	1.858.000.000.000	99,97	0,03
5	DIPP01	KIK EBA DANAREKSA INDONESIA POWER PLN 1-PIUTANG USAHA	3.062.698.106.540	99,99	0,01
6	SPSMFBTN04A2	EBA-SP SMF-BTN04 KELAS A	38.309.385.349	100	0
7	MGIA01	KIK EBA MANDIRI GIAA01 - SURAT BERHARGA HAK ATAS PENDAPATAN PENJUALAN TIKET	1.800.000.000.000	100	0
8	BBKK01	EFEK BERAGUN ASET BAHANA BUKOPIN-KUMPULAN TAGIHAN KREDIT PENSIUNAN	326.672.000.000	100	0
9	SPSMFBTN05A1	EBA-SP SMF-BTN 05	574.000.000.000	100	0
10	SPSMFBTN05A2	EBA-SP SMF-BTN 05	1.142.000.000.000	100	0

No	Code	Issuer	Amount	Domestic (%)	Foreign (%)
11	BBKK01A2	EFEK BERAGUN ASET BAHANA BUKOPIN-KUMPULAN TAGIHAN KREDIT PENSIUNAN YANG DIALIHKAN	308.000.000.000	100	0
12	SPSMFBTN06A	EBA-SP SMF-BTN 06	576.734.000.000	100	0
13	SPSMFBTN07A	EBA-SP SMF-BTN07	452.500.000.000	100	0
14	SPSMFBRIS01A	EBAS-SP SMF-BRIS01	297.700.000.000	100	0
15	SPSMFBTN08A	EBA-SP SMF-BTN08	544.800.000.000	100	0
16	BNCF01	EFEK BERAGUN ASET BNI-AM CF 01 - TAGIHAN	81.800.000.000	0	100

