Collecting data on securities used in reverse transactions for the compilation of portfolio investment – how to compromise between theory and practice

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Introduction

Over the years, there has been much discussion regarding the appropriate statistical treatment of reverse transactions (collateralised loans) and their income (property income). Much less attention has been given to the question of what is the most appropriate way to collect data for the compilation of portfolio investment based on economic ownership, in the context of balance of payments statistics (covering both the BOP and IIP), through surveys or other forms of data collection. This paper addresses that question and presents relevant experience in setting up a new data collection system for portfolio investment assets in the Netherlands. First, I shall provide a short overview of market practices and summarise the methodological guidelines.

The mechanics of repurchase agreements and securities lending

Reverse transactions entail the temporary transfer of securities from one party (the lender) to another (the borrower). These transactions can be collateralised using cash (repurchase agreement or sell/buy back), other securities, or other assets (securities lending or borrowing). In legal terms, all types of reverse transactions involve the transfer of absolute title to the securities. In other words, a reverse transaction implies a change in legal ownership. This means that the borrower of the securities also acquires voting rights and other economic benefits (dividend and coupon payments). The borrower will in most cases, however, "manufacture" equivalent payments to the original owner of the security.

There are many ways in which lenders and borrowers of securities come together. Institutions with large enough lending operations of their own will be active in the market themselves. Most institutions make use of an intermediary, which may assume the role of either principal or agent. The main difference between an agent and a principal is that the agent does not act as the counterparty in the reverse transaction itself (though often providing the services to facilitate the transaction), whereas the principal will be positioned between the lender and the borrower of the securities. The use of principal intermediaries actually means that each reverse transaction is divided into two back-to-back contracts: one between the lender and the principal intermediary, and another between the principal intermediary and the borrower. Agent intermediaries include asset managers, custodian banks and specialised so-called third-party agents. Principal intermediaries are usually brokers and dealers that deal for their own account or on behalf of their clients.

Most outright securities transactions are executed through so-called "delivery versus payment" (DVP) transfers, in which a central counterparty matches the transfer of securities

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with the transfer of funds. Securities lending operations are often executed through "free of payment" (FOP) transfers. This is the case even if cash collateral is provided in exchange for the securities. Most settlement systems identify repos and sell/buy backs involving DVP transfers, allowing them to be separated from outright sales, but there remains a lack of standardisation. Dutch custodians have indicated that they can distinguish a client's reverse transaction from an outright sale only when they represent the lender of the securities. The reason for this is that they record an entry in their system in anticipation of the redelivery of the securities, simultaneously with the order to transfer the securities to the account of the borrower. In the opposite case, the custodian of the borrower would register only the receipt of the securities (involving just an FOP transfer) without any additional information. In principle, identification of the security (through its ISIN code), and thereby its issuer and the residence and sector of the issuer, does not appear to be a problem.

Many intermediaries use the securities of a large number of clients to satisfy the demands of securities borrowers. Some intermediaries (mostly custodians) have even developed systems for automatic securities lending. Such systems match the demand for securities with the supply from a pool of client portfolios, and are able to substitute new securities in the case of an early recall. The borrowing is arranged under a fixed contract and, for individual lending transactions, is carried out without the consent of the owner. This means that end-investors will not always be informed whether or which securities are being borrowed from their portfolios.

Methodological guidelines

The IMF Committee on Balance of Payments Statistics reconfirmed in 2001 that reverse transactions should be treated as collateralised loans. Accordingly, since the transfer of securities used in reverse transactions is viewed as the provision of collateral, reverse transactions do not give rise to a change in economic ownership of the securities. International discussion has subsequently dealt with the question of how to exclude reverse transactions from portfolio investment, given the fact that, in legal terms, there is a transfer of title. The market practices summarised above explain the results of research by a number of groups (the repos subgroup of the ECB Task Force on Portfolio Investment Collection Systems (TF-PICS) and the IMF Technical Group on Reverse Transactions (TGRT)). Both groups concluded that the information on reverse transactions is not available from any single group of market participants (either end-investors, custodians, brokers or dealers). The experience in the Netherlands described below provides additional insight into this question.

The Dutch data collection system for assets

The new system set up in the Netherlands in 2003 for portfolio investment assets (Dutch holdings of foreign securities), replacing the ITRS, is predominantly a direct reporting system. Except for the securities held by households, which are covered by a survey of resident custodians, all information is collected from the resident end-investors themselves. The most important factor behind this is the fact that Dutch institutional investors (pension funds, insurance companies and investment funds) and banks often use the services of foreign custodians. A survey of resident custodians would therefore never achieve sufficient coverage. The participation of Dutch institutional investors and banks in securities lending was a second factor.

It was expected that end-investors would use information from their custody accounts, and that they had access to information on all of their reverse transactions. It would therefore not matter whether the information was collected on the basis of economic ownership or on legal ownership supplemented with data on reverse transactions. It seemed clear that the use of information from custodians alone would not allow for the derivation of economic ownership. Consistency in the design of forms led to a decision to collect holdership information from end-investors on a legal ownership basis (see below). This was supplemented by two separate forms requesting information on positions and changes of positions in the foreign securities used in reverse transactions with non-resident counterparties (the exact type of reverse transaction – repo, sell/buy back or lending – being irrelevant). Portfolio investment assets were then compiled as the legal holdings plus foreign securities lent, minus foreign securities borrowed. The correction applied to legal holdings for foreign securities lent to/borrowed from non-residents was only partial. No information was collected on foreign securities lent to/borrowed from residents, which resulted in a misallocation of holdings between resident sectors, even though the total of resident holdings across sectors was correct.

