

**ANALYSIS OF THE BOND REPO MARKET IN INDONESIA**

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*Keywords:**Bond Repo; Indonesia;**Financial Market;**Interbank Repo Market***Abstract**

This paper aims to examine the role of local currency bond markets repo in Indonesia's financial market. The role of Bond Repo in Indonesia is mainly for central bank monetary operation and short-term liquidity management by banks. The counterparties in the Indonesia repo market are predominantly the Indonesian central bank and banks. Based on the nature of the transactions and the range of market participants, the bond repo market in Indonesia is still in an early stage of development. This paper also aims to explain the pricing phenomenon of the interbank repo market versus interbank call money in Indonesia. Based on market data we have collected from 2016 until June 2021, General Collateral repo rates are priced at a similar level or occasionally higher compared to interbank call money. Repo market research in other countries in Asia has been used as literature reference to help explain the behavior. Factors such as excess liquidity condition, market segmentation, limited market participation, and high dependency on other money market instruments may have influenced this situation.

ANALISA PASAR REPO OBLIGASI DI INDONESIA**Abstrak**

Penelitian ini mengkaji peran repo obligasi rupiah pada pasar finansial di Indonesia. Peran utama repo obligasi pada pasar finansial di Indonesia adalah sebagai instrumen operasi moneter bank sentral dan instrument pengelolaan likuiditas jangka pendek bank. Pelaku pasar repo di Indonesia didominasi oleh bank sentral dan bank. Berdasarkan pengamatan atas penggunaan transaksi dan sebaran pelaku pasar, repo obligasi di Indonesia termasuk dalam tahap awal pengembangan. Penelitian ini juga mencoba menjelaskan kondisi penetapan harga pasar repo antar bank versus pasar uang antar bank di Indonesia. Berdasarkan data pasar sejak tahun 2016 hingga Juni 2021, tingkat bunga repo General Collateral berada pada level yang sama atau terkadang lebih tinggi dibandingkan dengan pasar uang antar bank. Penelitian pasar repo di negara Asia lainnya digunakan sebagai referensi literatur untuk membantu menjelaskan kondisi tersebut. Faktor-faktor yaitu kondisi eksekusi likuiditas, segmentasi pasar, terbatasnya peserta pasar, dan ketergantungan yang tinggi pada instrumen pasar uang lainnya telah mempengaruhi terciptanya situasi dimaksud.

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INTRODUCTION

Repo is considered a simple product but has a dozen applications for various market participants. In a global context, repo and securities borrowing and lending are important foundations of the fixed-income market.

Researchers, policymakers, and the central banks have agreed that an active and resilient repo market has a positive impact on the real economy. It is a funding instrument that facilitates greater asset mobility and capital flows. It enhances investor demand for the local bond, has a positive contribution on price discovery process, and improving secondary bond market liquidity, which helps finance the economy. The nature of the repo structure as collateralized funding also supports financial market stability in times of uncertainty. It has been widely used in the transmission of central bank monetary policy, risk-free rate benchmark, and open market operation instruments.

The Indonesian financial services authority (OJK) encourages an increase in the use of repo by issuing new regulations on repo (POJK 9/POJK.04/2015) and introduces the use of GMRA Indonesia as a mandatory master agreement for all repo transactions using securities issued and listed in Indonesia. The regulation has increased the certainty of laws in regard to repo in Indonesia. It ensures the recognition of transfer of title, close-out netting and minimizes the re-characterization risk of repo. Indonesia Central Bank (Bank Indonesia) and OJK have been trying to develop bond repo market through the introduction of new regulations, market standards, development of repo market infrastructure, moral suasion, and series of market education.

This paper aims to examine the role of repo and analyze characteristics of local currency bond markets repo in Indonesia, in particular the interbank repo pricing. This is important to gain more understanding of market development and look for opportunities to strengthen the Indonesia repo market.

LITERATURE REVIEW

Repo (repurchase agreement) is a legal transaction in which one party (called a repo seller or cash borrower) sells securities to another (called a repo buyer or cash lender) and simultaneously commits to repurchase identical (or equivalent) securities on a specified future date at a specified price. The buyer pays the repo seller in cash after the seller provides securities as collateral. The cash is provided at a predetermined interest rate, known as the repo rate. The lender usually provides the cash after taking into account the haircut applied to the securities. This means that the repo carries over-collateralization or an initial margin. When the repo matures, the collateral is received by the original seller (or collateral of comparable type and quality) and repays the borrowed funds with repo interest. When viewed from the seller's (cash borrower's) perspective, such a transaction is known as repo, and when viewed from the buyer's perspective (cash lender), it is known as reverse repo. This most common repo structure is best described in Figure 1.

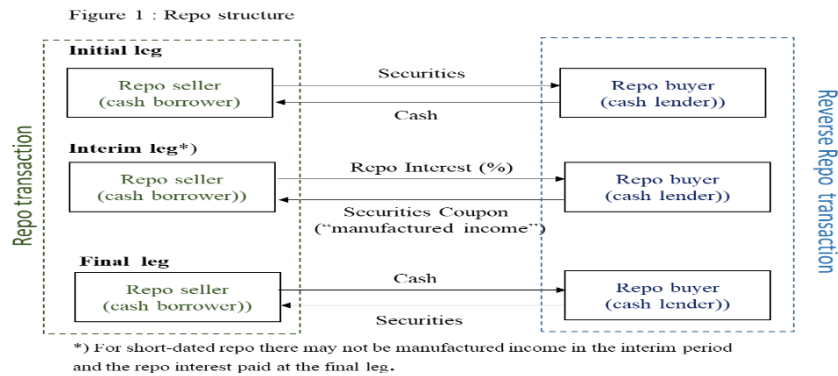


Figure 1. Repo structure

In the most common repo transaction, the legal ownership of the securities is transferred. The transfer of legal title gives the repo buyer (cash lender) greater control over the collateral in the event that the seller defaults or becomes insolvent. This lowers the credit risk. However, the transfer of collateral and cash is recognized as temporary in a repo. As a result, the repo seller (cash borrower) maintains both the economic benefit and the market risk associated with the securities' ownership. The repo seller will continue to determine the bond price based on mark-to-market of the bond on their book. These features differentiate repo with outright sales or collateralized loans. Although in essence repo is one of the forms of collateralized loans, these differences are substantial enough to label repo as a hybrid instrument.