Source: KSEI

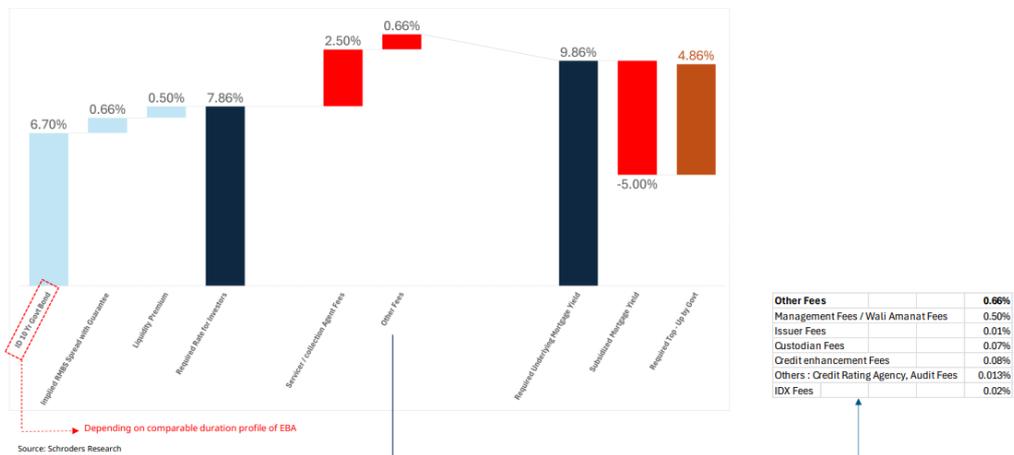
A.22 EBA Closing Price Statistics



Source: KSEI

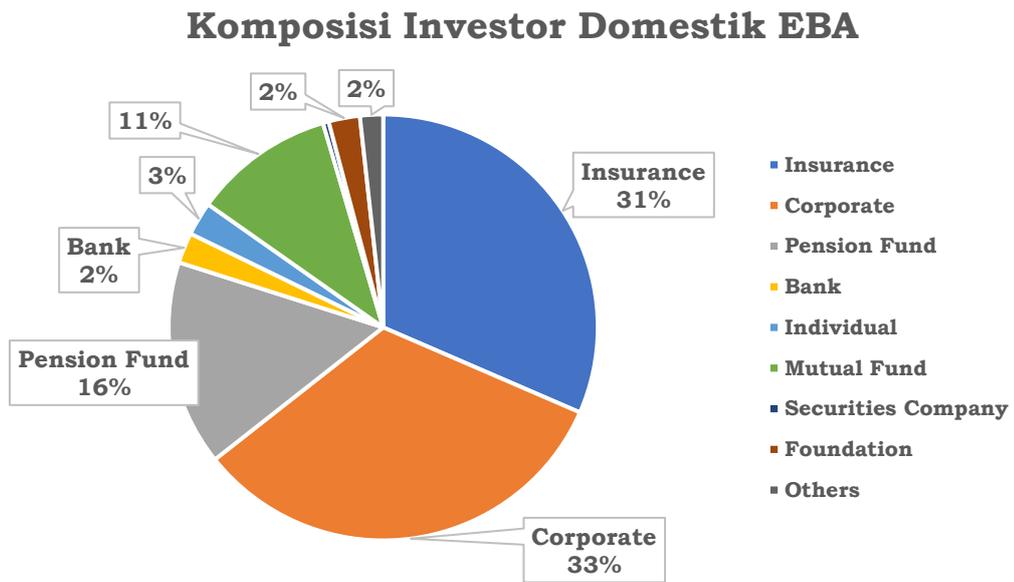
A.23 Simplified Back – Envelope Calculation

Simplified Back – Envelope Calculation



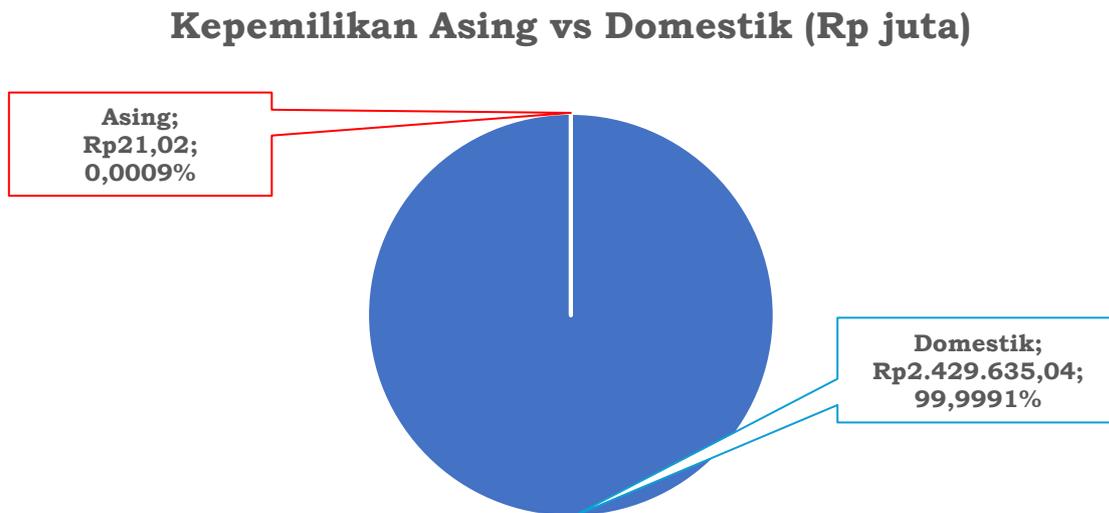
Source: Pefindo

A.24 Domestic Investor Composition of EBA



Source: KSEI (27 May 2025)

