Note on the profile of repurchase transactions on the JSE Limited

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Introduction

Repurchase transactions, loosely referred to as 'repos', are widely used in the financial markets. They constitute one of several types of transactions catered for in the secondary bond market on the JSE Limited (JSE). While it is well known that large amounts of funds flow through the repurchase market on a daily basis, the detailed information on the bond market obtained by the South African Reserve Bank (the Bank) makes it possible to measure and analyse numerous dimensions of the formal market in repurchase agreements. The purpose of this note is to explain the profile of repurchase transactions, including the definition and working of repurchase agreements; the underlying instruments used; the active sectors and countries in this trade type; and the maturity spectrum of, and the average interest rates on repurchase transactions.

Definition and working of repurchase transactions

A repurchase agreement is an agreement between two parties whereby one party sells a security to the other at a specified price with a commitment to buy the security back at a later date. The second price (determined at the time of the first leg) is the price of the first leg plus the repurchase interest, often called the 'carry rate'. The difference between the first and second price is the cost of carry. Any repurchase transaction therefore has two trade legs; (1) the near leg and (2) the far leg. For the party buying the security and agreeing to sell it later (buyer), the agreement is referred to as a 'reverse repurchase agreement'.

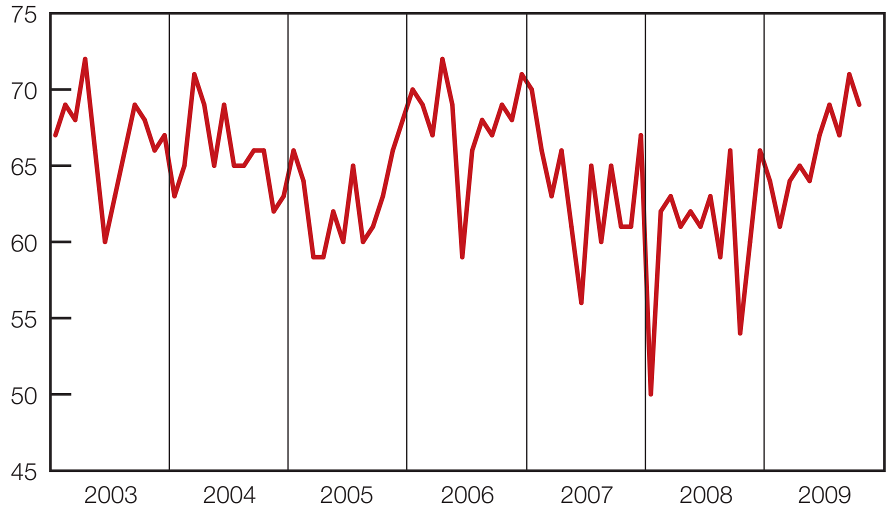
In a repurchase transaction the original owner retains or is entitled to any proceeds that accrue to that security while it is temporarily sold, as the risk and return on the collateral are retained by the temporary seller. The legal transfer of ownership and use of funds are temporary, since a repurchase agreement is economically similar to a secured, collateralised loan, with the difference being that in the case of a loan the collateral is only pledged to the party providing finance, with no legal change in ownership. Repurchase agreements are also not the same as securities (scrip) lending as in scrip lending the party obtaining the assets is the borrower and not the buyer, while the party providing the assets is the lender not the seller, with a fee paid to the lender and not interest as in a repurchase transaction. A distinction can also be drawn between classical repurchase transactions and buy/sell-backs; the main difference being the treatment of the coupon payment. In a classic repurchase transaction the coupon is paid by the buyer to the original owner on the coupon payment date, whereas in the case of buy/sell-backs the coupon payment is included as part of the price of the second leg of the trade.

By contrast, 'outright transactions' (all trades excluding repurchase transactions) refer to the purchasing or selling of securities and, unlike repurchase transactions, do not involve the obligation or agreement to re-sell or repurchase those securities. With outright transactions, the ownership of securities is transferred to the buyer and remains with the buyer until maturity of the security or until the choice to trade the security is exercised.

The significance of repurchase trades in the secondary bond market on the JSE is reflected in the considerable contribution they made towards total turnover as indicated in Figure 1. On a monthly basis, repurchase agreements constituted between 50 and 72 per cent of total turnover.

