BOPCOM-03/12

Sixteenth Meeting of the
IMF Committee on Balance of Payments Statistics
Washington D.C., December 1–5, 2003

Report of Technical Group on Reverse Transactions

Prepared by the Technical Group on Reverse Transactions

REPORT OF TECHNICAL GROUP ON REVERSE TRANSACTIONS

I. INTRODUCTION

Over the past eight years, the IMF Committee on Balance of Payments Statistics (Committee) has taken a considerable interest in the statistical treatment of reverse transactions. At its 2000 meeting, the Committee set up the Technical Group on Reverse Transactions (TGRT), with the following terms of reference:

- *To determine the recording practices (for transactions and positions) for repurchase agreements and securities lending by the principals, custodians, intermediaries, and fund managers, depending on the data sources and the information sought — position or transactions — and whether these transactions/positions can always be identified*

- *To determine what are the recording practices for a reverse repurchase agreement/security borrowing (for the principal, the custodian, the intermediary, or the fund manager) when a repurchase agreement then is undertaken with the same instrument*

- *To identify whether market players can identify instrument and counterparty for repurchase agreements, reverse repurchase agreements, securities lending and security borrowing*

- *To determine, in particular, to what extent "short" recording is the practice when a reverse repo is followed by an outright sale*

- *To identify what might be involved for custodians and/or end-investors and/or fund managers to make easier the identification if repos/securities lending from both sides (seller/lender and buyer/borrower)*

And as a second step in the work of the Working Group

- *To establish the size of repurchase agreement/securities lending activities (for positions outstanding, and possibly for transactions)*

- *To determine whether the market is growing, and, if so, at what rate*

In addition, the TGRT was asked to examine the treatment of the fees payable with securities lending/borrowing and gold loans.

This paper reports on the work of the TGRT during the past year.

II. WHAT ARE REVERSE TRANSACTIONS?

"Reverse transactions" refer to repurchase agreements involving cash ("repos"), securities lending without cash collateral, gold swaps and gold loans. This report addresses two aspects of reverse transactions: (i) the information systems of financial institutions that undertake repos and securities lending without cash collateral; and (ii) the treatment of fees receivable/payable on securities lending and gold loans.

A reverse transaction is defined as

> "*an arrangement involving the transfer of ownership of securities, gold (or other asset) at a specified price with a commitment to return the same or similar asset at a fixed price on a specified future date or be of an "open" maturity (where the parties agree to renew or terminate the reverse transaction daily).*[1,2,3] *Initial and variation margin payments may also be made. Full, unfettered ownership passes to the "asset acquirer"*[4] *but the market risks (such as holding losses (and gains) and receipt of any property/investment income attached to the asset—are retained by the original owner as if no change of ownership had occurred. "Full, unfettered ownership" means that the asset acquirer obtains ownership of the asset and may sell it."* (BOPCOM-01/16)

It is this feature of reverse transactions—that they may be recorded on balance sheet by two parties at the same time—that has caused the most difficulty in the classification of reverse transactions. This is because change of legal ownership is often taken as a proxy for a change in economic ownership, an underlying principle in all macroeconomic statistics. In response to the complexities surrounding the measurement of reverse transactions, and the need to find out more about the recording practices of practitioners in financial markets that the TGRT was created.

---

[1] 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 repo and should be recorded as a transaction in a security with an option (a financial derivative) attached to it.

[2] Transactions known as sale/buy backs, carries, stock or bond lending against cash, securities lending with cash collateral, all have essentially the same characteristics as repo, though there are minor legal or technical differences. Provided they involve a cash leg, they are all included in this paper under the term "repo".

[3] The term "repurchase agreement" is derived from the perspective of the provider of the security as it is that party which is obligated to repurchase it.

[4] Except the right to sell.

III. SURVEY OF END-INVESTORS, CUSTODIANS, AND BROKERS/DEALERS TO DETERMINE THE INFORMATION THEY HOLD IN THEIR INFORMATION SYSTEMS

In light of these terms of reference, the TGRT undertook a survey of major financial institutions that are involved in reverse transactions, to determine how, if at all, their internal information systems identify reverse transactions.[5] Among other things, the survey was designed to identify to what extent financial institutions might have additional information from which compilers might be able to draw to overcome some of the difficulties that they encounter when trying to measure these reverse transactions.

Nine jurisdictions took part: Belgium, Hong Kong, SAR, Japan, Portugal, South Africa, Spain, Switzerland, the United Kingdom, and the United States.[6] There were three different survey groups: end-investors, custodians, and brokers/dealers.[7] In total, there were 61 responses: 29 end-investors, 22 custodians, and 10 brokers/dealers. The aggregate results of the three surveys are provided as appendices to this paper.[8] The following sub-sections summarize the responses to the survey.

A. Principal Survey Results

The respondents to the survey were nearly all very large financial institutions, either with very large balance sheets, or with substantial assets held in custody, or were brokers/dealers with substantial securities market activity.

Regarding the "second step" (in the terms of reference), all respondents were asked to provide (if readily available) estimates of the value of reverse transactions undertaken in June 2002, and estimates of value of reverse transactions still outstanding at the end of June 2002, with both residents and nonresidents, and for securities issued by residents and nonresidents. However, very few respondents reported the data: it would appear that this is not information that is presently kept in the information systems of many of these institutions.

---

[5] The Committee discussed the questionnaires at its meeting in 2001. See BOPCOM-01/17.

[6] The author wishes to thank all these jurisdictions for their participation in the survey.

[7] There was also a survey of fund managers. However, responses were received from only two of them and both from South Africa. As it is not possible to make a cross-country comparison, their responses are not included in this paper.

[8] When the responses to the questionnaire are being reviewed, it is important to bear in mind that the aggregation loses some of the nuances to some of the responses. To try to overcome this problem, the aggregated results in the appendix have had many footnotes have been attached. These should be read when reviewing the results.

(i) End-investors

(a) Repurchase agreements involving cash

Responses were received from 29 end-investors in all jurisdictions that participated in the survey. The question numbers in this sub-section refer to those in Appendix I.

While most of the respondents indicated that their counterparties would know that they, the respondents, were acting as principal when undertaking a repo, eight indicated that their counterparts would not know (Question 2 (i)). Sizable minorities of the respondents indicated that neither their own custodian nor that of their counterparty would be able to distinguish between a repo/reverse repo and an outright sale[9]. (Question 3 (i) and (iii)). On the other hand, nearly all of them felt that any broker that was involved in the transaction would know this (Question 3 (ii)).

While most of the respondents indicated that their information system classified repos as collateralized loans (Question 4 (i)), several indicated that they also recorded a transaction in a security (Question 4 (iii)). All the respondents in Belgium and Japan indicated that they recorded them in this manner, but Hong Kong SAR, Portugal, and South Africa also had one respondent each with the same response. One respondent in each of South Africa and Spain said that they recorded repos solely as transactions in securities. (Question 4 (ii)).

Most of the respondents indicated that they could use a security acquired under a reverse repo as a repo or as an outright sale. (Questions 5, 7 and 11). When such a transaction occurs, most of the respondents indicated that they would record a “short” position (i.e., a negative holding in the security on-sold or repoed) (Question 8 (i)), but a few respondents (in Japan, South Africa, and the United Kingdom) indicated that they would record the transaction as a liability to the repoing party, that is, the party from which they had received the security. (Question 8 (ii)).

One of the areas where there was close to unanimity was in regard to the database on the characteristics of the security and the counterparty. Nearly all indicated that their information systems could identify the residence of the issuer, if a nonresident, or the sector, if a resident, the country of residence, if a nonresident, or the sector, if a resident, of the counterparty, and the ISIN code. (Question 12).

An interesting, emerging issue is the use of clearing houses (such as the London Clearing House, Euroclear) to act in tripartite repos. Bipartite repos involve only the cash taker and the cash provider. Tripartite repos involve a clearing house that acts as the counterparty to both the cash taker and the cash provider. Several respondents indicated their use of these

[9] It was in light of similar evidence that the Netherlands Bank decided to change its collection systems, with regard to portfolio investment and repurchase agreements, to use end-investors as the primary data source rather than to rely on custodians.

institutions (Questions 13 and 14). This issue raises questions as to the classification of the transaction (as the clearing house is the counterparty to all transactions conducted through it) as well as the classification of the clearing house as an institutional unit. (See BOPCOM03/13 for further discussion of this issue.)