A.25 Profile of EBA Ownership

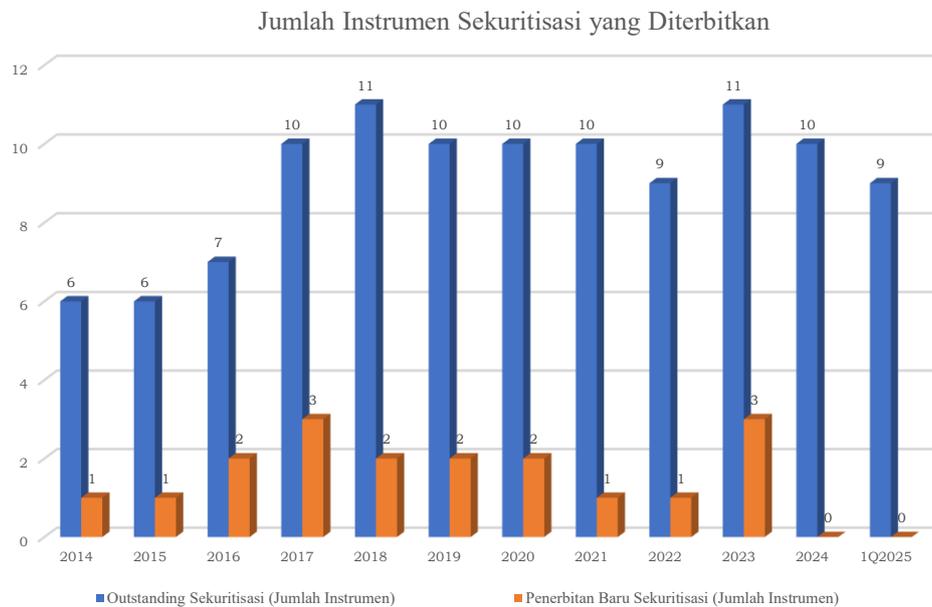


Source: KSEI (27 May 2025)

A.26 Potential EBA Purchases According to BMPK Rules (0.25% of Tier 1 Capital per Bank Group Based on KBMI)

				(Rp Miliar)
Keterangan	2022	2023	2024	Feb-25
Modal Inti Bank KBMI 1	224.274	228.441	225.772	216.067
Modal Inti Bank KBMI 2	286.794	325.890	358.258	364.523
Modal Inti Bank KBMI 3	364.092	390.825	417.930	442.669
Modal Inti Bank KBMI 4	741.527	800.018	856.821	886.490
Modal Inti (Tier I)	1.616.687	1.745.174	1.858.781	1.909.748
BMPK 0,25% dari Modal Inti				
Potensi Pembelian EBA-SP Bank KBMI 1	561	571	564	540
Potensi Pembelian EBA-SP Bank KBMI 2	717	815	896	911
Potensi Pembelian EBA-SP Bank KBMI 3	910	977	1.045	1.107
Potensi Pembelian EBA-SP Bank KBMI 4	1.854	2.000	2.142	2.216
Total Potensi Pembelian EBA-SP	4.042	4.363	4.647	4.774

A.27 Total Issuance of Securitization Instruments (2014 – Q1 2025)