On the coupon value day, the bond coupon is typically paid over to the repo seller. This is referred to as manufactured income. The standard legal contract for repo is the Global Master Repurchase Agreement (GMRA) which regulates close-out netting, margining, and other provisions. The benefits of using repo for various market participants are summarized in Figure 2.

Figure 2 : Benefit of using Repo

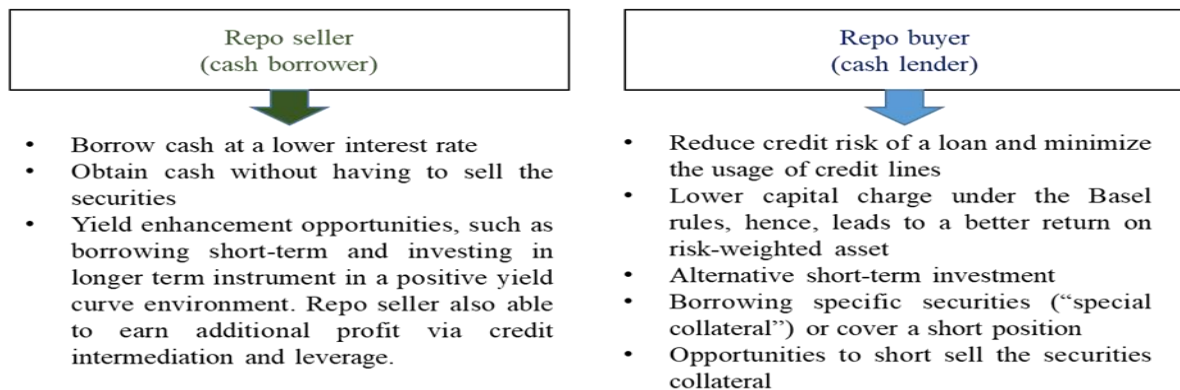


Figure 2. Benefit of using repo

Key Elements of a Repo Transaction

There are four key elements of repo transaction that contribute to creating a "risk-free characteristic" of repo. They are (i) collateral, (ii) haircut or initial margin, (iii) mark-to-market, and (iv) legal documentation.

The cash lender dictates the terms of collateral accepted. Although most of the repo transactions are collateralized with government bonds, a wide range of collateral can be used for

repo. However, from a local repo market perspective, government securities are considered as high-quality collateral and considered free of credit risk. Most repo trades are subject to a haircut where the cash amount (or also known as repo proceed) is less than the collateral's market value. This further reduces counterparty risk.

Repo can be characterized as secured margin loans. The underlying securities are marked to market on a daily basis. A decrease in the underlying securities value at a certain level triggers daily margining, in which the cash borrower must provide extra collateral. Margin or margining is a standard mechanism that maintains the initial haircut or over-collateralization against market price fluctuations. Hence, reducing the market risk significantly.

From a legal standpoint, the GMRA documentation of repo transaction ensures the transfer title right of the collateral to the cash lender. The legal agreement protects the ability to sell the underlying repo or perform close-out netting in the event of cash borrower default.

Repo as a Funding Instrument

Repo supports the market-making activities by providing cost-effective short-term funding to finance the long portfolio position of the bond trader. Traders expect that funding costs via repo will be cheaper compared to the interbank money market (call money). Institutional investors, such as banks and money market funds, utilize repo to fulfill short-term liquidity needs without having to sell current assets. Repo reduces systemic risk by allowing traders in a stressed market to temporarily convert assets into cash in a less disruptive manner than outright sales. The repo markets are very critical to create the shock-absorbing capacity of financial markets.

When compared to unsecured borrowing such as interbank call money, repo is a more stable source of funding due to its collateralized nature. As repo trading is fully collateralized, the cash lender is fully secured. As such, repo trading may enable the cash lender to consider larger transaction volumes and longer maturities than would occur in an unsecured trade. In some cases, repo is also used as a medium-term funding instrument to finance certain growth in other assets. Under the Basel rules, the cash lender in repo is subject to lower capital charges. This reduces risk and optimizes the usage of credit lines or risk-weighted assets. In many jurisdictions, bank lending via repo with high-quality government securities is exempted from legal lending limit requirements. A fully-functioning repo market should encourage longer-term wholesale financing arrangements across all segments of market participants, hence, creating healthier liquidity distribution. The developed repo market creates a more resilient money market.

In some advanced repo markets with various segment market participants, repo provides alternative funding access and placement of cash other than banks. Hence, it reduces the degree of dependence on commercial banks and makes repo one of the largest “shadow banking” systems. The most recent estimate of the entire repo market globally is approximately \$12 trillion (Cullen 2017).

Repo as an Instrument for Investment and Yield Enhancement

Cash investors use repo as a safe instrument to place short-term money. Repo serves as a diversification from the ordinary bank deposit. Repo is a way to invest the cash but minimize the counterparty exposure. Investors, commonly money market funds or corporates lend out cash and receive general collateral (GC) in return. GC is any securities or bond which meet the required credit quality requirements. In this practice, a repo seller (cash borrower) is said to pay GC rate as the repo interest.

In a yield-enhancement strategy, a repo counterpart may borrow money at the GC rate and then reinvest the cash at a higher rate. Typically, because they will have to invest in higher-risk instruments, these trades includes some credit risk.