1 The views expressed are those of the authors and do not necessarily reflect the views of the South African Reserve Bank. The authors wish to thank J P van den Heever, M Kock and Z Nhleko for their comments and inputs.

Figure 1 Repurchase turnover as a percentage of total turnover



Underlying instruments in repurchase trades

Although repurchase trades are conducted across a wide spectrum of securities, government bonds dominate. For instance, in October 2009, 96 per cent of repurchase turnover in the secondary bond market involved government bonds – mainly conventional, but also inflation-linked bonds (Table 1). Of the total repurchase turnover in inflation-linked bonds the R189 (maturing in 2013) accounted for 70 per cent and within conventional government bonds the R157 (maturing in 2014/2015/2016) and the R186 (maturing in 2025/2026/2027) accounted for 57 per cent.

Table 1 Repurchase turnover by type of instrument, October 2009

Issuer and type	Percentage contribution to total repurchase turnover
National government	96
Conventional bonds	*92*
Inflation-linked bonds	*4*
State-owned enterprises	3
Private sector	1
Total	100

Main sectors and countries participating in repurchase agreements

The domestic banking sector accounted for half of the trading activity in October 2009, with the other participants mainly being non-residents and the rest of the domestic financial sector, which includes finance companies, financial controlling companies and private-sector financial auxiliaries. The non-resident and other domestic financial sectors jointly accounted for around 38 per cent of trading activity. The monetary authority and public non-financial corporate sectors contributed to a lesser extent to total turnover as specified in Table 2. Repurchase transactions are used by the Bank to manage and control liquidity in the money market.

Table 2 Repurchase turnover by type of participant, October 2009

Institutional sectors	Percentage contribution to total repurchase turnover
Banks	52
Other financial institutions	26
Public non-financial corporate sector	5
Monetary authority	2
Public-sector pension and provident funds	1
Unit trusts	1
Public-sector financial intermediaries	1
Non-residents	12
Total	100

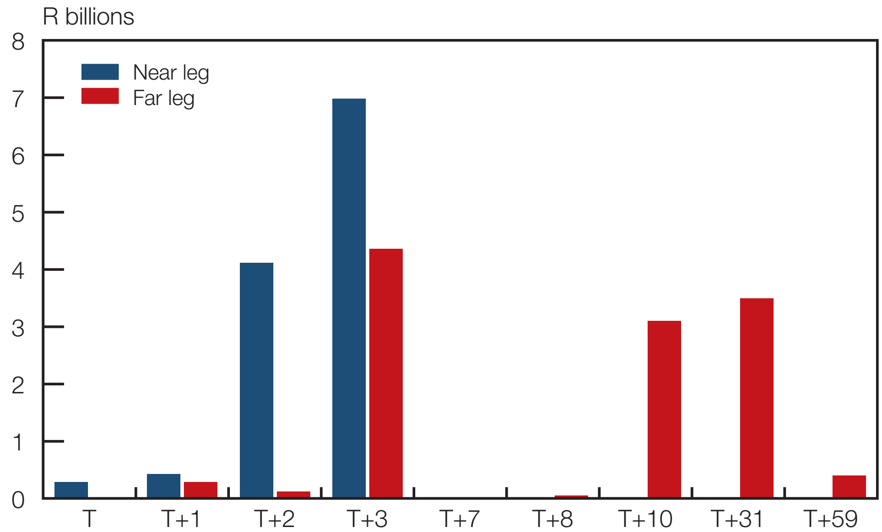
About 99,6 per cent of the repurchase transactions conducted by non-residents are by parties domiciled in the United Kingdom, with Namibia and the United States the only other countries involved in repurchase trades in South Africa in the first ten months of 2009.

Maturity spectrum of, and interest rates on repurchase transactions

The flexible maturity structure of repurchase trades is entirely independent of the maturity of the underlying security. Considering all repurchase trades on a normal[2] day, the repurchase turnover for every settlement is depicted in Figure 2. Settlement on a T+3 basis dominated trade as it accounted for nearly half of the number of repurchase trades and turnover on this day.

2 A normal trading day has an average number of repo trades, and is not an auction day or the day before a major announcement, for example, the Monetary Policy Committee's announcement of the repurchase rate.