Virtually all respondents indicated their treatment of repos and reverse repos with residents was identical to their treatment of the same transactions with nonresidents (Question 15). This was also true of their treatment of these transactions with securities issued by residents versus those issued by nonresidents. (Question 16).

(ii) Securities lending without cash collateral

Of those responding[10] that undertook securities lending (or borrowing) without cash collateral, there was an almost exact split between those that indicated that their custodian would know the nature of the transaction and those that indicated that their custodian would not know (Question 18 (i)). Equally, those that thought the counterparty's custodian would know the nature of the transaction was almost the same as those that thought the counterparty's custodian would not know (Question 18 (iii)) but most thought that any broker involved in the transaction would know (Question 18 (ii)).

As to the manner in which securities lending transaction is recorded, half recorded them off-balance sheet (Question 19 (ii)). Of the balance, two institutions in each of Japan and South Africa, and one in the United Kingdom, recorded them as transactions in the security, and created an account payable/receivable to the party from which they had borrowed or lent the security (equal in value to the security borrowed or lent). (Questions 19 (i) and 20).

Of those respondents that recorded securities lending off-balance sheet, almost all of them could identify the country of residence for the issuer, if a security issued by a nonresident issuer were involved, or the residence of the counterparty, if the counterparty were a nonresident (Question 21 (i) and (iii)). Likewise, almost all could identify the sector of the issuer if the security were issued by another resident, and the sector of the counterparty if a resident. (Question 21 (ii) and (iv)).

As with repos, a significant minority of respondents indicated that they used a clearinghouse. (Question 22). The same issues arise here as for repos. See above.

Nearly all respondents indicated that they are advised, in one way or another, when their custodian undertakes securities lending on their behalf (Question 24).

Most respondents indicated that, if a security acquired under a security lending arrangement were on-sold, they would record it as a "short" (Question 25 (i)). However, two respondents

---

[10] Of the 29 respondents, well over half indicated that they did not undertake securities lending without cash collateral. This means that any inferences that might otherwise be drawn from these results must be interpreted more cautiously.

in South Africa, and one each in Japan and the United Kingdom, indicated that they would record a liability to return the security to the party from whom they had borrowed it. (Question 25 (ii)).

All respondents indicated that they sometimes or always receive collateral in return for securities lent (Question 26). Most of them indicated that they can on-sell at their own discretion. (Question 27 (i)). The same applied to variation margin received (Question 30 (i)).

Almost all respondents indicated that their information systems were able to provide the same information on collateral received in return for securities lending, and variation margin, as for the underlying securities involved, that is reflected in response to Question 21. (Questions 28 and 31)

All respondents indicated there was no difference in their treatment of securities lending without cash collateral with residents and nonresidents or with securities issued by residents compared with those issued by nonresidents. (Questions 32 and 33).

B. Custodians

(i) Repurchase agreements involving cash

Responses were received from 22 custodians from all jurisdictions that participated in the survey. The question numbers in this sub-section refer to those in Appendix II. Several custodians indicated that they could identify repos and securities lending/borrowing, and the underlying characteristics of the security, if the transaction were being undertaken by their own institution or by one of their customers, but not otherwise. In those cases, the notation is "sometimes".

The view that several end-investors held—that custodians would be unable to identify repurchase agreements—was partly confirmed by the responses from the custodians themselves. Of the 22 respondents from custodians, only nine indicated that they would be able to make a distinction between a repurchase agreement and an outright sale undertaken by their customers in all cases. Moreover, only eight of the respondents indicated that they would be able to identify a reverse repo, as distinct from an outright purchase, in all cases. (Question 1). In addition, only five respondents indicated that they could identify, in all cases, a repo using a security acquired under a reverse repo. (Question 2). Many indicated that they would need major changes to either their information systems or the manner in which information is reported to them, or both (see many of the footnotes at the end of Appendix II). *This limited ability to identify reverse transactions affected all the subsequent responses, as those not able to identify these transactions in the first instance would not be able to identify them in any of the following questions.*

Of those that responded positively to Questions 1 and 2, most, if not all, appeared to be able to identify the residence/sector of both the issuer of the security and the residence/ sector of the counterparties as well as the ISIN (or similar security identifying code)(Question 4).

By a margin of more than 2:1, most custodians were unable to identify variation margin received under a reverse repo from an outright purchase in all instances. (Question 5).

As with end-investors, virtually all respondents indicated their treatment of repos and reverse repos with residents was identical to their treatment of the same transactions with nonresidents (Question 6). This was also true of their treatment of these transactions with securities issued by residents versus those issued by residents. (Question 7). However, as many of them were unable to distinguish repos from outright sales, or reverse repos from outright purchases, this may not be very helpful.

(ii) Securities lending without cash collateral

Of the 22 custodians that responded, only 15 indicated that they undertook securities lending or borrowing and only 11 indicated that they undertook securities borrowing. As a consequence, these responses are probably less representative than those for repos.

Of those that indicated that they undertake securities lending on behalf of their customers, all indicated that, one way or another, they advised their customers (Question 9).

Most indicated that their information systems could identify the residence of the issuer of the security used in a securities lending and securities borrowing if a nonresident issuer, and the residence of the counterparty for both securities lending and securities borrowing (though more for the former than the latter), if the counterparty were a nonresident (Question 10 (i) and (iii)). (This was not merely a reflection of fewer respondents: in the United States, for example, none of the custodians indicated they could make this identification for repos but all indicated they could do so for securities lending).

For resident issued securities, more than half of the custodians indicated that they could not identify the sector of issuer of the security, if a resident issuer, for both securities lending and securities borrowing. However, somewhat more than half could identify the sector of the counterparty, if a resident, for securities lending, but only half for securities borrowing. (Question 10 (ii) and (iv)).

Nearly all respondents indicated that they had ISIN (or equivalent) information for both securities lending and securities borrowing. (Question 10 (v)).

Not all custodians received collateral for securities lent, but of those that did, most indicated that they could identify them. (Questions 11 and 12). Most indicated that their customers were not able to on-sell the collateral at their own discretion, instead, some sort of trigger was required (such as a default). (Question 13). The same applied to those that indicated they received variation margin on behalf of their customers (Question 15).

As to the respondents' information systems' being able to provide the characteristics on any variation margin received, as to the residence/sector of the issuer of the security (Question 16 (i) and (ii)) and the residence/sector of the counterparty (Question 16 (iii) and (iv))most indicated they could. However, the number responding to the question – eight – is perhaps too small from which to draw any conclusions. (Question 16).

Virtually all respondents indicated that securities lending/borrowing with nonresidents or with a nonresident issued security is not treated differently in their information systems from those with residents or involving resident counterparties. (Questions 17 and 18).

C. Brokers/dealers

(i) Repurchase agreements involving cash

Responses were received from 10 entities in only four jurisdictions (Hong Kong SAR, South Africa, Spain and the United States). The question numbers in this sub-section refer to those in Appendix III.

Nearly all the respondents indicated that their information systems could identify when a repo or reverse repo was being undertaken by their customers. (Question 1). However, only half of them could identify when a repo was undertaken with a security acquired under a reverse repo (Question 2) and only two (out of seven responding to the question) indicated that they could identify an outright sale, using a security acquired under a reverse repo. (Question 3).

All the respondents indicated that they could identify variation margin delivered under a repo (Question 4) and virtually all could identify variation margin received under a reverse repo (Question 5).

Nearly all of the respondents indicated that they could identify the characteristics of the residence of a nonresident issued security involved in the repo/reverse repo, and the residence of the counterparty, if a nonresident (Question 6 (i) and (ii). However, only six out of ten could identify the sector of issue of a resident issued security for both repos and reverse repos, and the sector of a resident counterparty for reverse repos. (Question 6 (ii) and (iv)b). Seven out of ten could identify the sector of a resident counterparty to a repo. (Question 6 (iv) (a)). However, all the respondents indicated that their information systems had ISIN codes (or equivalents) for all securities in both repos and reverse repos. (Question 6 (v)).

None of the respondents indicated that they treated repos and reverse repos with nonresidents, or with a nonresident issued security, any differently from these transactions with residents, or with a resident issued security. (Questions 7 and 8).