Financial institutions with a large portfolio of securities can use repo to create leverage and enhance income. They can borrow from repos and give securities as collateral and then invest the cash in other qualified securities. They may use the securities investment as the collateral for the next repo trade, borrow cash again, reinvest, and so on. The only constraint on this leverage is the amount of haircut and positive trading spread between the borrowing from repo and the re-investment.

Repo as a Securities Borrowing-and-Lending Instrument

Repo can be used to cover short positions by borrowing specific securities. Borrowing securities from a repo helps avoid settlement failures when an outgoing delivery is dependent on an incoming delivery that is at risk not to be delivered.

A portfolio manager who manages a range of assets that is in high demand may take advantage of this situation by lending these to approved counterparties. Counterparties who borrow cash and give special collateral (SC) will pay the SC rate as the repo interest. Because these specific securities have become “special”, the SC rate is lower than the GC rate. Bond short positions are established by traders as part of market-making activities, either as a result of client flow, as a pure trading strategy with the expectation that bond prices would fall, or as a hedge against a long position on the balance sheet or in a trading portfolio. Hence, the use of repo in this case contributes liquidity to the secondary market of securities. The resilience of the repo market and the presence of securities borrowing and lending mechanisms can ensure the liquidity of the secondary bond market.

Matched Repo Book Trading

Matched book trading desk is defined as a market-making desk in a repo market. These are dealers who set two-way trading prices in a variety of securities. The term “matched book” is a misnomer; most matched books are deliberately mismatched as part of a view on the short-term yield curve (Choudhry 2010). Principals and intermediaries who do a lot of repo and reverse repo are said to have matched books. Matched book trading is used in developed markets to generate profit and to reduce portfolio funding costs. Traders using matched books to profit from short-term interest rate movements, yield curves, or to forecast supply-demand in the underlying securities. Traders who anticipate an inverted yield curve, for example, can lend cash at a two weeks and borrow at a two-month GC rate. In a normal positive yield curve environment, a repo trader lends cash for three months and borrows cash for one month. By doing so the trader has secure in a certain profit target for one month and running mismatch exposure for the remaining tenor.

Dealers with access to the international market or a wide range of customer segments may act as credit intermediation and take advantage of pricing differences in various markets, client segments, or different credit/assets.

Facilitating Central Bank Operations

Repo is a popular instrument for central banks to use in open market operations to control liquidity and influence the short-term yield curve. Its collateralized nature reduces the central bank's credit risk and allows it to use a broader range of assets. Central bank repo allowing liquidity to be redistributed to banks in an efficient manner. The central banks can use repo to provide emergency liquidity in times of market stress.

In Indonesia, monetary operations are carried out by controlling interest rates in the Overnight Interbank Money Market (PUAB O/N) to move around the policy rate, which is the BI 7-Day Reverse Repo Rate (BI7-DRR), and by maintaining rupiah exchange rate stability that in line with the fundamental exchange rate. Bank Indonesia manages liquidity in the rupiah money

market by absorbing and/or injecting liquidity in order to regulate the interest rate in overnight interbank call money as the operational target of monetary policy. Open Market Operations (OMO) and Standing Facilities are two types of monetary operations (SF). Repo and Reverse Repo are part of these operations.

The repo rate is used as a signal to advertise the favored level of interest rate. The central bank follows an interest rate corridor through Repo and Reverse Repo, which represents the money market's support and resistance levels. The interest rate at which a central bank is ready to lend money in return for government securities collateral (liquidity injection) is known as the central bank repo rate. The reverse repo rate and the Deposit Facility (DF) rates are set at lower rate than the repo rate. The reverse repo and DF are part of liquidity absorption tools at which the central bank is willing to absorb excess liquidity in the banking system. Repo and Reverse repo are auction-based and held regularly for various tenors. The standing facilities consist of Deposit Facility (DF) and Lending Facilities (LF). DF and LF are non-auction facilities. DF is set at the fixed rate of 75bps lower than BI7-DRR while LF is set at the fixed rate of 75bps above the BI7-DRR.

Bank Indonesia is also trying to control or influence the short-term yield curve (up to 12-months tenor) through its regular open market operations by conducting regular Repo/ Reverse Repo auctions for tenors ranging from one week to one year. The increase of reverse repo activities by Bank Indonesia also has a positive impact on creating demand for government securities.

METHOD

This study uses a descriptive analysis approach and a literature review. This study aims to describe the ongoing conditions at the time this research was conducted and examine the causes of certain conditions. The focus of the research is the repo market for rupiah-denominated bonds in Indonesia. The data used are market data and data from Bank Indonesia for the period June 2016 to June 2021. The focus of the transaction is interbank repo, where this type of transaction is the main type of repo transaction in Indonesia after repo conducted by the central bank in the context of monetary operations. This time period was chosen to provide an overview of the repo market after the implementation of GMRA Indonesia.

OUTCOMES AND DISCUSSION

An Overview of the Market Structure

Banks and the central bank continue to dominate bond repo transactions within the framework of central bank monetary operations and bank liquidity management. Indonesia bond repo consists of two different markets, 1) central bank repos as part of the monetary operation and 2) repo markets among banks. Both repos operate under classic repo format and use government securities as the underlying collateral. Non-bank financial institutions have not participated in the bond repo market despite a few one-off repo transactions conducted by non-bank financial institutions in the past.

Indonesia's repo market predominantly uses local currency government securities as the underlying collateral. This is a high-quality, low-risk collateral from the point of view of local market participants. Therefore, it reduces the counterparty risk significantly. Availability of GMRA Indonesia and the market standard allows participants to use the haircut and margining to manage

the market risk arising from price fluctuation of securities. Repo using government securities are settled via the Bank Indonesia – Scripless Securities Settlement System (BI-SSSS) and RTGS.

