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**The Macroeconomic Statistical Treatment of Securities Repurchase
Agreements, Securities Lending, Gold Swaps and Gold Loans**

**Prepared by the Statistics Department
International Monetary Fund**

THE MACROECONOMIC STATISTICAL TREATMENT OF SECURITIES REPURCHASE AGREEMENTS, SECURITIES LENDING, GOLD SWAPS AND GOLD LOANS

The attached draft working paper on the statistical treatment of securities repurchase agreements, securities lending, gold swaps and gold loans is a Fund work-in-progress on the treatment of these complex and important transactions. The paper attempts to address the issue from a broad macroeconomic statistical perspective, as the transactions have an important role in monetary and financial statistical framework (as well as, to a lesser extent, in the national accounts and government finance statistics).

The issue of the appropriate treatment of repurchase agreements (repos) and securities lending transactions has been discussed at three previous meetings of the IMF Committee on Balance of Payments Statistics (in 1995, 1996 and 1998). On each occasion, it was decided that the existing BPM5 guidelines were inadequate to reflect the changing nature of these transactions and that additional methodological work in this complex area was required. Accordingly, in early 1999, a comprehensive research and consultation process was undertaken by the Fund. Visits were made to the authorities in several countries as well as to international organizations and a review of the literature was undertaken.

The outcome of the research is reflected in the attached paper which shows that:

- a) the market for repos and securities lending is large and growing, both for resident-resident transactions as well as for cross-border transactions. Other transactions (such as sale/buy backs, stock (bond) lending against cash) have essentially the same features as repos and should be recorded in the same manner where the economic impact is the same
- b) the ability to on-sell a security acquired under a repo or a security borrowing is almost universal
- c) although there are data available, they are considered by most parties in the market to be inadequate
- d) there is no definitive agreement on how these complex transactions should be treated statistically
- e) generally, market practitioners, economic analysts and economic statisticians regard repos, securities lending and gold swaps as collateralized loans but accounting practices differ
- f) the international accounting standards have adopted the treatment as collateralized loans for these type of transactions
- g) there is no consensus on the treatment of gold loans (deposits) and that more work will be necessary to achieve one

The paper makes a number of recommendations, including the adoption of the collateralized loan approach for repos, securities lending and gold swaps. The recommendations are consistent with those being developed in the *Provisional Operational Guidelines on the Data Template for International Reserves and Foreign Currency Liquidity*. Alternative approaches are possible, depending on country practice, data sources, etc., provided additional information is supplied.

The paper also notes the impact that this approach will have on external debt statistics, on reserve assets and for monetary statistics (especially the question of consolidation within the financial sector). Suggestions for addressing these issues are made.

The Committee are asked to comment specifically on the following issues for discussion:

1. The consensus of opinion among compilers appears to be that repos should be classified as collateralized loans; for instance, this was the advice given for the Coordinated Portfolio Investment Survey. Does the Committee support this approach? Does classifying these transactions in the manner set out above appear appropriate?
2. What are the Committee's views on the recommended treatments for securities lending without cash collateral, gold swaps and gold loans?
3. Because the nature of these transactions is ambiguous, and given the size of the activity, the recommended treatments suggest supplementary information be provided where appropriate. Do Committee members accept, in principle, the need for supplementary information and if so what are their preferences?
4. Does the Committee agree that, for those countries, for reasons of convention, data sources or for other reasons, that do not adopt the collateralized loan approach, that repos be recorded as transactions in securities and that supplementary information be provided so that securities on repo, and those received in a reverse repo, can be identified?
5. Does the Committee agree that the research work on these transactions be continued, especially into the treatment of gold loans/deposits?

If Committee members have detailed, specific comments they are asked to provide them in writing in due course (i.e., subsequent to the Committee meeting) so that they can be taken into account for further work. It is intended that the paper be released as a Fund paper for balance of payments compilers after agreement has been reached and comments have been received.