The experiences with this approach over the following two years proved disappointing, even though the method had been discussed with reporters in advance. The misallocation between sectors turned out to be quite material, and had to be corrected on a macro level using aggregate balance sheet information from the other-MFIs sector to avoid discrepancy with money and banking data. End-investors did not always possess the information on securities used in reverse transactions, or had to arrange for the provision of such data by intermediaries and/or custodians, sometimes at considerable cost. Many declared a preference for reporting their holdings on the basis of economic ownership. There was also confusion on the reporting of coupon payments and interest earned on the securities used in reverse transactions, as well as the interest earned on the reverse transaction itself. A change in the BOP collection system to facilitate reporting for quarterly sector accounts from the beginning of 2006 was used to accommodate reporters' preferences. Since the beginning of 2006, all end-investors report their holdings of foreign securities on the basis of economic ownership (with short positions being reported as negative holdings). They also no longer need to report on the foreign securities used in reverse transactions with non-resident counterparties.

The Dutch data collection system for liabilities

The Dutch data collection system for portfolio investment liabilities (foreign holdings of Dutch securities) established in 2003 is a mixed approach (see §85–89 of the final report of the TF PICS). Briefly, under the mixed approach, portfolio investment liabilities are calculated as the net balance of all cross-border custody holdings between resident issuers, CSDs, custodians and end-investors. Because this approach uses information from direct and indirect reporters, it was all the more important to analyse the information needed on (Dutch) securities used in reverse transactions. If end-investors reported their Dutch securities held with foreign custodians (used as a correction on foreign holdings data collected from custodians) on the basis of legal ownership, the resulting portfolio investment liabilities would also correspond to legal ownership. In order to convert this to economic ownership, data were needed on Dutch securities used in reverse transactions with non-resident counterparts, irrespective of where the securities were/are held in custody before/after the transfer. Since this combined neatly with the information required to correct portfolio investment assets, the Dutch system asked resident end-investors for holdings of Dutch securities with foreign custodians on the basis of legal ownership.

As indicated above in relation to experience with the data collection system for portfolio investment assets, this approach encountered a number of practical problems with end-investors. Along with foreign securities, reporting of Dutch securities held with foreign custodians was shifted to an economic ownership basis as of the start of 2006. In contrast to the case of foreign securities, however, the compilation of portfolio investment liabilities still required certain information on securities used in reverse transactions. Without going into too much detail, analysis showed that what was now needed was information on whether the securities used in reverse transactions were held with resident custodians, irrespective of the residency of the counterpart.

Table 1

Results from the survey on lending of Dutch securities

Proportion of institutions		MFIs	Insurance companies	Pension funds	Investment funds
Active in securities borrowing (%)	Shares Bonds	41.7 25.0	0.0 0.0	0.0 5.9	0.0 0.0
Active in securities lending (%)	Shares Bonds	41.7 75.0	45.0 60.0	64.7 70.6	62.5 37.5
Uses an exclusive principal agreement (%)		N/A	25.0	58.8	37.5
Non-resident counterparty (%)		58.3	20.0	17.6	50.0
Net lending (billions of euros)	Shares Bonds	–1.2 –5.0	0.2 8.4	1.2 4.4	0.3 0.6
Number of institutions surveyed		12	20	17	8

Source: De Nederlandsche Bank.

Logically, securities lending between residents equals securities borrowing. If most of the lending and borrowing of securities maintained with resident custodians were carried out with other residents (most notably the central bank), information collected on securities used in reverse transactions would largely cancel out. An ad hoc questionnaire was sent out to all relevant groups of end-investors during the fall of 2005 to investigate the value of securities and the counterparties involved. The results of this questionnaire, summarised in table 1, showed that banks were active in both lending and borrowing of shares and bonds. The other groups of end-investors were almost exclusively active in securities lending. The net amounts involved, however, turned out to be very small in comparison with aggregates from the IIP. In the survey, net lending of shares totalled 0.5 billion euros, compared to total liabilities in the IIP of 419.6 billion euros for end-2005, while the figures for net lending of bonds were –8.4 billion euros and 537.1 billion euros. Moreover, only half or less of the reporters were involved in reverse transactions with non-residents (except MFIs) that used securities from resident custody accounts. In the end, the conclusion from the survey was that information on Dutch securities held with resident custodians and used in reverse transactions could be ignored. It was decided to repeat the survey periodically to monitor whether it would be necessary to reintroduce reporting.

Conclusions

The type of system chosen for the collection of information on portfolio investment, direct or indirect, determines whether the data are based on economic or legal ownership. Dutch end-investors prefer to provide information on the basis of economic ownership. In this case, there is no problem of excluding securities exchanged under reverse transactions from portfolio investment assets. Custodians and other intermediaries are only able to provide information on the basis of legal ownership. For the compilation of portfolio investment liabilities, which requires information from both direct and indirect reporters, adoption of a practical solution proved to be possible, after research concluded that the error from ignoring securities lending and borrowing was immaterial.

Another important lesson is the importance of discussing information needs thoroughly with prospective reporters. Even though this was done in the Netherlands before a new direct reporting system was implemented, the system proved less effective in practice than anticipated. The Dutch central bank has therefore instituted commissions that meet on a regular basis to discuss reporting issues with all of its major reporters.

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