The majority type of repo traded in Indonesia nowadays is classic term repo, which is the most basic form of the bilateral repo. Since the introduction of GMRA, classic repo has replaced the ISDA-based style on sell/buy back trade. Classic repo is essentially a secured loan conducted under a standard legal agreement (GMRA) but with securities transfer of title from repo sellers (cash borrowers) to repo buyers (cash lenders).

The repo market in Indonesia is a pure OTC market. The standard plain vanilla repors (based on GMRA Indonesia) are traded bilaterally between banks or via money brokers. Market makers which normally consist of banks in the category of BUKU 4 (biggest banks in terms of capital and assets) publish their price quotations on the screen. An electronic trading platform and central clearing counterparty have not been established for the Indonesia repo market.

Although current regulations and infrastructure allow participants to enter hold-in custody repo, the market rarely uses this type of repo product. The tri-party repo mechanism has not been established either in the Indonesian market. However, there have been a few trades in the form of OTC cross currency repo involving USD cash borrowing/lending using local currency government securities as underlying collateral.

The repo market in Indonesia is categorized as the General Collateral (GC) markets. The underlying bond in GC repo are not pre-specified. Specific collateral (SC) is not an established market yet in Indonesia. Bond dealers practically hesitate to build a short position in the onshore market. One of the reasons is because short-selling activities are relatively rare on the market. The cash bond market is settled within T+2 business day convention, where failure or delay of settlement is perceived to be an unacceptable situation both from the regulator and market perspective. Hence, the majority of local bond dealers only offer price quotations based on their available inventories or if they have the immediate cover/matching position. Derivative markets such as interest rate future, bond forward or bond option are also not well developed in the onshore market. As a consequence of the absence of the SC repo market and the fact that market participants are still limited to banks, we have not found significant evidence for matched repo book trading activities in the recent market.

Interbank Repo Market

Domestic banks have started to sign bilateral GMRA Indonesia agreements since 2016. In the first few years, the interbank repo market volume has increased but at a relatively slow pace. Interbank call money (unsecured) is still the dominant money market instrument compared to repo transactions. Interbank market relies more on-call money, FX Swap, and the Central Banks repo/reverse repo as a way to manage short-term liquidity and funding. Based on the data of overall interbank money market transactions during February 2021, FX swap constituted around 55 percent of the total transaction by which PUAB contributed slightly more than 25 percent and the remaining 20 percent coming from Repos.

By the end of 2020, there were 76 commercial banks (79 percent of the total population) that had signed the bilateral GMRA Indonesia. Since 2016, 57 banks have entered repo transactions. There has been an increase in volume of the interbank repo transaction, especially for overnight repos and short-dated repos. In total, 30 banks were involved in repo transactions in the first two months of 2021. Based on Bank Indonesia's report, as of February 2021, the daily average of repo transactions has reached IDR 6 Trillion (or equivalent USD 420 million) which is, -the highest level since the establishment of GMRA in 2016. However, from a volume perspective, the FX swap is still the biggest traded instrument in the money market, and the contribution of the repo has increased significantly in 2021. The share of repo transactions compared with the total

repo and interbank call money (PUAB) has jumped from 4 percent to 47 percent in the range of November 2020 until February 2021. The intensive market education effort by Bank Indonesia has motivated some banks to shift from unsecured lending to repo transactions, especially for overnight tenor.

The Roles of Repo Transaction in Indonesia

The central bank (Bank Indonesia) uses repo as part of its open monetary operation and standing facilities. The liquidity injection facility provided by Bank Indonesia through its repo auction on a regular basis is an important instrument to ensure liquidity in the banking system. Bank Indonesia has been able to create a sense of calmness in the market by providing access to various repo tenors for up to one year. Repo/Reverse repo is Bank Indonesia’s main instrument in their open monetary operation framework.

Repo is also commonly utilized by banks for managing short-term liquidity. This can be observed by identifying the most common tenor in the repo transactions which are mostly short-dated. Overnight repos are the most liquid instrument and are highly traded. The volume of repo with a tenor longer than a week is still relatively small.

Repos in the Indonesian market are not normally used as a medium for balance-sheet funding and or bond portfolio management. However, there is evidence that a few banks occasionally use term repo with a tenor longer than a year for balance-sheet funding purposes in local currency and USD.

The collateral used as the underlying repo is typically short-dated government securities or non-benchmark government bonds. By looking at the limited use of repo and the limited market participant, there is no direct influence of repo on the overall liquidity of Indonesia’s fixed income markets.

Repo Pricing in Indonesia Interbank Market

In the context of Indonesia, despite the fact that GC repos have a near-risk-free feature, the rates are priced at a similar level, if not occasionally higher, than interbank call money (unsecured lending). Typical daily price quotation of interbank call money and repo transactions can be found in Figure 3.

Figure 3 : Sample price quotation of Interbank Call Money and Local Currency Repo



3.a : Typical price quotation of Interbank Call Money (under “IDR Depo”) and Local Currency Repo (under GMRA- Repo) via money brokers

3.b : Typical price quotation of Local Currency Repo across tenor by one of market maker (a bank)

Source : Refinitiv Eikon

Figure 3. Sample price quotation of interbank call money and repo

The spread/gap between GC repos and interbank call money is very tight across various tenors not just overnight. This is observable in Figure 4. We have plotted the repo price quotation of the cash lender with INDONIA for overnight and JIBOR for one week and one month. This situation is different from a theoretical perspective which will be explained in the next section. The GC repo rate should be lower because it is collateralized. Despite the relatively ample liquidity and low-interest rate environment, those should not be at a similar level. Attractiveness in repo pricing compared to interbank call money can be seen as one of the market incentives to attract more volume of trade and number of active market participants.

