Appendix 2. Reverse Security Transactions

Introduction

1. A reverse securities transaction is defined in the *Guide* to include all arrangements whereby one party legally acquires securities and agrees, under a legal agreement at inception, to return the same or equivalent securities on or by an agreed date to the same party from whom the securities were acquired initially.[1] These arrangements are known as repurchase agreements (repos), securities lending, and sell-/buybacks.[2] Where cash is involved, the economic nature of the agreement is similar to that of a collateralized loan in that the purchaser of the security is providing funds collateralized by the securities to the seller for the period of the agreement and is receiving a return from these funds through the agreed fixed price at which the securities are resold when the agreement is reversed.

2. As outlined in Chapter 3, securities that are provided under a reverse securities transaction are reported as remaining on the balance sheet of the security provider. The supply and receipt of funds under a security repurchase agreement is treated as a loan or deposit. It is a loan, unless classified as a deposit in national measures of broad money. If a securities repurchase agreement does not involve the supply of cash (i.e., there is an exchange of one security for another, or one party supplies a security without collateral), there is no loan or deposit. If the security taker sells outright these securities so acquired, the security taker reports a negative (or "short") position in the security.

3. This appendix provides background information on reverse security transactions and four examples of how these positions should be recorded in the gross external debt position.

What Are These Instruments?

Repurchase Agreements (Repos)

4. Under a repo, securities are provided for cash with a commitment by the seller (security provider) to repurchase the same or similar securities for cash at a fixed price on a specified future date. The security taker views the transaction as a *reverse repo*. The security taker earns interest on the cash advanced through the difference between the selling and buying rates for the securities; interest is related to the current interbank rate and not that of the security being "repoed".[3] Full, unfettered ownership passes to the security taker, who can on-sell the security, but the market risk—the benefits (and risks) of ownership (such as the right to holding gains—and losses)—remains with the security provider, who also receives the property/investment income attached to the security, albeit from the security taker rather than the security issuer, i.e., the commitment to reverse the change in legal ownership in the future at a fixed price means that the original owner retains the risks and rewards of changes in the price of the asset. Originally, it was intended that the security taker's right to on-sell would be invoked only

[1] The commitment to repurchase may be either on a specified future date (often one or a few days hence, but also further in the future) or an "open" maturity.

[2] Repos, securities lending with cash collateral, and sale-/buybacks are different terms for arrangements with the same economic effect as a securities repurchase agreement—all involve the provision of securities as collateral for a loan or deposit. A repo is used as a term from the perspective of the security provider, while a reverse repo is used from the perspective of the security taker. Sell-/buybacks are the same as repos in economic effect, but are less sophisticated operationally. If the seller acquires an option rather than an obligation to buy back the security, the arrangement is sometimes called a *spurious repurchase agreement*. Such a transaction is not considered to be a reverse security transaction in the *Guide*.

[3] In the event that a coupon payment is made during the life of the repo, this is taken into account when determining the funds to be repaid. However, market participants endeavor to avoid such a situation if possible.

in the event of a default by the security provider, but as the market has developed, the right to on-sell at the security taker's option has become commonplace.

5. Repos are actively used in international financial markets. They often have a very short overnight maturity, but are also for longer maturities (sometimes up to several weeks), or have an "open" maturity (i.e., the parties agree daily to renew or terminate the agreement). Several different types of institutions are involved. Most commonly, financial institutions transact with other financial institutions, both domestic and nonresident, and central banks with domestic financial institutions and other central banks. However, nonfinancial enterprises and governments may also use repos.

