

Lifecycle of transactions

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This chapter looks at the lifecycle of a repo and securities lending transaction, from inception (trading and settlement), during its term (income payments and corporate events) through to maturity or early unwind.

For a more precise understanding of the contractual obligations which underpin much of what is said in this chapter, reference should be made to the provisions of the underlying documentation between the parties. This chapter assumes the underlying documentation to be the 2000 Global Master Repurchase Agreement (GMRA) (for repo and buy/sell-backs) or the 2010 Global Master Securities Lending Agreement (GMSLA) (for securities lending), in each case discussed in detail elsewhere in this book. There would be slight differences if other versions of those documents had been used. Some, but not all, of these differences are noted.

Additional guidance on market practices, conventions and best or recommended practices can be obtained from the “Guide to Best Practice in the European Repo Market” published by ICMA (latest edition October 2014) and the “Securities Borrowing and Lending Code of Guidance” published by the SLRC (latest edition July 2009, but in the process of being updated at the time of writing).

1. Doing the trade

The trade itself may arise in any number of ways depending on the circumstances.

A holder of stock may proactively offer its securities as being available for borrowing by a panel of approved borrowers. In practice, this will often be arranged through an agent lender on its behalf who will enter into stock loans for their lender client.

A corporate treasurer looking to invest cash may call up a relationship bank and request that an amount of cash it holds be invested in repo. Alternatively, an owner of securities may use repo to seek to raise finance on the inventory that it is holding or is about to purchase.

The trade may also come to exist through one of the many automatic borrowing and lending facilities operated by the clearing systems or through a trading platform.

The trade may be agreed via the telephone, by email or via an electronic messaging system or it may be generated automatically or through an order matching system. The date on which the deal is struck is then the trade date. Where the trade is only agreed orally or otherwise than through a matching system there will be a separate trade confirmation generated by either or both parties which will be exchanged and agreed – which may itself occur by physical signature of paper confirmations, email exchange or through an electronic messaging system. The confirmation, once agreed, will then

become the definitive source of the terms of the trade and will supersede the initial oral agreement. Until that time, however, there is still a binding contract as long as all the key trade terms are sufficiently clear at the outset. Confirmations are typically issued and agreed on the same day as the trade date.

It is also increasingly best practice periodically to reconcile trade details subsequent to the trade in order to affirm its terms and so identify any breaks (mismatches) and hopefully avoid future disputes.

2. Pricing rates, initial margin and collateral

How the trade is priced will depend on the type of transaction and is best shown by reference to simple illustrations.

Repo rates are usually bilaterally agreed specifically for each transaction but there are quoted repo rates for general collateral repo published by the major pricing sources. Central banks also have published rates at which they will buy back government bonds from the banks that they regulate. Since the financial crisis, central banks have also been purchasing by way of repo asset-backed securities subject to certain qualification criteria being met.

Stock lending fees are similarly bilaterally agreed. There are standard lending fee rates for very liquid stocks on the main markets but fees can be significantly higher for stocks that are less liquid or are 'special' (ie, in demand). Where cash collateral is posted to the lender of stock the fee may be quoted as a 'rebate', reflecting the fact that the lender will earn interest on the cash collateral and 'rebate' it to the borrower of the stock.

The following paragraphs give some example transactions.

2.1 Classic repo

The holder of €100 million principal (or face) amount of 1.5% 10-year German Bunds wishes to raise finance on them for one week. It approaches the repo desk of one of its relationship banks and agrees a repo rate of 0.1% for the financing. A 2% haircut for repos of G7 government bonds is agreed. The deal is done. The trade will settle (ie, the purchase date will occur) on T+1¹ (the day after the trade date).

The settlement date for a repo is usually a day earlier than in the conventional settlement cycle for transactions in the cash market for the securities themselves, as repo market settlement conventions follow money-market conventions and earlier settlement is required in order to enable repo securities to be used by the buyer for settlement of onward sales. Non-bank sellers might need to extend this settlement to correspond to the cycle in the cash market for the securities.

Assume that the clean market value of the Bunds is €106,330,000. The accrued interest on the holding of the Bunds at the purchase date is €719,180 giving a 'dirty' price (including the accrued coupon) of €107,049,180. Applying a 2% haircut to the market value of the Bunds means that the seller of the Bunds (ie, the person borrowing the cash) can raise €104,908,200 (or €107,049,180 × 98%) from its holding. This is the initial purchase price.

1 With the European cash bond markets moving to T+2 in October 2014, the repo settlement convention changed to T+1.

It should be noted that the initial margin under the GMRA is actually expressed as the value of collateral (purchased securities), as a percentage of the purchase price, not as a discount to the value of collateral (purchased securities).² Mathematically, an initial margin of 102% is the same as applying a haircut of 1.961% to the value of the Bunds, not 2%.