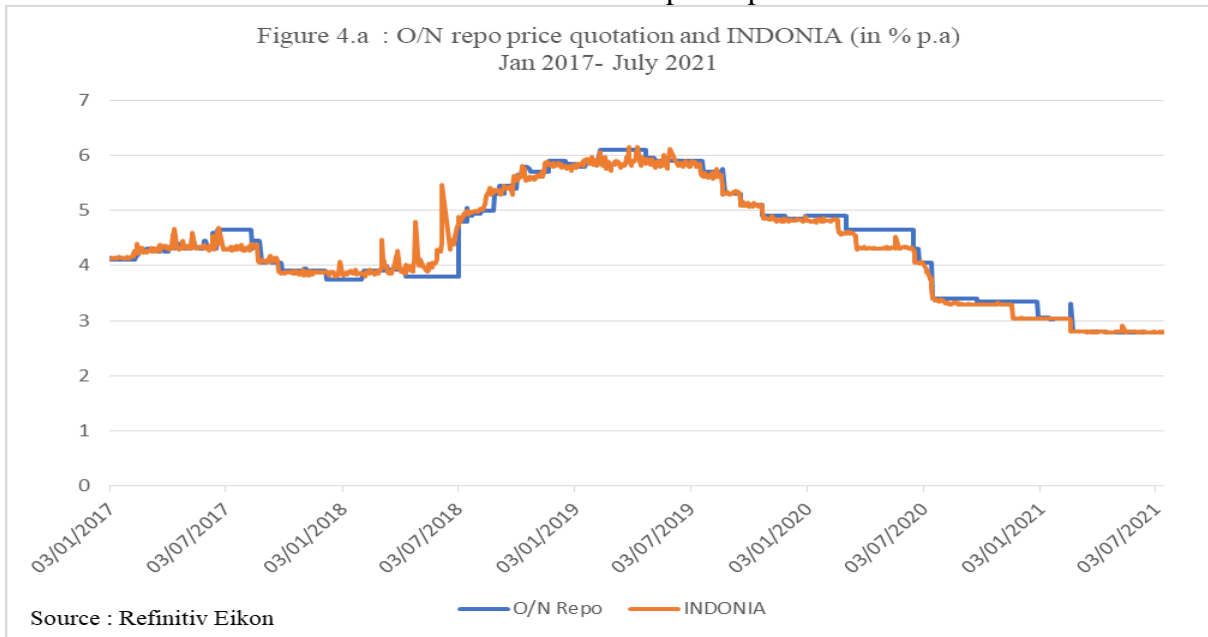


Figure 4.a : O/N repo price quotation and INDONIA

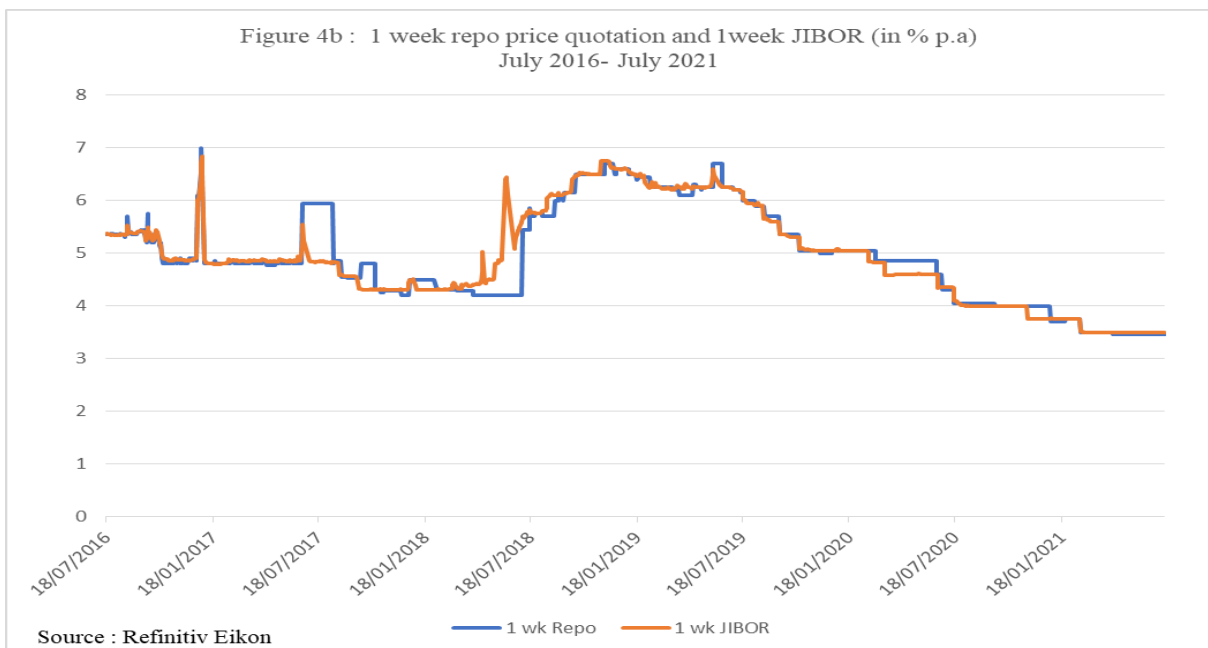


Figure 4.b : One week repo price quotation and One week JIBOR

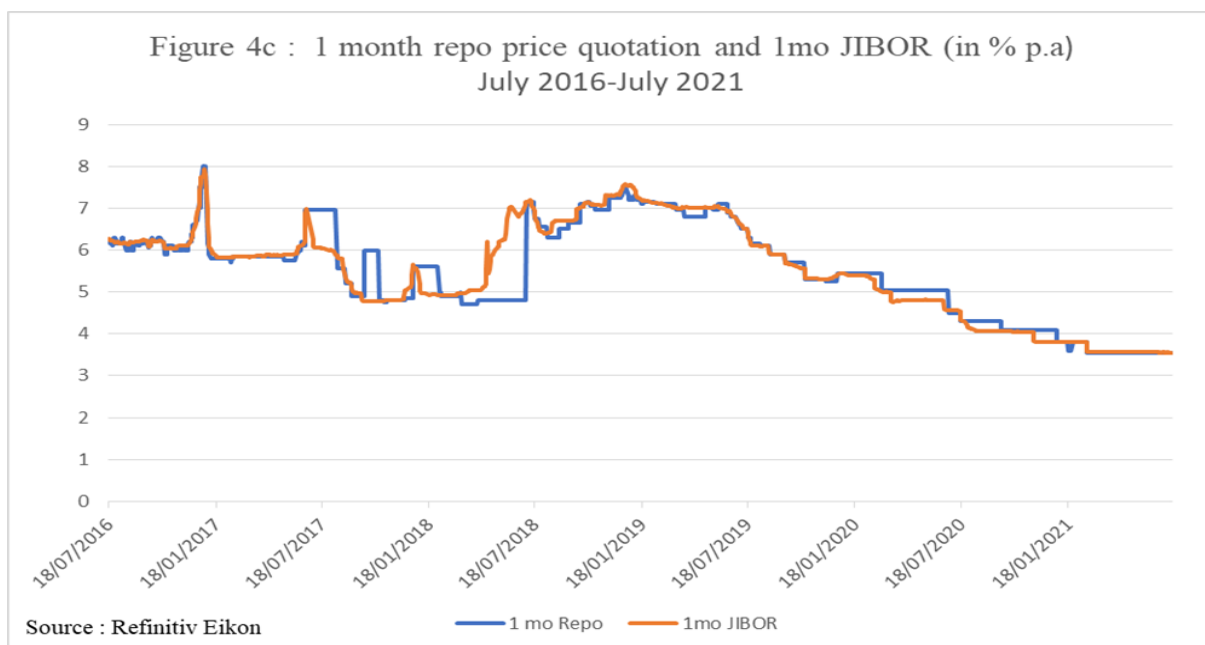


Figure 4.c : 1 month repo price quotation and 1 month JIBOR

The Analysis of Interbank Repo Pricing

In order to help to analyze Indonesia's situation, this paper studies research conducted in the Japanese repo market. Although the Japanese repo market is more developed, a similar phenomenon of repo pricing was identified and analyzed at some point. More than 99 percent of repo transactions are collateralized by Japan Government Bonds (Fukunaga and Kato 2015). Overnight repo contributed large volume of trade in the market and most deals are settled on the next business day (T+1). The approximate amount of the General Collateral (GC) repo was roughly half of the total amount outstanding.

According to Baba & Inamura (2004) and Fukunaga & Kato (2015), unlike in the United States and many other countries, Japanese GC repo rates were higher than uncollateralized call rates, despite the fact that the former was backed by collateral.

According to Fukunaga and Kato (2015), the segmentation of the Japanese repo and call markets was an important factor in explaining these characteristics. In the Japan repo market, securities companies are the main cash borrower (securities lenders), while banks are on the cash lender side of the market.

Baba and Inamura (2004) identified a difference in fund demand structure between GC repos, interbank call money, and the so-called euro-yen market. Trust fund, city, long-term credit, and banks are the primary lenders in the Japanese GC repo market. These lenders can construct arbitrage positions by utilizing the repo, euro-yen, and call markets. Securities firms, on the other hand, are the primary borrowers in repo markets. They had few other options for raising funds.