THE MACROECONOMIC STATISTICAL TREATMENT OF SECURITIES REPURCHASE AGREEMENTS, SECURITIES LENDING, GOLD SWAPS AND GOLD LOANS¹

I. INTRODUCTION

This paper addresses the question of the appropriate treatment in macroeconomic statistics² of securities repurchase agreements, securities lending with and without cash collateral, gold swaps and gold loans which together have posed difficulties for macroeconomic statisticians. They are widely used in financial markets and have been growing rapidly in the last few years³. In all cases, while there is a legal change in ownership of the underlying instrument, market risk remains with the original owner. Their use results in improved market efficiency. In most instances, these activities permit the holder of the underlying instrument to increase its income from the asset. They do not fit easily in the standard instrument breakdown because they have complicated features that defy simple classification. Indeed, all these activities create the potential of a double count of the assets involved, while the alternative measurement approaches offer different analytical interpretation. This paper seeks to achieve an acceptable statistical approach that makes their treatment both analytically meaningful (in economic terms) as well as observing the principles of the macroeconomic statistical system. Developing an internationally consistent and coherent approach is important, not just to avoid imbalances (though that is clearly important) but also to provide comparability of concept and interpretation.

The next section sets out what these transactions are and indicates their similarities and their differences. The third section will review the underlying principles of *Balance of Payments Manual*, fifth edition (BPM5) and the *1993 System of National Accounts* (SNA93). The fourth section examines how accounting standards address the issues. The fifth section examines the statistical implications of the different treatments and how they might be applied to these transactions. The paper concludes by indicating what may be an acceptable situation. An appendix provides examples of these different treatment.

¹ The author of this paper wishes to thank the authorities in Australia, Germany, Japan, Singapore, South Africa, Spain, the United Kingdom, the United States, the Bank for International Settlements and the European Central Bank for the discussions and their thoughtful input.

² The balance of payments, the national accounts, monetary and financial statistics and government finance statistics.

³ The size of the market for transactions of this nature is not well recorded. However, recent work by the International Organization of Securities Commissions (1999) indicates that the value of securities on “loan” and repurchase agreements in excess of \$2 trillion monthly (see p. 13 of the report). Cross-border transactions are not well developed but the indications are that are also substantial. See Bank of England (1999)

II. WHAT ARE THESE INSTRUMENTS?

Security repurchase agreements (repos)

A securities repurchase agreement (*repo*) is an arrangement involving the sale of securities at a specified price with a commitment to repurchase the same or similar securities at a fixed price on a specified future date (often with a very short maturity, e.g., overnight, but increasingly for longer maturities, sometimes up to several weeks) or on a date subject to the discretion of the purchaser^{4,5,6}. Initial and variation margin payments may also be made (see further below). A repo viewed from the point of view of the cash provider is called a *reverse repo*. When the funds are repaid (along with an interest payment, based on the inter-bank rate and determined at the outset of the transaction) the securities are returned to the “cash taker”⁷. The provision of the funds earns the cash provider interest which is related to the current interbank rate and not the rate of interest earned on the security “repoed”⁸. Full, unfettered ownership passes to the “cash provider” but the market risk – the benefits (and risks) of ownership (such as the right to holding gains (and losses) -- and receipt of the property/investment income attached to the security remain with the cash taker. “Full, unfettered ownership” means that the cash provider acquires ownership of the security and may sell it. Originally, it was intended that the cash provider’s right to on-sell would be invoked only in the event of a default by the cash taker. However, as the market has developed, on-selling has become much more common and the right to on-sell at the cash provider’s option is almost universal. It is this development that has caused the most difficulty in the classification of repos as change of ownership is an underlying principle of all the macroeconomic statistics.

⁴ 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.

⁵ 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”.

⁶ 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.

⁷ Terms such as “borrower”, “lender”, “purchaser” or “seller” may be misleading in this context, given the nature of these transactions. Accordingly, this paper uses the more neutral terms of “cash provider” and “cash taker” in discussing repos, in line with those used by the Bank of England’s document *Repo of Government Securities*.

⁸ In the event that a coupon payment is made during the life of the repo, that is factored into the funds repaid. However, market participants endeavor to avoid such a situation if possible.

In many countries, the accounting practice is for the security to be retained on the balance sheet of the cash taker which also records a loan payable (equal to the value of the cash received) while the cash provider records a loan receivable (as the counter entry to the cash provided to the cash taker) and the collateral received is recorded off-balance sheet. If the cash provider on-sells the security, it usually records a “short” (or negative) asset position. In a few countries, repos are recorded as transactions in the underlying instrument, reflecting the change in ownership principle. A variation of this latter treatment is to regard the reverse leg of repo as having financial derivative attributes⁹, while, in some countries, accounting practice is asymmetrical, that is, the cash taker records a collateralized loan, while the cash provider records a transaction in the underlying security. These issues are explored further later in this paper.