Slightly different repo rates will apply to different financing periods and different haircuts will apply to different types of asset, although there are conventional categorisations and haircuts for the main asset classes. The more volatile the price of the security and the less liquid, the higher the haircut. As it is this which protects the buyer in case the seller defaults, the haircut should be adequate to allow for possible changes in value of the collateral for the period of time it takes to close-out and then liquidate the collateral since the last movement of margin was made. Haircuts may also be higher to reflect the term of the transaction and the creditworthiness of the counterparty.

2.2 Buy/sell-back

With a buy/sell-back transaction it is the repurchase price that needs to be agreed. So in the above example, had the parties instead entered into a buy/sell-back, they would have instead agreed an initial purchase price of €104,908,200, a repurchase date seven days after the initial settlement date and a repurchase price of:

$$€104,908,200 + [€104,908,200 \times 7/360 \times 0.1\%] = €104,910,240.$$

The implicit repo rate (0.1%) can be derived from the repurchase price as the daily rate of accrual of the excess of the repurchase price over the purchase price.

In practice, however, the parties will still actually agree the repo rate and then use it to calculate the repurchase price. This calculation is not always as straightforward as in the above example for reasons which are explained later in this chapter.

2.3 Stock loan

With a conventional stock loan the parties will agree what securities are to be lent, what period they are to be lent for (if not open-ended, on demand) and what lending fee will apply. The types of collateral which can be posted and the haircuts which will apply to each type are typically pre-agreed in the GMSLA.

Take an example of 1 million shares in SAP AG being lent for a week against non-cash collateral at a fee of 0.5%. The initial price of SAP AG shares is €53.70. Collateral having a margin (or 'haircutted') value of €53,700,000 will therefore be required to be posted to the lender of the stock. The borrower chooses to post 3.75% five-year OATs (French government bonds) as collateral which have a pre-agreed 'margin percentage' of 105%. The clean price of the OATs is 117.22 and there is accrued interest on the OATs giving a dirty price of 117.34. The borrower of the SAP AG shares will have to provide OATs to the lender of the stock by way of collateral having a market value of:

2 The 2011 GMRA now allows for both methods of expressing initial margin to be used.

$$€53,700,000 \times 105\% = €56,385,000.$$

The principal amount of OATs to be provided will therefore be:

$$€56,385,000 \div 117.34\% = €48,052,667.$$

3. Settlement at the outset

In all cases, initial settlement will occur on the agreed or customary standard settlement date (by reference to the applicable market convention and trade date). On that date there will be a transfer of securities against cash or collateral.

In the repo example, on the initial settlement date, the seller will transfer €100 million principal amount of the Bunds to the buyer, who will pay €104,908,200 to the seller. In the stock loan example, the lender will transfer 1 million shares in SAP AG to the borrower and the borrower will transfer to the lender €48,052,667 principal amount of the OATs.

Transfers are almost always made on a delivery-versus-payment (DvP) basis through one of the international or local clearing systems that settle transactions in the relevant securities or by debiting and crediting cash and securities accounts held by the parties with a tri-party agent. DvP settlement removes inter-day settlement risk (ie, the risk of one party meeting its transfer obligation and the other party failing to meet its corresponding payment or transfer obligation).

4. Interest/fee accrual

4.1 Classic repo

Repo interest accrues at the agreed repo rate for each day during the term of the repo on the amount of cash lent. In the classic repo example, with a repo rate of 0.1%, accrued repo interest on day three is therefore:

$$€104,908,200 \times 3/360 \times 0.1\% = €870.$$

4.2 Buy/sell-back

The same rate applies to the buy/sell-back example but the way to view it is that the accrued repurchase price as at day three is €104,909,070, being the original purchase price plus accrued repo interest at the repo rate *implicit* in the trade terms.

4.3 Stock loan

With the stock loan example, there is no interest as such (as the collateral posted was not cash) but there is an accrued lending fee. In order to determine that fee we need to know the SAP AG share price for each of the three days on which the stock loan has been outstanding. Assuming an average share price for the three days of €52.57, the accrued lending fee (at an agreed rate of 0.5%) will therefore be:

$$€52.57 \times 1,000,000 \times 3/360 \times 0.5\% = €2,190.$$

Note that repo interest and lending fees are not paid each day; they are either paid at maturity (in the case of a repo) or periodically (typically monthly in the case of on-demand (or 'open') stock loans). With longer-dated term transactions, periodic payments may also be required and the repo rate itself may be reset during the term of the transaction.

This is an extract from the chapter 'Lifecycle of transactions' by Guy Usher in Repo and Stock Lending: A Practitioner's Guide, published by Globe Law and Business.

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