According to Baba and Inamura (2004), the difference could be attributed to transaction practices and the fund demand structure in each market. The transaction practices include i) the increase of settlement and collateral management cost for repo in Japan has increased, ii) length of time between the contract date and the settlement date differs between GC repo and uncollateralized borrowing (T+2 versus T+0) which gives some uncertainty on the availability of funding in the next two days. Fukunaga and Kato (2015) recognized that the additional transaction costs imposed by collateral and risk management may make repo funding more expensive.

GC Repo rates should be priced near the risk-free interest rate. Griffiths and Winters (1997) discovered that in the United States, GC repo rates moved almost parallel with the uncollateralized federal funds (FF) rate. The GC repo rate moves a few basis points below the uncollateralized FF rate in the United States.

The repo rate is calculated by subtracting the interest rate from the securities lending fee. By definition, all funds are of equal quality, and we can assume that the repo rate should equal to the average rate of uncollateralized lending, such as interbank call money minus securities lending fees. Since the market only uses GC repo, we can assume that the securities lending fees are on the same level.

In the Indonesian money market, as explained before, despite the fact that GC repos have a near-risk-free characteristic, repo rates are priced at a comparable level or even occasionally higher compared to interbank call money across various tenors. According to Choudhry (2010), The GC rate tracks the interbank rate firmly, as a reflection of the supply and demand for short-dated repo compared to interbank borrowing and lending. The GC rate as mentioned by Duffie (1996) is the highest repo rate.

Golaka (2013) investigated the factors influencing the spread between the repo and call markets in the Indian repo market. To analyze the determinant of the spread, the authors provided a linear regression model. The based theory was that the spread should be dependent on the Liquidity Adjustment Facility (a form of central bank support), money market activity, lagged spread, and interest rate corridor. The spread/gap between these two instruments should also be affected by the state of liquidity condition or market stress level. Tight liquidity condition often leads to an increase of stress in the market, which in turn caused the spread between collateralized (repo) and uncollateralized rates (interbank call money) to widen.