(ii) Securities lending without cash collateral

Nearly all the respondents indicated that their information systems could identify when their customers undertook securities lending or borrowing. (Question 9). Similarly, their systems could identify collateral (or variation margin) received or delivered under securities lending or borrowing. (Questions 10 and 11).

Regarding the characteristics of a security involved in securities lending or borrowing, most of the respondents could identify the residence of the issuer of the security (if a nonresident issued security) and the residence of the counterparty (if a nonresident). (Question 12 (i) and (iii)). However, as with repos and reverse repos, only half of the respondents' information systems were able to identify the sector of the issuer of a resident issued security, and only slightly more were able to identify the sector of the counterparty, if a resident. (Question 12(ii) and (iv)). On the other hand, all indicated that, whether for securities lending or borrowing, their information systems had the ISIN (or equivalent) identifiers.

All indicated that they recorded securities lending/borrowing with nonresidents in the same way as with residents (Question 13) and nearly all indicated the same for securities issued by nonresidents as with resident issued securities (Question 14).

IV. IMPLICATIONS OF THE SURVEY RESULTS

What emerges from the foregoing? In the first instance, it is clear that there is no easy manner in which information on reverse transactions can be obtained: the recording practices vary not only across countries but within them. While a surprisingly large number of the respondents indicated that their counterparties would not know that they, the respondents, were acting as principal when undertaking a repo, for the most part, it would appear that end-investors are in the best position to know when repos/reverse repos are being undertaken. In addition, most end-investors can identify the characteristics of the underlying securities, and, in almost all cases, ISIN (or other identifiers) for repos and reverse repos. That having been said, however, they may not be able to identify the counterparties to a securities lending, if undertaken by their custodian under a master agreement[11].

Question 4 in the end-investor survey has important ramifications for any future work. The responses to this question indicate that end-investors overwhelmingly record repos as collateralized loans (in one way or another) in their information systems. Only two respondents indicted that they record repos as transactions in the underlying security only. However, a third of the respondents indicated that they record repos as both a collateralized loan and as a transaction in the underlying security. If further work is to be undertaken, exploring these practices may prove fruitful.

It was also of note that a significant minority (four out of eleven responding to Question 25 of the end-investor survey) indicated that, if a security acquired under a reverse repo were on-sold, it would be recorded in their information systems on their balance sheet as a liability to return the security to the original owner, rather than as a "short".

[11] Such an agreement allows the custodian to lend its customers' securities without having to seek their explicit approval: in return, the custodian indemnifies the customer against any loss if the borrower is unable to return the security.

In contrast, many custodians' information systems did not have the same level of information required to identify repos and reverse repos. Moreover, many custodians indicated that it would involve considerable costs to change their reporting systems, and the manner in which the information is received, for them to be able to provide the information on the basis it is required. However, responses from the United States indicated that the new reporting system being put in place by the Federal Reserve Bank of New York (as the depository) would allow much of this information to be available, as this new reporting system would require that reverse transactions be identified. If such an approach were adopted by other countries, this might offer a mechanism for resolving some of the reporting (and measurement) problems.

While most of the brokers/dealers could identify repos and reverse repos that their customers undertook, the numbers able to identify repos that used the security acquired under a reverse repo, or an outright sale of a security acquired under a reverse repo, were much less. Most of the brokers/dealers indicated that their information systems could identify the characteristics of the underlying securities and the counterparties for repos, reverse repos, and securities lending/borrowing, though the information for nonresident issued securities and nonresident counterparties was somewhat better.

In light of this, it would appear that focusing on end-investors is likely to produce the best information on reverse transactions. For countries that rely on custodial reporting, especially for the Coordinated Portfolio Investment Survey, this may cause major problems. However, the new reporting system, set up by the Federal Reserve Bank of New York, may be the route that other countries may wish to explore. The Technical Group on Reverse Transactions will explore this new reporting system further, with a view to reporting back to the Committee in 2004.

Another important issue is the growing role of clearing houses for reverse transactions. Apart from the need to decide on their classification to sector (and the implications this has for monetary aggregates), they may well offer important means for identifying the parties and underlying securities in all reverse transactions that pass through their systems, given that they are counterparties to all transactions that pass through them. If they were to become important players, (it is not clear yet how important they are, but it appears that they are growing rapidly), and they were found to have much of the information needed, it might offer an important means of collecting much of the information from a single source. (It would clearly be necessary to consider how to obtain information that was not channeled through clearing houses, however.)[12]

[12] A paper from the Bank of England (BOPCOM-03/13) addresses some of the issues regarding clearing houses, in a somewhat broader context, but it raises questions on "netting" where there is a legal right of offset, with wide ranging implications for financial statistics.

V. Treatment of Fees Payable on Securities Lending and Gold Loans

In addition to exploring the information systems of financial institutions on their recording of reverse transactions, the TGRT examined how the fee receivable/payable when securities lending and gold loans are undertaken should be treated in the national accounts and balance of payments frameworks. Neither the *Balance of Payments Manual*, fifth edition (*BPM5)* nor the *1993 System of National Accounts (1993 SNA)* discusses the issue. Because of this gap in the methodology, the TGRT reviewed the possibilities.

When is the fee payable? For **securities lending/borrowing**, typically, a custodian, acting on the security "lender's" behalf, delivers the security to another financial intermediary (usually a broker) so that the latter can make delivery (often for a security that it has been instructed to buy for one of its clients but has not done so). Full, unfettered ownership is transferred to the "borrower" but the economic risks and benefits of ownership remain with the original owners.[13] In return, the "lender" receives a fee from the "borrower" for delivering the security. **Gold loans** are similar in nature to securities lending. Under a gold loan, gold is "lent" by the owner to the "borrower" for a given period of time; the ownership of the gold is transferred, but the risks and benefits of price change remain with the "lender". A comparable payment to that for securities lending is often made by the recipient of the gold to the "lender". In both cases, the value of the fee is related to the value of the underlying asset provided, and the length of time before the "borrower" returns the underlying asset. The question is: what does the fee represent—payment for a service? or property (investment) income? Or something else? For a transaction to be considered *production*, commodities, physical capital, labor, and entrepreneurship, are combined to produce output of a good or service. *Property (investment) income*, on the other hand, represents a return to the owner to allow a user the right to use a nonproduced (financial) asset. For income to be payable/receivable does not necessarily involve a change of ownership of the underlying asset: rent of land is such an example.

As *securities lending/borrowing* does not appear to involve the inputs necessary for production (commodities, labor, and nonfinancial capital—though there might be an element of entrepreneurship),[14] it might appear that it is not a productive activity, at least not as an activity in its own right.[15] A nonproduced asset (the security) is made available by the lender to the borrower, which, following the principle above—that income represents the return to the owner by the user for the right to *use* a nonproduced (financial) asset—would appear to mean that it should be treated as property (investment) income.

---

[13] Except for the right to sell the security. Collateral may also be provided, but the collateral does not change ownership unless the "borrower" defaults.

[14] The concept of *entrepreneurship* in this context raises questions about risk taking. In some respects, in the *1993 SNA*, risk taking is regarded is a productive activity and would be included in operating surplus, whereas in other respects, it is regarded as representing part of the return on the provision of a nonproduced asset, and is treated as *income.* See *1993 SNA*, paras. 7.18-7.19

[15] That is, as distinct from the provision of custodial services, which is a separate activity.

However, even were the fee for securities lending deemed to represent *income*, an additional complication arises as to what type of income it would be. For example, if equity securities have been lent (as they frequently are), what is the income? interest? dividends? some other "income" item? It is clear that the fee cannot be a dividend: dividends are payable only by the *issuer* of the security, not a borrower of the security. That means that, unless a new "income" category[16] is created, the fee payable would represent *interest*, by default, which would be incongruous for an equity instrument. It would also be somewhat incongruous even for debt securities, as interest is the return for making debt financing available. If the fee were regarded as "interest", that would imply that *funds* have been lent to two parties simultaneously: the issuer of the security, and the "borrower" of the security, even though the security "borrower" is not the recipient of any funds, (given the Committee's decision, at its 2001 meeting,[17] that securities lending does not represent a transaction). Accordingly, it would mean that the fee receivable/payable could not be "interest", as securities lending does not represent the provision of financial capital, and how could a party which is not borrowing *funds* pay interest? Therefore, it would seem more appropriate that, if the fee were to be classified as *income*, a new income category, in the "(primary) income account" be created.