6. Repos are undertaken for a variety of reasons:

- To finance security purchases, i.e., the security provider acquires a security outright and then sells it under a repo to help finance the position
- To increase liquidity by raising funds while retaining exposure to market price movements in the security, i.e., the security provider may want a longer-term position in the security but may also require cash in the short term
- To acquire securities in order to cover a negative (or "short") position, i.e., the security taker takes a negative position in the security, thus benefiting from market price declines
- To take leverage positions in securities through a program of buying securities, repoing them out, purchasing more securities with the cash acquired and so on, with only the requirement for margins limiting this activity, i.e., the security provider creates a large positive exposure to movements in the price of the securities without having to fully fund this exposure with own funds
- Central banks use repos as an operational tool to ease or drain liquidity in the domestic financial markets—in many countries, the repo rate (the rate paid by the borrower in a repo transaction) is the benchmark rate for central bank market lending

7. Chains of repos and reverse repos are common practice in financial markets as highly creditworthy market players raise funds at lower rates than they are able to on-lend. In this manner, the repo market is part of broader financial intermediation activity.[4] The development of repo markets can increase the liquidity of a money market while, at the same time, deepening the market for the underlying securities used (frequently government securities, but not necessarily), leading to finer borrowing rates both for money market participants and governments.

8. Usually, the security provider in a repo is the initiator of the transaction, which tends to place the security taker in a slightly stronger negotiating position. These are called "cash-driven" repos. In these circumstances, the security provider is not required to provide a specific security—a list of acceptable securities is generally available. Frequently, substitution of the security is permitted during the life of the repo, i.e., the security provider may wish to access the security repoed and so usually is permitted to do so by substituting it for another of equal quality (generally, one on the list of acceptable securities). The right to substitute securities will usually affect the rate of interest charged on the repo.

9. In certain circumstances, one party may have need for a specific type of security. These transactions are known as "securities-driven" repos. They result when a particular security goes "special", i.e., is in very high demand and there is insufficient supply to meet commitments. In these circumstances, cash is provided as collateral (noncash collateral is discussed under *Securities Lending,* below) and the security provider is in a stronger bargaining position. In essence, when a security-driven transaction takes place, the security provider is prepared to accept cash in return for the security "lent," provided that the provider can be compensated for the risk of lending by obtaining a sufficient spread between the interest to be paid on the cash received and what can be earned in the money market. In extreme cases, when the security may be unavailable from any other source, the interest rate on the cash received may fall to zero.

[4] Repo market players may have matched or unmatched books: in a matched book, maturities of all repos out are the same as those for repos in; in an unmatched book, the maturities differ, in which case the market player is speculating on movements in the yield curve.

10. Whether a transaction is cash-driven or securities-driven will affect which party pays *margin*. Margin payments provide one party with collateral of greater market value than the instrument being provided—the term "haircut" is sometimes used to describe this difference. Margin payments may be made at the outset—known as *initial margins*—and during the life of a repo—known as *variation margin*.[5] As the market value of the collateral falls, so variation margin is paid, restoring the margin to its original market value. If the transaction is cash-driven, the security provider will provide the margin; if the transaction is securities-driven, the security taker will provide the margin. Margin may be cash or securities.

11. Market and credit risk affect the amount of margin provided. The market risk is that of the underlying security—the more variable the market price of the security, the greater the margin; the credit risk is that of the two counterparties to the repo to each other—the greater the perceived credit risk of the margin provider, the higher the margin. In both instances, the higher margin protects the margin taker against the higher probability of adverse developments. Because each party at the inception of a repo is equally exposed to risk, in many developed financial markets, initial margin may not be required if the credit standing is approximately equal (monetary authorities usually ask for initial margin and rarely, if ever, pay initial margin), but variation margin is usually provided when the market price of the security falls. On the other hand, when the value of the security rises, the security taker may or may not return part of the security's value as a "reverse variation margin," depending on the market's practices in any given country. In less developed capital markets, and depending on the depth and price volatility of the market of the security underlying the repo, initial margins of substantially more (possibly up to 25 percent) than the value of the cash provided may be required.