In the case of Indonesia, the transaction practices factor (difference in settlement date between interbank call money and repos) cannot be the reason for the pricing phenomenon since both repo and call money can be settled within T+0 or T+1. It is true that there is some additional layer of complexity on the operational aspect of repo trades compared to interbank calls. This cost is mostly related to the amount of extra work associated with settlement, reporting, confirmation, and post-trade monitoring. However, since most of the terms of the trades are OTC bilateral, short-dated, and standard in nature, there is no significant investment in new infrastructure. This aspect of transaction practices should not contribute much to the additional price for repo.

The following factors influence pricing in the Indonesia repo market today:

- Excess liquidity condition in the banking system and dependency on other money market instruments

In a market with flush liquidity, a borrower has options to manage their liquidity needs through various instruments, including call money and repo with the central bank. On the other hand, banks with liquidity surplus will have the discretion to lend the fund or invest the fund to other venues. The share of repo transactions in interbank money market transactions in Indonesia had been relatively small. This is different from other more developed countries such as Thailand, Korea, Japan, and China where repo dominates money market transactions.

There has been an increase in repo volume since the beginning of 2021 although most of the repo transactions are overnight in nature. As illustrated in Figure 5, we compare the average daily volume of the interbank call money (PUAB), interbank call money sharia, and repo across the most liquid tenor (overnight, one week, and one month).

In the case of the Indonesian market where its market size of interbank call money (PUAB) is more established and dominant than repo, the borrowers and lenders do not have much incentive to prioritize repo. The market has high dependency on the interbank call market and Bank Indonesia's

open monetary operation as the main instrument in the money market.

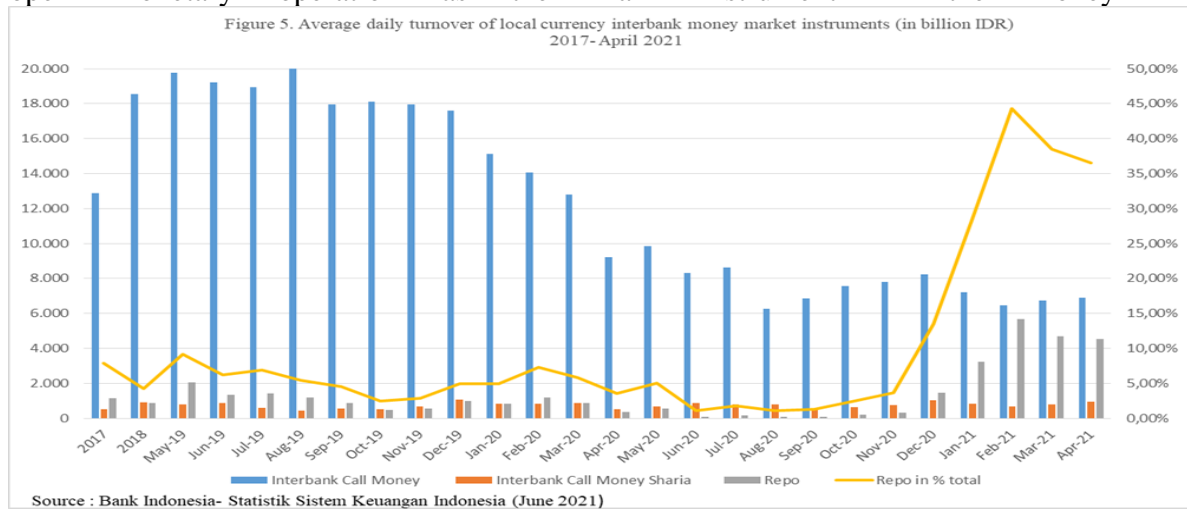


Figure 5. Average daily turnover of local currency interbank money market instruments

- Segmented market in the repo market and limited market participants create inefficiency in the pricing discovery process.

In Indonesia, all of the bond repo transactions are either related to central bank monetary operations or interbank repo trade. Figure 6 illustrates the average number of market participants in interbank call money and interbank repo on a daily basis. The market participant in Indonesia’s bond repo market is limited to 20-30 banks, which mostly enter into the overnight repo or short-dated repo (Figure 7). In this market, both the cash lenders and cash borrowers are banks only. Market makers are predominantly a few big banks (Bank BUKU 4) which are by default amongst the biggest banks in terms of assets. Other players are smaller banks (Bank BUKU 3). There are no other market participants such as securities and money market funds, unlike in other developed markets. In more developed markets, other type of market participant, such as non-bank financial institutions, actively trade repo on a larger scale.

In the pure OTC market with limited participants and all within the same segments, there is not enough supply-demand dynamic happening in the market. Market makers (banks) hold the bargaining position and dictate the flow of transactions with other banks.