Conversely, are there elements of securities lending that might be taken to be productive? In the *Manual on Statistics of International Trade in Services*[18] (MSITS), the closest productive activity appears to be *intermediation*:

> *"Financial services covers financial intermediation and auxiliary services, except those of life insurance and pension funds ... Such services may be provided by banks, stock exchanges, factoring enterprises, credit card enterprises and other enterprises.*[19] *Included are services provided in connection with transactions in financial instruments, as well as other services related to financial activity, such as advisory, custody and asset management services."* (MSITS, 3.108)

However, the nature of securities lending does not appear to meet this concept of intermediation referred to in the definition of *financial services* despite the reference to "custody" in the last sentence. Securities lending is undertaken (for the most part) by a custodian *on behalf of* its customers but it is not the custodian that "earns" the fee, it is the

[16] Along the lines of, but additional to, that proposed for "rent" in the draft Annotated Outline of the Update to the fifth edition of *BPM5.*

[17] On the basis of BOPCOM-01/16.

[18] *Manual on Statistics of International Trade in Services*, United Nations, European Commission, International Monetary Fund, OECD, UNCTAD, World Trade Organization, Geneva, Luxembourg, New York, Paris Washington, D.C., 2002

[19] A more detailed breakdown of the component *financial services*, appropriate to the particular need to provide data useful for negotiations under GATS, may be developed after the publication of the *Manual*. (Footnote in original text).

owner of the security that does. Although, in some circumstances, the fee is payable to the custodian in the first instance (and used to defray custodial charges, in whole or in part), in principle, all of the fee is payable to the owner of the security who, in turn, is deemed to pay part or all of it to the custodian in a separate transaction (which would be for custodial services). Accordingly, there would appear to be no *intermediation* service provided by the custodian in securities lending.

However, that the MSITS does not provide an adequate description to cover securities lending does not necessarily preclude it from being treated as a service. Some other kind of service may be provided. For example, securities lending could be construed to represent a "market liquidation" service, especially in a thin market, similar to market making. It could be said that securities lending offers the borrower a facility different from the alternative of purchasing the security. By the same token, this could be taken to represent the provision of *convenience*, usually regarded as a productive activity.

If securities lending were deemed to be productive, however, that might imply a change in the concept of *production*, inasfar as just holding/lending a financial asset would, in certain circumstances, represent output. The reason for such a change would be that it is the end-investor, not the custodian, that would be considered to be the productive unit. In the *1993 SNA*, the act of lending (in and of itself, and not involving intermediation), is not considered productive. Treating securities lending as a productive activity would imply that the producer of the service could be any institutional unit, not just a depository corporation, but also an insurance enterprise, a pension fund, general government, a nonfinancial enterprises, or even households.

An additional point that needs to be borne in mind in considering how to treat the fee on securities lending is that the draft annotated outline on the revision to the fifth edition of *BPM5* is proposing to structure the primary income account so that income items are explicitly linked to their associated asset on which the income is receivable/payable. "Other income" may be inappropriate as that would normally be expected to be linked to "other investment". If a separate income category for income to cover securities lending were to be created for the fee receivable/payable on securities lending, a different asset item may also be necessary.

A possible alternative treatment is the following: if the "lender" is a financial intermediary, the fee would be treated as a payment for a service; if the "lender" is not a financial intermediary, it would be considered property (investment) income. This would be analogous to the current treatment in the *1993 SNA* and *BPM5,* where one nonfinancial entity lends funds directly to another—no service is deemed to have been produced, as there is no intermediation. The payment for the use of the funds is entirely interest. On the other hand, if the lender channels the funds to the ultimate borrower through a financial intermediary, a service, FISIM (financial intermediation services indirectly measured), is provided.

For **gold loans**, the situation is still more complicated. At its meeting in 2001, the Committee decided to treat gold loans in an analogous fashion to securities lending/borrowing[20], that is, when one party "lends" gold to another, it is not considered to be a transaction. The "borrower" will take delivery of the gold but will keep it off-balance sheet. However, if the "borrower" takes delivery with a view to on-selling/on-lending the gold, as it usually will, it will probably record both the asset and the liability as a foreign exchange item, that is, as a financial instrument.[21] In effect, the gold has been transformed from being either monetary gold or commodity gold into "financial gold",[22,23] (though, in principle, the gold that is on-sold should be recorded as a "short" in the holding of the commodity gold).[24]

What has been provided in a gold loan? A financial asset, a commodity, or a service? Gold is unique in the *1993 SNA* and *BPM5*, in that it can be either a financial asset (monetary gold is included in *reserve assets*) or a commodity (all other uses), depending on which institutional unit holds it and the use to which it is being put. If a gold loan is undertaken so that the ultimate user (for whom the financial intermediary borrows it, in the first place) takes delivery of it as commodity gold, treating the fee payable/receivable as property income is inappropriate as the commodity is a produced asset and produced assets do not earn property (investment) income. Use of a produced asset in the *1993 SNA* is treated as a service. However, although the underlying nature of a gold loan is the same as securities lending, and both were deemed to be productive, the production from gold lending would be different from that from securities lending: it would be a service for the use of a produced asset, not the provision of liquidity to a financial market.

Accordingly, it might be more appropriate to make an exception and treat the return on a produced asset as property (investment) income, especially given that the gold "borrower", usually a financial intermediary, is, essentially, using the gold as a financial asset. There is a precedent, though an obverse one, in the *1993 SNA* for treating the revenue stream from an

[20] Also on the basis of BOPCOM-01/16.

[21] This approach is a consequence of not treating gold loans as a transaction in gold.

[22] "Financial gold" is not currently a concept used in the *1993 SNA* or *BPM5*, but some countries, notably the United Kingdom and India, have argued that gold is mostly held as a store of value, and that for most holders, it is the equivalent of a financial asset.

[23] An alternative way of looking at it might be to say that the gold has been used to back a foreign currency claim/liability.

[24] The net effect of this treatment is that the gold may be recorded as commodity gold by two parties (the original "lender" and the final "borrower") as well as a financial asset and liability, by the financial intermediary (on- and off-balance sheet). Or it may be held as monetary gold by a monetary authority (as the original lender) and by another monetary authority (which, in effect, represents a double count). Or it may be held as monetary gold by a monetary authority (as the original lender), as a financial asset and liability by the financial intermediary, and as commodity gold by the final "borrower". None of these outcomes seems satisfactory.

asset in a manner different from the way the asset's category might otherwise indicate. In the *1993 SNA*, patents, and the capitalization of other intellectual property, are treated as nonproduced, nonfinancial assets. However, use of these assets is treated as a service, when, in principle, it should have be treated as income, as the underlying asset is not deemed to have been produced.

Another approach to the treatment of the fee payable/receivable on gold loans is similar to that proposed for the fee associated with securities lending, that is, if the fee were receivable by a financial intermediary, it would be treated as a service; if the fee were not receivable by a financial intermediary, it would represent *income*, though not interest, as the Committee has decided that no transaction has occurred with a gold loan, so no interest—payable on the provision of financial resources—is payable/receivable. Accordingly, it may be more appropriate to treat the fee receivable as a new type of income, in the same manner as one of the alternatives for securities lending.

In summary, there appear to be a number of options:

1. Treat the fee as a service in all instances:

   (a) *For securities lending*: "Market liquidation" services, related to market making
   (b) *For gold loans*: Possibly a new category of services (such as *market liquidation services*) or "Other business services"

2.(a) If the fee is receivable by a financial intermediary, treat it as either option #1a) and #1b), as appropriate

   (b) If the fee is not receivable by a financial intermediary, it would represent "income", and involve the creation of a new income sub-category, akin to, but separate from, *rent*.

3. Treat the fee as income in all instances, in a new income category, as indicated in 2b.

4. Treat the fee on securities lending as income in all circumstances and the fee on gold loans as service in all circumstances.

None appears to offer an entirely satisfactory treatment. The TGRT could not reach a consensus: all of the options received some measure of support. The TGRT felt that further work is needed.