12. The legal and market arrangements for repos, including the payments of margin (whether initial or variation), the ability to substitute securities, and the retention of market risk by the security provider, support the view that repos are classified as loans, with the security remaining on the balance sheet of the security provider, i.e., there is considered to be no change of economic ownership of the security. This is certainly the way repos are viewed by market participants. On the other hand, given the change of legal ownership of the security, some argue that a security transaction should be recorded—the security provider no longer has a legal claim on the security issuer. In Chapter 4 a memorandum table to the gross external debt position is provided that can be used to present data on resident-issued debt securities that residents (1) provided to and (2) acquired from nonresidents under outstanding reverse transactions, including repo agreements. This table helps in tracking the change of legal ownership of these debt securities between residents and nonresidents and, more generally, the positions acquired under reverse transactions.

Securities Lending

13. Under a *securities lending agreement*, securities are provided under a legal agreement that requires the security taker to return the same or similar securities on or by an agreed date to the same party from whom the securities were acquired initially. No cash is provided by the security taker to the security provider in return for the acquisition of the securities, although a fee may be paid by the security taker and collateral provided (as in the form of other securities). If cash collateral is provided, the transaction has the same economic impact as a repo.

14. As with repos, full, unfettered legal ownership passes to the security taker, who can on-sell the security, but the market risk—the benefits (and risks) of ownership (such as the right to holding gains—and losses)—remains with the original owner of the security, who also receives the property/investment income attached to the security, albeit from the security taker rather than the security issuer. Therefore, there is no transaction in securities and—if no cash is involved—there is no loan. Because securities lending is a securities-driven activity, so the security taker initiates the transaction, which means that the bargaining advantage lies with the "lender" of the security. The level of the fee charged depends on the availability of the security. The payment may be made at inception or at the close out of the contract. In most cases, the original security owner considers the arrangements to

[5] Sale-/buybacks do not have margin payments.

be temporary and does not remove the securities or include the collateral on its balance sheet, since the owner retains the rights to any dividends or interest while the securities are on loan, albeit from the security taker rather than the security issuer.[6]

15. Security loans are actively used in financial markets. In many cases, the transfer of securities between holders is conducted by security depositories. The security owner will provide the depository with the general right to on-lend the securities subject to certain legal safeguards. As a consequence, frequently the owner of the security will be unaware that the security it owns has been sold under a securities loan agreement.

16. The primary purposes of securities lending are:

- For the security taker, the security is acquired in order to meet a commitment to sell the security, i.e., to cover a negative (or "short") position. The security taker can take leverage positions by selling securities it does not own and then covering the position with securities acquired under securities loans.
- For the security provider, the fee paid by the security taker generates income—the owner has a long-term position in the security, but through a securities loan earns additional income.
- The depository can earn extra fee income, which might be partially passed on to the security owner through lower custodial fees. The depository is more likely to be able to manage the collateral provided by the security taker than the security owner, who, in return for allowing securities to be lent, may pay lower custodial fees and not have the responsibility of managing the collateral provided.

17. Like repos, chains of securities lending can be established whereby brokers successively on-lend securities to brokers, dealers, or other parties. The lending chains are reversed when the securities are returned. Securities lending involves securities that may be issued by residents or nonresidents, by governments or by corporations, and can be either equities or debt instruments. Securities lending increases liquidity in the securities market as well as the timeliness of some trade settlements—especially for securities that trade infrequently or in small volume.

18. The securities taker will usually provide collateral in the form of other securities of equal or greater value to the securities "lent," providing initial margin, although in some instances no collateral is provided. If cash collateral is provided, the transaction has the same economic impact as a repo (discussed above). If the market value of securities placed as collateral falls relative to the value of the securities "loaned," the securities taker is usually required to place variation margin, to restore the relative position. If the value of the securities placed as collateral increases, the securities provider may or may not be required to return part of the collateral, depending on country practice.

19. Because of the requirement for the securities to be returned, the payments of margin, the retention by the original security owner of the market risks of the securities, and the right to receive income payments on the security, securities lent under security loans remain on the balance sheet of the original owner. If a security taker sells the security acquired under a security loan, a negative (or "short") position is recorded in the security, reflecting the obligation to return the security to the security provider. As noted above, Chapter 4 provides a memorandum table to the gross external debt position that can be used to present data on resident-issued debt securities that residents (1) provided to and (2) acquired from nonresidents under outstanding reverse transactions, including security lending agreements.