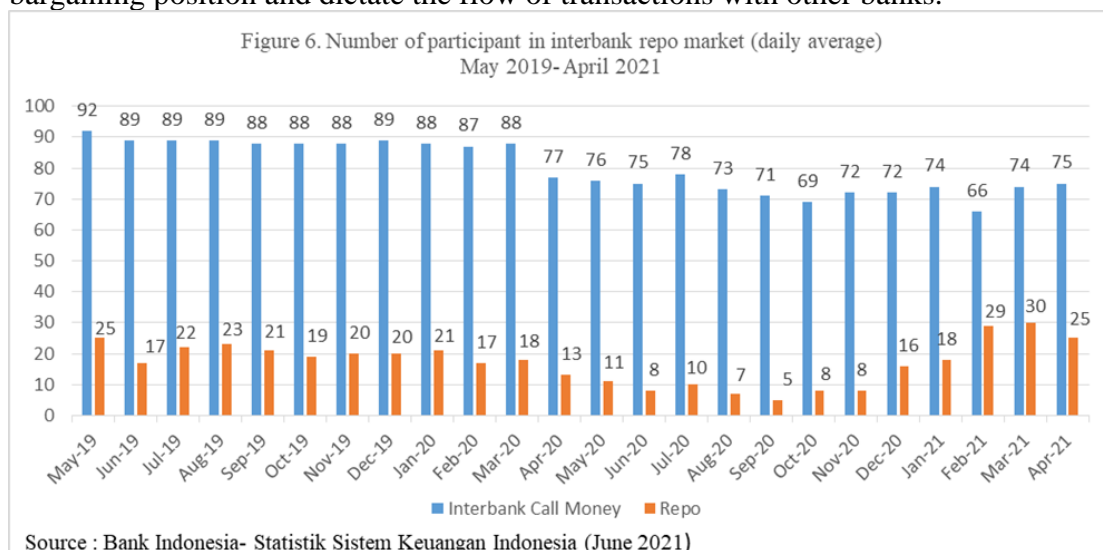


Figure 6. Number of participant in interbank repo market

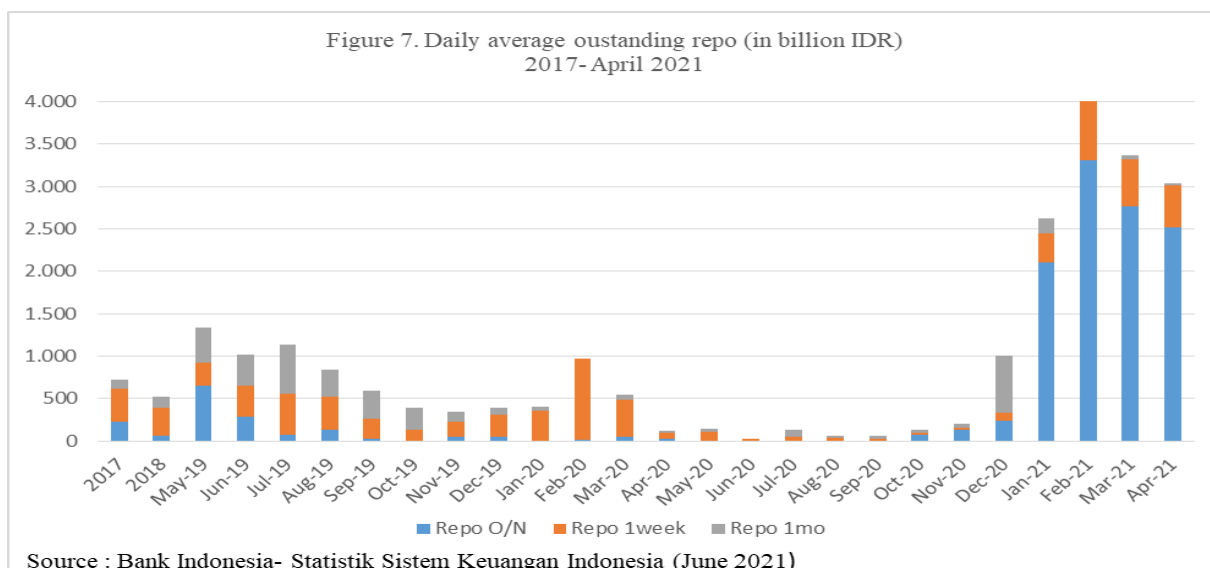


Figure 7. Daily average of outstanding repo

CLOSING

The important role of Repo in creating a resilient money market and reducing systemic risk must lead to continuous effort to shift away from too much dependency toward unsecured borrowing (call money). The repo market ideally should be larger than the interbank call money. More active participants and market makers are needed in the repo market.

Repo pricing in the interbank market must be attractive enough for the borrowers and the benefit of doing repo must be substantial for the lenders. Some market participants felt that the spread between interbank repo interest and central bank repo is too tight (around 20bps at the moment for one week tenor) making it unattractive. Borrowing cash from the central bank via repo carries more benefit for banks because it will not reduce their secondary reserve. When a repo borrower enters repo trade with another bank and transfers the underlying government securities, it will reduce the level of secondary reserve. Smaller banks may not be able to utilize the repo facility without reducing the secondary reserve level because the interbank repo market only uses government securities as the collateral. The habit of banks to borrow on short-dated-tenor and run a gap risk also diminish the incentive to borrow longer tenor with repo.

In order to improve the situation, regulators can support the market by conducting the following actions:

- Updating the current policies.
Regulators must give more incentives for participants in building secured lending/repo positions with other banks and discourage high exposure/dependency on interbank call money. There must be policies to control the exposure or degree of high dependence on short-dated unsecured call money.
- Effort should be made to enhance repo markets by attracting more market participants.
Regulation relaxation and a clear guidance are essential to allow more market participants from non-bank financial institutions, especially bond investors such as insurance, mutual fund, and pension funds. Efforts should be made to enhance repo markets by attracting more market participants. Other barriers to entry for non-bank financial institutions are unclear regulatory and

supervisory consensus on the tax treatment and legal aspect. These are issues that need to be addressed jointly by different stakeholders.

- Continuous market education and moral suasion.

The bank and non-bank financial institutions also play a crucial role to increase market awareness on the benefit of repo transactions from risk management and economic/business perspective. Ideally, participants should discover on their own that repo (collateralized lending) is better than interbank call or unsecured lending. The fact that many have not shown that some knowledge must be shared.

- Improve the repo infrastructure and pricing discovery process

The establishment of CCP, tri-party repo product, and electronic matching trading platform are important to scale up the market capacity. Simplification of settlement, reporting mechanism, and standardization of post-transaction monitoring will encourage smaller-size institutions to participate more in the repo market. The visibility of repo pricing, daily trading data, availability of trading platform, and standardization of repo arrangement can improve the transparency in the market. In the next step, the regulator and participants must also consider developing a repo market for corporate bonds. The development will foster liquidity in the corporate bond market and help to grow the capital market.

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