VI. Conclusion

The TGRT survey of financial institutions confirmed that continuing vigilance is required when measuring reverse transactions, even in those countries where the respondents have the most rigorous and robust information systems. For the most part, while it would appear that end-investors are in a better position to provide the information on repos, on the required basis, than custodians or brokers/dealers, their reporting practices were not always in line with the accepted standards. For example, several end-investors indicated that their counterparties would not know that they, the respondents, were acting as principal when undertaking a repo. Also of note was that a significant minority indicated that, if a security acquired under a reverse repo were on-sold, it would be recorded in their information systems on their balance sheet as a liability to return the security to the original owner, rather than as a "short". If this recording practice is widespread, the TGRT felt that it may be represent an important factor in inconsistent reporting. Of particular importance were the responses to Question 4, on how end-investors recorded repos. Given their responses to this question (a third recorded them as both a collateralized loan and a transaction in the security simultaneously), the TGRT was of the view that there may be a basis for exploring the feasibility of having repos reported in the latter manner.

The survey found that the information systems for many custodians were insufficient to provide reports on reverse transactions on the basis required for statistical purpose. This would indicate that, for those countries that rely on custodial reporting as the primary source of information, special care needs to be applied to ensure that the reporting is done on the basis required. The paper proposes that developments in the United States on a new reporting system be pursued to see to what extent they offer a means for other countries to follow suit..

The survey has identified that clearing houses for reverse transactions are becoming an important factor in these markets. Their role and function has important ramifications for macroeconomic statistics standards, especially for monetary statistics. The TGRT feels that further work in this area may be warranted (see also BOPCOM-03/13).

As regards the fee associated with securities lending/borrowing and gold loans, the TGRT could not agree on a satisfactory approach. These are issues which might be further taken up by the InterSecretariat Working Group on National Accounts and other fora, such as the OECD's Working Party on Financial Statistics, and the OECD's Task Force on Financial Services.

Questions for the Committee

1. *Does the Committee agree with the assessment of the results of the survey on reverse transactions?*

2. *Does the Committee agree that the Technical Group should explore the new reporting system in the United States, with a view to reviewing whether it results in accurate and reliable data on reverse transactions, and, in light of this, examine whether it could be generalized?*

3. *Should the Committee agree to further work on the effectiveness and generalized applicability of the new system in the United States, in particular, does the Committee agree that, in the event that a generalized application of the new system in the United*

States does not appear appropriate, other avenues be explored as to how the quality of statistics on reverse transactions could be improved, including the development and testing of a prototype report form?

4. *In view of the increased (and growing) importance of central clearing houses, and the problems they raise regarding classification for counterpart information, does the Committee agree that further work needs to be undertaken on how to treat transactions conducted through them?*

5. *Does the Committee have a view on how to treat the fees associated with securities lending and gold loans? Does the Committee agree that the issue should be taken to the InterSecretariat Working Group on National Accounts for their views, and other fora, such as the OECD's Task Force on Financial Services, before bringing the issue back to the Committee?*

RESPONSES OF FINANCIAL INSTITUTIONS AS END INVESTORS/PRINCIPALS ON THEIR INFORMATION SYSTEMS FOR REPURCHASE AGREEMENTS AND SECURITIES LENDING

	Responses
1. Does your institution undertake as principal	
(a) repos?	**28Y,1N**
(b) reverse repos?	**28Y,1N**
2. When your institution undertakes a repo as principal,	
(i) does the counterparty know that your institution is acting as principal?	**19Y,8N,1DK**[(1)]
(ii) do the intermediaries, (if any), such as broker/dealers, know You are acting as principal?	**19Y,6N,1DK**
3. When your institution undertakes a repo/reverse repo as principal,	
(i) does your custodian know that the transaction is a repo/reverse repo and not an outright sale/purchase?	
(a) repos?	**12Y,10N,3S,1DK** [(1) (2) (3)]
(b) reverse repos?	**9Y,7N,3S**
(ii) do intermediaries, (if any), such as broker/dealers, know that a repo/reverse repo is occurring, instead of an outright sale/ purchase?	
(a) repos?	**22Y,4N**
(b) reverse repos?	**22Y,4N**
(iii) do the counterparty custodians know that a repo/reverse repo is occurring, instead of an outright sale/purchase?	
(a) repos?	**12Y,8N,2S,5DK** [(1) (2) (4)]
(b) reverse repos?	**12Y,7N,2S,5DK** [(1) (2) (4)]
4.When undertaking repos, as principal, does your institution record a repo/reverse Repo	
(i) as a collateralized loan payable/receivable only?	**18Y,7N** [(5)]
(ii) as a transaction in the security only (thereby removing/adding the security from the balance sheet)?	**2Y,19N** [(5)]
(iii) as both a transaction in a security and as a collateralized loan payable/receivable?	**8Y,16N**
(iv) in another way?	**1Y,21N**

If you answered “in another way”, please specify.

5.When undertaking repos, as principal, does your institution use the same security

	Responses
that was acquired under a reverse repo?	**18Y,8N,1S**
6. If you answered "yes" to Question 5, when your institution, as principal, undertakes a repo using a security acquired under an earlier reverse repo, is the transaction recorded in the same for a repo, as shown in your answer to Question 4?	**18Y**
If you answered "no" to Question 6, please specify	
7. When acting as principal, does your institution undertake outright sales of Securities acquired under a reverse repo?	**15Y,4N,1S**
8. If you answered "yes" to Question 7, does your institution record on its balance Sheet	
(i) a "short" (negative asset) in the security sold?	**16Y,2N**
(ii) as a liability to the original owner of the security?	**5Y,9N (6)**
(iii) in another way?	**12N**
If you answered "in another way", please specify	
9. Do you provide/take **variation margin** when undertaking a repo/reverse repo, when acting as principal?	
(a) repos?	**13Y,9N,7S (7)**
(b) reverse repos?	**13Y,8N,5S (7)**
10. If you answered "yes" or "sometimes" to Question 9, do you record the margin Payments/receipts off-balance sheet?	**8Y,8N,4S (8) (9) (10)**
If not, please briefly specify your recording practice.	
11. If you answered "yes" or "sometimes" to Question 9 for reverse repos, is your Institution, when acting as principal, able to on-sell at its own discretion the securities So acquired, or is it subject to a (default) trigger before it can on-sell the securities?	
(i) own discretion?	**13Y,3N,2S**
(ii) trigger?	**4Y,13N,1S**
12. When acting as principal, for both repos and reverse repos, regardless of whether the security is recorded on or off your institution's balance sheet, can your information system readily allow you to identify:	
(i) if a nonresident issued security, the country of residence Of the issuer of the security?	
(a) repos?	**26Y,2N**
(b) reverse repos?	**25Y,1N**
(ii) if a domestically issued security, the economic sector of residence of the issuer of the security,?	
(a) repos?	**19Y,2N**

	Responses
(b) reverse repos?	**18Y,2N**
(iii) if a nonresident counterparty, the country of residence of the counterparty?	
(a) repos?	**25Y,2N**
(b) reverse repos?	**25Y,2N**
(iv) if a resident counterparty, the economic sector of the counterparty?	
(a) repos?	**19Y,2N**
(b) reverse repos?	**18Y,2N**
(v) the ISIN code or any other individual identifier for the securities exchanged?	
(a) repos?	**26Y,1N**
(b) reverse repos?	**25Y,1N**
If you answered "no" to any part of Question 12, please briefly describe what would Be involved in obtaining the information.	
13. When acting as principal, for both repos and reverse repos, does your institution use a clearinghouse service, wherein the clearinghouse stands as counterparty to all repo and reverse repos transactions?	**7Y,18N,2S**
14. If you answered "yes" to Question 13 for either repos or reverse repos, please name the clearing house and indicate the volume of transactions conducted through the clearinghouse.	
15. Are repos and reverse repos with nonresidents recorded differently in your information system from repos and reverse repos with residents?	
(a) repos?	**2Y,25N**
(b) reverse repos?	**2Y,25N**
If you answered "yes" to Question 15, for either repos or reverse repos, please briefly indicate how they are treated differently.	
16. When acting as principal, are repos/reverse repos involving securities issued by nonresidents recorded differently in your information system from repos/reverse repos Involving securities issued by residents?	
(a) repos?	**1Y,27N**
(b) reverse repos?	**1Y,26N**
If you answered "yes" to Question 16, please briefly specify how repos/reverse repos Involving securities issued by nonresidents treated differently from repos/reverse repos Involving securities issued by residents	
17. Does your institution undertake **securities lending without cash collateral** or **Securities borrowing without cash collateral**:	
(i) directly (i.e., without using a custodian)?	