Repos are used by several types of players in financial markets. Most commonly, financial institutions transact with other financial institutions, both domestic and nonresident, and central banks with domestic financial institutions and other central banks. However, nonfinancial enterprises and governments may also use repos. When reverse repos are used by central banks with domestic financial institutions, they are used as a policy tool to ease liquidity in the financial system. On the other hand, when a central bank undertakes a repo (that is, it becomes the “cash taker”) it is draining liquidity from the financial system in the short-term -- restricting monetary conditions—by removing funds from the market until the central bank’s pre-arranged repurchase of the securities is realized.

Repos are frequently used as a means of financing the acquisition of the underlying instrument. For example, a nonresident purchaser of a government security may repo the security to a resident financial institution as it may either not have or wish to use its own funds to acquire the security outright (at least, for the time being) and may be assuming that the repo rate (see below) will be less than the rate on the security it is acquiring (for as long as it holds the security) or that the purchaser is anticipating a downwards shift in the interest yield curve, producing holding gains on the security, without tying up its own funds. In many countries, the repo rate (the rate paid by the borrower in a repo transaction) is the benchmark rate for central bank lending.

If a central bank “repos” with a financial institution (either domestic or nonresident) by providing foreign currency securities issued by a nonresident in exchange for foreign exchange deposits, it may be undertaking the transaction to increase the liquidity of gross reserve assets¹⁰ (provided the foreign assets meet the criteria for inclusion in reserves). One common method of recording the transaction is not to record a sale of the security, but to “gross up” the transaction, given its reversible nature, that is, to record the foreign exchange

⁹ This option is not used, as far as the author of the paper knows but is under active consideration in Australia.

¹⁰ This assumes that foreign exchange deposits of domestic financial institutions are not included in reserve assets.

received as a reserve asset together with a loan liability as the offsetting entry in *Other investment: Liabilities: Loans: Monetary authorities: Short-term* in the balance of payments. Net reserves, however, remain unchanged. In the same manner, when used between central banks, repos provide a means by which the cash taking central bank can increase (gross) reserve assets without entering the foreign exchange market. Conversely, the cash providing (reverse repoing) central bank removes the foreign exchange from its balance sheet and may record a loan receivable in its place (provided the criteria for inclusion in reserves are observed¹¹) while the cash taking central bank increases its holdings of foreign exchange without removing the security from its balance sheet while creating a loan liability. The net effect of treating the transaction in this manner is to increase recorded global gross international reserves (although “net” reserves remain unchanged).

To avoid this overcounting of gross reserves, an alternative approach is for the cash receiving central bank, while retaining the repoed securities on its balance sheet, to remove the securities from its measure of reserves. This is the recommendation in the *Provisional Operational Guidelines on the Data Template for International Reserves and Foreign Currency Liquidity*. In this manner, the collateralized loan approach is retained but reserves are not “overstated”.

Repos between financial institutions, whether with other domestic or non-resident financial institutions, permit the cash taker to retain the benefits (and risks) of ownership of the security, while being able to obtain funds at a competitive rate. For the cash provider, funds are lent at a market rate, while securing a very high quality collateral which can be accessed quickly and easily either as part of the financial institution’s own financing activities or in the event of default. Chains of repo and reverse repo are common practice in financial markets as highly credit worthy market players raise funds at lower rates than they are able to on-lend. In this manner, repo players are also part of a broader financial intermediation activity¹². The development of repo markets can increase liquidity of a money market while, at the same time, deepening the market for the underlying securities used (frequently, government securities but not necessarily), leading to finer borrowing rates both for money market participants and governments.

Usually, the cash taker in a repo is the initiator of the transaction which tends to place the cash provider in a slightly stronger negotiating position. These are called “cash-driven” repos. In these circumstances, the cash taker is not required to provide a specific security – a

¹¹ If the funds provided under resale agreements with nonresident units can be reclaimed at very short notice for use in meeting balance of payments needs, the resale agreements can be treated as international reserves and classified therein as a separate component of the central bank deposits abroad. Otherwise, the resale agreements should be classified as loans to nonresidents in *other investment: monetary authorities: assets: loans*.