Figure 2 Turnover of repurchase transactions across settlement dates



T = 19 October 2009

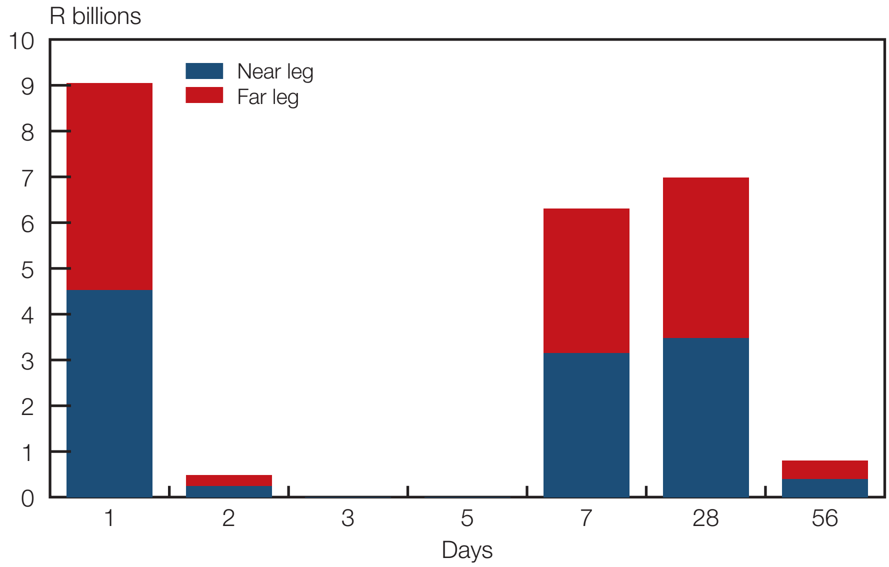
Table 3 shows that the near leg settlement date of 22 October 2009 and the far leg settlement date of 17 December 2009 – with a difference of 56 days – generated the highest average value per transaction.

Table 3 Repurchase trades entered into on 19 October 2009

Near leg settlement date	Far leg settlement date	Difference in settlement (Days)	Number of transactions	Value of transactions (R millions)	Average value per transaction (R millions)
19 October 2009	20 October 2009	1	4	574	144
19 October 2009	22 October 2009	3	4	5	1
20 October 2009	21 October 2009	1	8	251	31
20 October 2009	22 October 2009	2	16	489	31
20 October 2009	27 October 2009	7	10	110	11
21 October 2009	22 October 2009	1	200	8 226	41
21 October 2009	26 October 2009	5	2	3	1
22 October 2009	29 October 2009	7	26	6 198	238
22 October 2009	19 November 2009	28	26	6 981	269
22 October 2009	17 December 2009	56	2	804	402

In 71 per cent of the trades the difference in settlement between the near leg and the far leg was one single day and accounted for 38 per cent of total repurchase turnover (Figure 3 and Table 4).

Figure 3 Turnover per difference (in days) in settlement between the near leg and far leg of repurchase trades



Annualised interest rates were calculated for each repurchase trade on 19 October 2009. Table 4 shows the average annualised interest rates calculated from each difference in settlement. These rates are similar to the Johannesburg Interbank Agreed Rates (Jibar) for October 2009, namely 6,95 per cent (1 month), 7,16 per cent (3 months) and 7,63 per cent (6 months). This confirms the point that repurchase agreements are essentially collateralised lending over money-market time horizons and at money-market interest rates.

Table 4 Interest rates per difference in settlement, 19 October 2009

Average interest rates per difference per annum (Per cent)	Difference in settlement between near leg and far leg (Days)	Percentage of the number of trades in each difference category to total trades (Per cent)
7,05	1	71
7,02	2	5
6,72	3	1
6,87	5	1
7,12	7	12
7,76	28	9
6,95	56	1

Conclusion

Repurchase transactions are well developed and this trade type forms an integral part of the secondary bond market on the JSE with regard to turnover and market liquidity – especially in respect of liquidity in the government bond sector – and therefore help to attract investors. Repurchase trades are settled mostly over a very short period, and the difference between selling and repurchase prices translates to annualised interest rates similar to those in the money market, such as the Jibar rates.