	Responses
(a) securities lending?	**10Y,17N,1S**
(b) securities borrowing?	**9Y,15N,4S**
(ii) through custodians?	
(a) securities lending?	**11Y,18N**
(b) securities borrowing?	**12Y,17N**
18. When your institution undertakes, as principal, a securities lending or borrowing without cash collateral,	
(i) does your custodian (if conducted through your custodian) know that the transaction is a lending/borrowing and not an outright sale?	
(a) securities lending?	**8Y,6N** (11)
(b) securities borrowing?	**7Y,7N** (11)
(ii) do the intermediaries, if any, such as broker/dealers, know that a securities lending or borrowing without cash collateral is occurring, instead of an outright sale?	
(a) securities lending?	**9Y,4N,1S**
(b) securities borrowing?	**9Y,4N**
(iii) do the counterparty custodians typically know that a securities lending or Borrowing without cash collateral is occurring, instead of an outright sale?	
(a) securities lending?	**6Y,7N,1DK** (1)
(b) securities borrowing?	**4Y,8N,1DK**
19. Does your institution record securities that have been loaned under a securities lending agreement or acquired under securities borrowing agreement:	
(i) as the disposal (acquisition) of a security and remove it from (add it to) your Institution's balance sheet?	**5Y,13N** (12)
(ii) as an off-balance sheet transaction?	**9Y,9N** (12)
(iii) differently, depending on whether the transaction is directly with the borrower/lender or through a custodian?	**13N**
(iv) in another way?	**1Y,14N** (13)
If you answered "yes" to (iii) in Question 19 for either securities lending or Borrowing without cash collateral, please specify what the difference is.	
If you answered "yes" to (iv) in Question 19 for either securities lending or Borrowing without cash collateral, please indicate what other method is used in your Institution.	
20. If you answered "yes" to (i) in Question 19 for either securities lending or Borrowing without cash collateral in, do you record the contra-entry as:	
(i) an account receivable/payable, equal in value to the security "lent" or "borrowed"?	**5Y**
(ii) another account?	**4N**
21. If you answered "yes" to (ii) or (iii) in Question 19 for either securities lending	

	Responses
or borrowing without cash collateral, does your information system readily allow you to identify:	
(i) for a nonresident issued security, the country of residence Of the issuer of the security	
(a) without using a custodian?	**6Y**
(b) through a custodian?	**9Y**
(ii) for a domestically issued security, the sector of residence of the issuer of the Security	
(a) without using a custodian?	**6Y,1N**
(b) through a custodian?	**7Y,1N**
(iii) for a nonresident counterparty, the country of residence of the counterparty	
(a) without using a custodian?	**6Y**
(b) through a custodian?	**7Y**
(iv) for a resident counterparty, the sector of the counterparty	
(a) without using a custodian?	**5Y,1N**
(b) through a custodian?	**6Y,1N**
If you answered "no" to any part of Question 21 please describe briefly what would be involved in making this information available.	
22. Do you use a clearinghouse service, wherein the clearinghouse stands as counterparty to all securities lending/borrowing without cash collateral transactions?	**6Y,9N**
23. If you answered "yes" to Question 22, please name the clearing house and indicate the volume of transactions conducted through the clearinghouse.	
24. If your institution undertakes securities lending without cash collateral **through** custodians, are you advised:	
(i) at the time your securities are "lent"?	**5Y,2N**
(ii) on a regular reporting date (e.g., weekly, monthly, quarterly)?	**5Y,4N**
(iii) on request?	**5Y,3N**
(iv) by an online, real time system?	**4Y,4N**
(v) not at all?	**1Y,6N**
25. If your institution on-sells a security that has been acquired through security borrowing without cash collateral, does your institution record:	
(i) a "short" (negative asset) on your balance sheet in the security that has been On-sold?	**9Y,2N**
(ii) a liability, to return the security to the original owner?	**4Y,7N**
(iii) off balance sheet?	**1Y,9N**
(iv) another way?	**2Y,8N** (13)

	Responses
If you answered "yes" to (iv) in Question 25, please describe briefly your institution's practices in this situation.	
26. Do you receive securities as collateral in return for securities you have lent under a Securities lending without cash collateral agreement?	**11Y,5S**
27. If you answered "yes" or "sometimes" to Question 26, is your institution Permitted to on-sell at its own discretion the securities (collateral) so acquired, or are you subject to a (default) trigger before your institution can on-sell the securities?	
(i) own discretion?	**8Y,2N,1S**
(ii) trigger?	**2Y,7N,1S**
28. If you answered "yes" to (i) or (ii) in Question 27, does your information system readily allow you to identify:	
(i) if a nonresident issued security, the country of residence of the issuer of the security?	**9Y,1N**
(ii) if a domestically issued security, the sector of residence of the issuer of the security?	**8Y,1N**
(iii) if a nonresident counterparty, the country of residence of the counterparty?	**9Y,1N**
(iv) if a resident counterparty, the sector of the counterparty?	**7Y,2N**
29. Do you receive ***variation collateral*** when undertaking securities lending without cash collateral?	**9Y,4N,2S** (7)
30. If you answered "yes" or "sometimes" to Question 29, is your institution able to On-sell at its own discretion the securities (collateral) so acquired, or are you subject to a (default) trigger before you can on-sell the securities?	
(i) own discretion?	**7Y,2N**
(ii) trigger?	**2Y,5N,2S**
If you answered "sometimes" to either (i) or (ii) in Question 30, please describe briefly under what circumstances.	
31. If you answered "yes" or "sometimes" to (i) or (ii) in Question 30, does your information system readily allow you to identify:	
(i) for a nonresident issued security, the country of residence of the issuer of the security?	**9Y,1N**
(ii) for a domestically issued security, the sector of residence of the issuer of the security?	**9Y**
(iii) for a nonresident counterparty, the country of residence of the counterparty?	**9Y,1N**
(iv) for a resident counterparty, the sector of the counterparty?	**7Y,2N**
(v) the ISIN code or any other individual identifer for the securities exchanged?	**9Y,1N**

	Responses
32. Is securities lending/borrowing without cash collateral with nonresidents treated differently from securities lending/borrowing without cash collateral with residents?	
(a) securities lending?	**15N**
(b) securities borrowing?	**14N**
If you answered “yes” to Question 32 for either securities lending or borrowing without cash collateral, please describe briefly how they are treated differently.	
33. Is securities lending/borrowing without cash collateral involving securities issued By nonresidents treated differently from securities lending/borrowing without cash collateral involving securities issued by residents?	
(a) securities lending?	**14N**
(b) securities borrowing?	**12N**
If you answered “yes” in Question 33 for both securities lending and borrowing without cash collateral, please describe briefly how they are treated differently.	

(1) One respondent states "yes" for domestic securities but "no" for foreign securities.
(2) One respondent states "No" for bilateral transactions; "yes" for trilateral transactions.
(3) One respondent states that, in the US, France and Belgium, the answer is probably "yes".
(4) One respondent states “yes” for Belgium and France only
(5) One respondent states “genuine” repo are flagged as repos. Securities lending/borrowing normally executed as outright sales/purchases.
(6) One respondent indicated off balance sheet liability to return security to reverse repo counterparty.
(7) Five respondents indicated that, for sovereigns, supranationals and central banks, no variation margin is not taken.
(8) One respondent indicated that a payable/receivable was recorded when a PSA/ISMA was used and a threshold was breached.
(9) One respondent states if a proprietary transaction, it is recorded as an on balance sheet transaction.
(10) One respondent states where variation margin is cash, taken on balance sheet; where securities, recorded off-balance sheet.
(11) One respondent that conducts securities lending/borrowing through a custodian (it is not custodian itself) answered"no"; two other respondents answered "yes" as they act as their own custodians.
(12) One respondent indicated that securities lending is treated off-balance sheet; securities borrowing is recorded on balance sheet: the security is recorded as an asset, and an account payable is recorded to the security lender.
(13) One respondent indicated that it used German GAAP.