Recording Examples

20. To help compilers, some examples are set out in Table A2.1 of how different types of reverse security transactions should be recorded in the gross external debt position and in the memorandum table, when debt securities are involved.[7] These examples show the change in the position when resident-issued debt

[6] In instances where equities are loaned, the period of the loan usually avoids coinciding with a shareholders' meeting, or any other instance where voting rights are required to be exercised (such as for a takeover bid). However, it is not always possible to know when these situations will arise, and the arrangements usually permit the return of the equities to the original owner in such circumstances.

[7] When equity securities are involved in reverse security transactions, external debt is affected only if the equity securities are used as collateral to raise cash from a nonresident. In this instance, a loan is recorded.

Table A2.1 External Debt: Recording of Reverse Security Transactions

Transaction	Change in the Gross External Debt Position		Memorandum: Debt Securities Acquired Under Reverse Security Transactions: Change in the Position	
	Debt securities (+ = increase)	Loans (+ = increase)	Acquired by nonresidents from residents (+ = increase)	Acquired by residents from nonresidents (– = increase)
Example 1: Repurchase agreement (repo)				
(a) Resident of A sells the security under a repo to a nonresident.	—	+95	+ 100	—
(b) Following 1(a), the nonresident sells the security under a repo to another resident of A.	—	+95	+100	–100
(c) Following 1(a), the nonresident sells the security under a repo to another nonresident.	—	+95	+100	—
(d) Following 1(a), the nonresident sells the security outright to a resident of A.	–100	+95	+100	—
(e) Following 1(a), the nonresident sells the security outright to another nonresident.	—	+95	+100	—
Example 2: Repurchase agreement (repo)				
(a) Resident of A buys the security under a repo from a nonresident.	—	—	—	–100
(b) Following 2(a), the resident sells the security under a repo to another resident of A.	—	—	—	–100
(c) Following 2(a), the resident sells the security under a repo to a nonresident.	—	+95	+100	–100
(d) Following 2(a), the resident sells the security outright to another resident.	—	—	—	–100
(e) Following 2(a), the resident sells the security outright to a nonresident.	+100	—	—	–100
Example 3: Security loan				
(a) Resident of A "sells" the security under a security loan to a nonresident.	—	—	+100	—
(b) Following 3(a), the nonresident "sells" the security under a security loan to another resident of A.	—	—	+100	–100
(c) Following 3(a), the nonresident "sells" the security under a security loan to another nonresident.	—	—	+100	—
(d) Following 3(a), the nonresident sells the security outright to a resident of A.	–100	—	+100	—
(e) Following 3(a), the nonresident sells the security outright to another nonresident.	—	—	+100	—
Example 4: Security loan				
(a) Resident of A "buys" the security under a securities loan from a nonresident.	—	—	—	–100
(b) Following 4(a), the resident "sells" the security under a security loan to another resident of A.	—	—	—	–100
(c) Following 4(a), the resident "sells" the security under a security loan to a nonresident.	—	—	+100	–100
(d) Following 4(a), the resident sells the security outright to another resident of A.	—	—	—	–100
(e) Following 4(a), the resident sells the security outright to another nonresident.	+100	—	—	–100

securities are acquired by a nonresident from a resident, or vice versa, under a reverse security transaction. In all these examples, it is assumed that debt securities involved in the transactions are valued at 100, and any cash provided is valued at 95. Each example involves a transaction in a debt security issued by a resident of A. Each example specifies an initial transaction, followed by different subsequent transactions. For each subsequent transaction, the recorded entries include both the initial transaction and the subsequent transaction. So, the entries, e.g., 1(b) include both the sale of the debt security under a repo by a resident of A to a nonresident (1(a)), and the subsequent sale under a repo by the nonresident to another resident of A (1(b)); the entries, e.g., 1(c) include both the sale of the debt security under a repo by a resident of A to a nonresident (1(a)), and the subsequent sale under a repo by the nonresident to another nonresident (1(c)).