A.28 Comparison of Securitization Issuance and EBUS



A.28 Potential Utilization of EBA in Macroprudential Policy Instruments

Dukungan Kebijakan Makroprudensial terhadap pengembangan Sekuritisasi Aset			
Instrumen Kebijakan Makroprudensial	Ketentuan Saat Ini	Potensi pemanfaatan Sekuritisasi Aset	Potensi Penguatan Instrumen
Rasio Intermediasi Makroprudensial (RIM)	<ul style="list-style-type: none"> Tujuan: mendorong intermediasi perbankan yg seimbang dan berkualitas dengan tetap menjaga prinsip kehati-hatian Komponen RIM: $\frac{\text{Kredit} + \text{Surat Berharga Korporasi yang Dimiliki DPK} + \text{Surat Berharga yang Diterbitkan} + \text{Pinjaman yang Diterima}}{\text{Total Aset}} \times 100$ 	<ul style="list-style-type: none"> Saat ini belum mencakup instrumen sekuritisasi aset yang dimiliki/diterbitkan bank Sekuritisasi aset yang ditujukan untuk mendorong peran perbankan dalam mendorong intermediasi dapat dipertimbangkan sebagai komponen RIM 	Penguatan RIM untuk mencakup sekuritisasi aset sebagai SSB berkualitas tinggi yg menjadi underlying OM dalam formula RIM
Penyangga Likuiditas Makroprudensial (PLM)	<ul style="list-style-type: none"> Tujuan: mengatasi permasalahan prosikikalitas likuiditas serta menjadi instrumen makroprudensial berbasis likuiditas yg berlaku utk seluruh bank Komponen PLM: Surat berharga dalam rupiah yang dimiliki BUK dan BUS yang dapat digunakan dalam operasi moneter (antara lain SRBI/SBI/SDBI/SBN/SBIS/SBSN/SukBI) 	<ul style="list-style-type: none"> Instrumen sekuritisasi aset belum tercakup sebagai SSB berkualitas tinggi yang menjadi underlying OM Sekuritisasi aset yang berkualitas tinggi dan menjadi underlying OM dapat berpotensi untuk diperhitungkan sebagai komponen PLM 	Penguatan PLM untuk mencakup sekuritisasi aset sebagai SSB berkualitas tinggi yg menjadi underlying OM dalam PLM
Pinjaman Likuiditas Jangka Pendek (PLJP)/ Pembiayaan Likuiditas Jangka Pendek Syariah (PLJPS)	<ul style="list-style-type: none"> Tujuan: Pemberian Pinjaman/Pembiayaan likuiditas jangka pendek kpd BUK dan BUS yang mengalami kesulitan likuiditas jk pendek. Agunan PLJP: Surat berharga berperingkat tinggi berupa: SBI, SDBI, SukBI, SRBI, SBN, SBIS, SBSN, dan surat berharga yg diterbitkan oleh badan hukum lain yang memenuhi persyaratan yakni memiliki peringkat paling rendah peringkat investasi, aktif diperdagangkan, dan memiliki sisa jk waktu yg ditetapkan oleh Bank Indonesia) 	<ul style="list-style-type: none"> Instrumen sekuritisasi aset belum tercakup sebagai SSB berkualitas tinggi yang menjadi underlying OM Sekuritisasi aset yang berkualitas tinggi dan menjadi underlying OM dapat berpotensi untuk diperhitungkan sebagai agunan PLJP/PLJPS 	Penguatan PLJP/PLJPS untuk mencakup sekuritisasi aset sbg SSB berkualitas tinggi yg menjadi underlying OM sebagai agunan PLJP
Rasio Pembiayaan Inklusif Makroprudensial (RPIM)	<ul style="list-style-type: none"> Tujuan: mendorong pertumbuhan kredit, khususnya kepada UMKM, Korporasi UMKM, dan Perorangan Berpenghasilan Rendah (PBR) Saat ini EBA dapat diperhitungkan dalam RPIM sepanjang memenuhi syarat sebagai Surat Berharga Pembiayaan Inklusif (SBPI), yaitu (i) diterbitkan Lembaga jasa keuangan non-Bank tertentu (termasuk SMF dan SMI); (ii) tradable, kecuali surat berharga syariah yang berdasarkan akad tertentu tidak dapat diperdagangkan secara syariah; dan (iii) dimiliki atau dikuasai oleh Bank. 		RPIM berpotensi meningkat seiring perkembangan/pertumbuhan EBA inklusif dan hijau

Sinergi Kebijakan:	<ul style="list-style-type: none"> Kemenkeu: Penjaminan atas surat berharga yg diterbitkan PT SMF OJK: Dukungan level HQLA SSB yang diterbitkan PT SMF sebagai HQLA Level 2A 	<ul style="list-style-type: none"> OJK: Dukungan Surat berharga SMF yang dijamin pemerintah dapat dicekualikan dari aturan BMPK
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