Legend: Y= Yes; N= No; S= Sometimes, DK= Don’t know

RESPONSES OF CUSTODIANS TO QUESTIONNAIRE, REGARDING THEIR INFORMATION SYSTEMS FOR REPURCHASE AGREEMENTS AND SECURITIES LENDING[25]

	Responses
1. Can your information system readily identify when your customers undertake repos (i.e., sell a security under a repo) as distinct from an outright sale or undertake a reverse repos (i.e., acquire a security under a repo) as opposed to an outright purchase:	
(a) for repos?	**9Y,8N,4S**
(b) for reverse repos?	**8Y,9N,4S**
2. Can your information system readily identify when your customers undertake a repo with securities acquired under a reverse repo?	**5Y,12N,4S**
3. Can your information system readily identify when your customers undertake outright sales of securities acquired under a reverse repo?	**3Y,12N,3S**
If you answered "sometimes" to any of Questions 1, 2, or 3, please briefly describe under what circumstances.	**(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)**
If you answered "no" to any of Questions 1, 2, or 3, please describe briefly under what would be involved to make the information available.	
4. For both repos and reverse repos, can your information system readily allow you to identify:	
(i) if a nonresident issued security, the country of residence of the issuer of the security?	
(a) for repos?	**11Y,8N (14)**
(b) for reverse repos?	**9Y,8N (14)**
(ii) if a domestically issued security, the economic sector of residence of the issuer of the security,?	
(a) for repos?	**10Y,9N (14)**
(b) for reverse repos?	**9Y,8N (14)**
(iii) if a nonresident counterparty, the country of residence of the counterparty?	
(a) for repos?	**12Y,7N (14)**
(b) for reverse repos?	**10Y,7N (14)**
(iv) if a resident counterparty, the economic sector of the counterparty?	
(a) for repos?	**11Y,8N (14)**
(b) for reverse repos?	**9Y,8N (14)**

[25] Several custodians indicated that they could identify repos and securities lending/borrowing, and the underlying characteristics of the security, if the transaction were being undertaken by their own institution or by one of their customers, but not otherwise. In those cases, the notation is "sometimes".

	Responses
(v) the ISIN code or any other individual identifier for the securities exchanged?	
(a) for repos?	**13Y,5N** (14)
(b) for reverse repos?	**11Y,5N** (14)
If you answered "no" to any part of Question 5, please briefly describe what would be involved in obtaining the information.	(5) (15) (16) (17) (18)
5. Can your information system readily identify variation margin (as distinct from an outright sale/purchase) if it is provided/received under a repo/reverse repo?	
(a) for repos?	**5Y,10N,2S**
(b) for reverse repos?	**4Y,9N,2S**
If you answered "sometimes" to any part of Question 5, please briefly describe what would be involved in obtaining the information.	(7) (14) (19) (20) (21) (22) (23) (25)
6. Are repos and reverse repos with nonresidents recorded differently in your information system from repos and reverse repos with residents?	
(a) for repos?	**16N**
(b) for reverse repos?	**15N**
If you answered "yes" or "sometimes" to Question 6, please briefly describe what would be involved in obtaining the information	
7. Are repos and reverse repos involving securities issued by nonresidents recorded differently in your information system from repos and reverse repos involving securities issued by residents?	
(a) for repos?	**16N**
(b) for reverse repos?	**15N**
If you answered "yes" or "sometimes" to Question 7, please briefly describe what would be involved in obtaining the information	
8. Does your institution undertake securities borrowing/lending on behalf of your customers?	
(a) securities lending?	**14Y,8N,1S**
(b) securities borrowing?	**11Y,10N**
9. If your institution undertakes securities lending on behalf of your customers, do you advise them	
(i) at the time the securities are "lent"?	**7Y,3N**
(ii) on a regular reporting date (e.g., weekly, monthly, quarterly)?	**11Y,1N**
(iii) on request?	**10Y,1N**
(iv) depending on the arrangement with the customer?	**12Y,1N**
(v) by an online, real time system?	**4Y,7N**
(vi) not at all?	**11N**

	Responses
10. For securities loaned or borrowed without cash collateral, can your information system readily allow you to identify:	
(i) for a nonresident issued security, the country of residence of the issuer of the security?	
(a) securities lending?	**12Y,2N**
(b) securities borrowing?	**9Y,4N**
(ii) for a domestically issued security, the sector of residence of the issuer of the security	
(a) securities lending?	**5Y,6N**
(b) securities borrowing?	**4Y,6N**
(iii) for a nonresident counterparty, the country of residence of the counterparty	
(a) securities lending?	**12Y,2N**
(b) securities borrowing?	**9Y,4N**
(iv) for a resident counterparty, the sector of the counterparty	
(a) securities lending?	**7Y,4N**
(b) securities borrowing?	**5Y,5N**
(v) the ISIN code or any other individual identifier for the securities exchanged:	
(a) securities lending?	**13Y,1N**
(b) securities borrowing?	**10Y,3N**
11. Do you receive on behalf of your customers securities as collateral for securities lent ?	**7Y,3N,5S** (26) (27)
12. If you answered "yes" or "sometimes" to Question 11, can these data be readily identified in your information system?	**9Y,2N,1S** (28)
13. If you answered "yes" or "sometimes" to Question 11 are your customers (you) able to on-sell (or on-"lend") at their (your) discretion the securities (collateral) so acquired, or are they (you) subject to a (default) trigger before they (you) can on-sell (on-"lend") the securities?	
(a) own discretion?	**1Y,7N,1S** (29)
(b) trigger?	**6Y,2N,2S** (29)
14. Do you receive/deliver variation margin when undertaking securities lending/borrowing on behalf of your customers?	
(a) securities lending?	**8Y,4N,1S** (29) (30)
(b) securities borrowing?	**5Y,6N,1S** (29) (30)
15. If you answered "yes" or "sometimes" to Question 14 are your customers (you) able to on-sell (or on-"lend") at their (your) discretion variation margin, or are they (you) subject to a (default) trigger before they (you) can on-sell (on-"lend") the securities?	
(a) own discretion?	**2Y,6N**
(b) trigger?	**7Y,1N,1S**

	Responses
16. For variation margin received for securities loaned without cash collateral, can your information system readily allow you to identify:	
(i) if a nonresident issued security, the country of residence of the issuer of the security?	**5Y,3N** (16) (31)
(ii) if a domestically issued security, the sector of residence of the issuer of the security?	**4Y,4N** (16) (17) (31)
(iii) if a nonresident counterparty, the country of residence of the counterparty?	**5Y,3N** (16) (31)
(iv) if a resident counterparty, the sector of the counterparty?	**5Y,3N** (16) (17) (31)
(v) the ISIN code or any other individual identifier for the securities exchanged?	**3Y,1N** (16) (31)
17. Is securities lending/borrowing with nonresidents treated differently from securities lending/borrowing with residents?	**1Y,13N** (16) (31)
If you answered "yes" to Question 17, please briefly describe how they are treated differently.	
18. Is securities lending/borrowing involving securities issued by nonresidents treated differently from securities lending/borrowing with residents?	**14N**
If you answered "yes" to Question 18, please briefly describe how they are treated differently	

(1) Depends on what type of service being provided. If customer does not use Triparty or Biparty services, information on nature of transactions will not be available.
(2) New zones in the inventory database and links with Swift would be required, plus "useful" information from Swift.
(3) Respondent would need to create separate transaction types for these transactions and positions. New system being developed which should be able to provide the information.
(4) Information would need to be provided by the customer.
(5) Custodians cannot identify whether the transactions are (reverse) repos or outright sales. The contract would need to be revised to distinguish between them.
(6) Custodians cannot identify whether the transactions are outright sales or repos. The contracts will need to be changed to identify this information. This would require a large change to reporting systems.
(7) Outright sales and repos cannot be separated. Repos would have to be specified as such. Changes to SWIFT standards as well as to respondent's custody and settlement systems.
(8) For the "1S" and one of the "No's", repos and reverse repos can only be identified when the respondent acts as the counterparty. For the other "no's", answers varied between (i) need to change securities settlement platform; (ii) special instructions needed; and (iii) information system does not make allow the separation to be made.
(9) The system is able to report customer positions which are lent but there is no distinction whether it is coming from repo/reverse repo or securities lending/borrowing.
(10) For gilts, the information is available through CREST. For non-UK securities, information unlikely to be available. For occurrences of on-selling, there is no automated means of monitoring. Would involve considerable manual intervention.

(11) The type of business is such that customers would be informed of any securities acquired under a reverse repo, but securities would be ring-fenced and would not be available for customer to sell. Securities are often acquired under a pooling arrangement on behalf of several customers, and the customer would only be advised of its portion.
(12) The repo tracking system implemented by DTC has enabled all 3 to detect and track repos better. Similar systems by other depositories will also assist all three respondents.
(13) System analysis and programming would be required.
(14) One respondent only deals in domestic securities.
(15) For one "no", the reason was that customer would need to provide the information.
(16) One respondent indicated that the sector information would need to be supplied from a suitable source if this information were required for statistical purposes.
(17) One respondent indicated that the sector codes are not currently held as part of the security issuer information but could be derived by looking up ISIN on external sources. This would involve manual interface. The custody business is recorded in a different system from principal trading, so cross-checks could be made with other databases to obtain the information.
(18) One respondent indicated that more detailed account information would be needed; another indicated that the information is maintained at the fund level. System enhancements and manual compilation would be required.
(19) One respondent indicated that it could identify repo and reverse repo; receive information from customer; add zone to database.
(20) One respondent indicated that the information is only available when Triparty services used.
(21) One respondent indicated that the information could be obtained from JSE as issuers not respondent's customers.
(22) One respondent said implementation of a new controls system would be needed.
(23) One respondent indicated that there is no distinction available for margin calls. This makes no sense from a business point of view. It is not important whether the securities are coming from a margin call or were already available. More important is whether the exposure is completely covered or not.
(24) One respondent indicated that it depends on contract with customer.
(25) One respondent in the United States indicated that a major change would be involved. The information on variation margin is maintained but not for repos. Another respondent in the United States indicated that it would require a system specification from the New York Federal Reserve Bank (that is, the depository) with a new transaction type. A third respondent in the United States stated the information is maintained at the fund level: see note 12.
(26) Collateral received under a triparty contract.
(27) Custodians need to revise contract to distinguish collateral. Large changes would also be required for the information system.
(28) Only where respondent provides collateral service.
(29) Although the customer acquires full legal title to collateral, in experience of one respondent this right has never been exercised.
(30) Only under a triparty contract; otherwise, variation margin is not identifiable.
(31) Nothing is "readily" available; the information sought would require manual compilation or systems modification.

Legend: Y= Yes; N= No; S= Sometimes, DK= Don't know

RESPONSES OF INTERMEDIARIES (BROKERS/DEALERS) ON THEIR INFORMATION SYSTEMS FOR REPURCHASE AGREEMENTS AND SECURITIES LENDING

	Responses
1. Can your records readily identify when your customers undertake repos (i.e., sell a security under a repo) or reverse repos (i.e., acquire a security under a repo):	
(i) repos?	**9Y,1N**
(ii) reverse repos?	**9Y,1N**
2. Can your records readily identify when your customers undertake a repo with securities acquired under a reverse repo?	**5Y,5N**
3. Can your records readily identify when your customers undertake outright sales of securities acquired under a reverse repo?	**2Y,5N**
If you answered "sometimes" to any of Questions 1, 2, or 3, please indicate briefly under what circumstances.	
If you answered "no" to any of Questions 1, 2, or 3, please what would be involved to make that information available.	**(1) (2) (3)**
4. If variation margin is delivered by one of your clients under a repo, is that recorded in your system?	**9Y**
If you answered "sometimes" to Question 4, please describe briefly under what circumstances.	
If you answered "no" to Question 4, please describe briefly what would be involved to make that information available.	**(1)**
5. If variation margin is received by one of your clients under a reverse repo, is that recorded in your system?	**9Y,1N**
If you answered "sometimes" to Question 5, please describe briefly under what circumstances.	
If you answered "no" to Question 5, please describe briefly what would be involved to make that information available.	**(1)**
6. For both repos and reverse repos, can your information system readily allow you to identify:	
(i) if a nonresident issued security, the country of residence of the issuer of the security?	
(a) for repos?	**8Y,2N (4) (5) (6)**
(b) for reverse repos?	**8Y,2N (4) (5) (6)**
(ii) if a domestically issued security, the economic sector of residence of the	

	Responses
issuer of the security,?	
(a) for repos?	**6Y,4N**(4) (5) (6)
(b) for reverse repos?	**6Y,4N**(4) (5) (6)
(iii) if a nonresident counterparty, the country of residence of the counterparty?	
(a) for repos?	**9Y,1N**(4) (5) (6)
(b) for reverse repos?	**9Y,1N**(4) (5) (6)
(iv) if a resident counterparty, the economic sector of the counterparty?	
(a) for repos?	**7Y,3N**(4) (5) (6)
(b) for reverse repos?	**6Y,4N**(4) (5) (6)
(v) the ISIN code or any other individual identifier for the securities Exchanged?	
(a) for repos?	**10Y**
(b) for reverse repos?	**10Y**
If you answered "no" to any part of Question 6, please briefly describe what would be involved to make the information available.	(4)
7. For both repos and reverse repos, are transactions with nonresidents treated differently from transactions with residents?	**10N**
If you answered "yes" to Question 7, please briefly describe how they are treated differently or under what circumstances.	
8. Are repos/reverse repos involving securities issued by nonresidents treated differently from transactions with residents?	**9N**
If you answered "yes" to Question 8, please briefly describe how they are treated differently.	
9. Can your records readily identify when your customers undertake securities lending or borrowing?	**8Y,1S**
If you answered "sometimes" to Question 9, please describe briefly under what circumstances.	
If you answered "no" to Question 9, please describe briefly what would be involved to make that information available.	(3) (7)
10. Can your system readily identify securities received/delivered as collateral on behalf of your customers in return for securities they have lent/borrowed:	
(i) securities lending?	**7Y,1N,1S**
(ii) securities borrowing?	**8Y,1N**
If you answered "sometimes" to Question 10, please describe briefly under what circumstances.	

	Responses
If you answered "no" to Question 10, please describe briefly what would be involved to make that information available.	
11. Can your information system readily identify securities that have been delivered/received on a margin call associated with securities lending/borrowing?	**7Y,1N,1S**
If you answered "sometimes" to Question 11, please describe briefly under what circumstances.	
If you answered "no" to Question 11, please describe briefly what would be involved to make that information available.	**(3) (8)**
12. For both securities lending and securities borrowing, can your information system readily allow you to identify:	
(i) if a nonresident issued security, the country of residence of the issuer of the security?	
(a) securities lending?	**6Y,2N**
(b) securities borrowing?	**6Y,2N**
(ii) if a domestically issued security, the economic sector of residence of the issuer of the security,?	
(a) securities lending?	**5Y,4N**
(b) securities borrowing?	**5Y,4N**
(iii) if a nonresident counterparty, the country of residence of the counterparty?	
(a) securities lending?	**8Y,1N**
(b) securities borrowing?	**8Y,1N**
(iv) if a resident counterparty, the economic sector of the counterparty?	
(a) securities lending?	**6Y,3N**
(b) securities borrowing?	**6Y,3N**
(v) the ISIN code or any other individual identifier for the securities Exchanged?	
(a) securities lending?	**9Y**
(b) securities borrowing?	**9Y**
13. Is securities lending/borrowing with nonresidents treated differently from securities lending/borrowing with residents?	**9N**
If you answered "yes" to Question 13, please briefly describe how they are treated differently.	
14. Is securities lending/borrowing involving securities issued by nonresidents treated differently from securities lending/borrowing involving securities issues by residents?	**8N,1N**
If you answered "yes" to Question 14, please briefly describe how they are treated differently.	

(1) Major system change. Currently, this would be shown as an outright sale/purchase.
(2) Would need to see clients' complete portfolio.
(3) Deals are accounted on a buy/sale back/sell/buy back format. Track has to be made of both trades in a specific profit center to determine if a repo/reverse repo has been undertaken
(4) A technology investment to build links between various systems, data providers and securities financing system.
(5) Currently, under existing systems, information is unavailable. System enhancement is underway which should provide these data.
(6) All respondents indicated that the new tracking system by DTC will allow them to detect and track better securities lending and borrowing.
(7) Securities lending and borrowing transactions are pooled so respondent does not match each loan/ Borrowing with exact collateral.
(8) System change involved. Currently, margining managed at total exposure, so no split between initial and variation margin possible.

Legend: Y= Yes; N= No; S= Sometimes, DK= Don't know