¹² Repo market players may have matched or unmatched books: in a matched book, maturities of all repos out are the same as those for repos in; in an unmatched book, the maturities differ in which case the market player is speculating on movements in the yield curve.

list of acceptable securities is generally available. Frequently, substitution of the security is permitted during the life of the repo, that is, the cash taker may wish to access the security repoed and so usually is permitted to do so by substituting it for another of equal quality (generally on the list of acceptable securities). This ability will usually affect the rate of interest charged on the repo. However, in certain circumstances, one party may have need for a specific type of security. These transactions are known as “securities-driven” repos. They result when a particular security goes “special” (i.e., it is in very high demand and there is insufficient supply to meet commitments). In these circumstances, if cash is provided as collateral (non-cash collateral is discussed under *securities lending*) the cash-taker may be in a stronger bargaining position. In essence, when a security driven transaction takes place, the cash taker is prepared to accept cash in return for the security “lent”, provided s/he can be compensated for the risk of lending by obtaining a sufficient spread between what is paid for on the repo rate and what can be earned in the money market. In extreme cases, when the security may be unavailable from any other source, the repo rate may fall to zero.¹³

Whether a transaction is cash-driven or securities-driven will affect which party pays *margin*. Margins payments are made to provide one party with some additional collateral, over and above the value of the cash provided. Margin payments¹⁴ may be made at the outset, in which case they are known as *initial margins*. Margin payments may also be paid during the life of a repo if the value of the collateral changes, in which case they are known as *variation margin*¹⁵. If the transaction is cash-driven, the cash taker will provide the margin; if the transaction is securities-driven, the cash provider will provide the margin. Margin may be cash or securities. If the margin (whether initial or variation) is paid as cash, it may be recorded as a loan payable/receivable or as a deposit. If it is paid in the form of non-cash (usually, securities) typically neither initial or variation is recorded as a transaction – it is held off-balance sheet.

Market and credit risk affect the amount of collateral provided. The market risk is that of the underlying security that the cash provider receives but the risks of ownership of which remain with the cash taker. The credit risk the exposure of each of the two parties to the repo (the cash taker and the cash provider) to each other. If the cash provider receives a security the value of which is subject to large price fluctuations, and/or if the cash provider were to

¹³ In some instances, when a repo is due to be unwound, the cash provider may not be able to return the security. This situation is called non-delivery (not default) and results in the cash taker retaining the funds without having to pay interest. Non-delivery is different from default in that there is not usually a question of the cash provider’s being unable to return the securities at all, merely there is a delay in the process (usually as the result of another party in the chain of repoing (in and out) being unable to access the specific security at that particular date).

¹⁴ The term “haircut” is sometimes used in relation to repo transactions. The haircut is used as part of the initial valuation of the collateral provided and is part of the way that margins are provided.

¹⁵ Some reverse transactions, such as sale/buy backs, do not have margin payments.

feel that there is a risk of default by the cash taker, initial or variation margins are required. This is because if the cash taker were to default, and the value of the security falls, due say to adverse movements in interest rates, the cash provider suffers a holding loss as the collateral may be worth less than the funds provided to the cash taker. In this instance, the *exchange* of value is imbalanced: one party is receiving (paying) more than it is providing (receiving). The transaction appears to have more of the characteristics of a loan than a transaction in securities. However, it could also be argued that the initial transaction is a sale/purchase of the security and that a margin payment of (additional) securities is not a transaction (as no additional funds have been exchanged) and the collateral is provided as protection for the reverse leg. On the other hand, the cash taker may also be exposed to risk. If the security's value rises, and the cash provider on-sells and then goes bankrupt before the repo is closed out, the cash taker will have lost any holding gain that might have occurred (abstracting from the payment of any margin). Equally, if the transaction is security-driven, and the value of the security rises, the cash taker may request additional collateral.

As each party¹⁶ at the inception of a repo is equally exposed to risk, in many developed financial markets, initial margin may not be required if the credit standing is approximately equal (monetary authorities usually ask for initial margin and rarely, if ever, pay it) but variation margin is usually provided when the market price of the security falls. On the other hand, when the value of the security rises, the cash provider may or may not return part of the security's value as a "reverse variation margin", depending on the market's practices in any given country. In less developed capital markets, and depending on the depth and price volatility of the market of the security underlying the repo, initial margins of substantially more (possibly up to 25%) than the value of the cash provider may be required.

In most cases, the economic nature of a repo is similar to that of a collateralized loan in that the purchaser of the securities is providing funds, but because the securities are provided as protection against default and because there is a change in legal ownership, a security transaction also takes place¹⁷. The legal and market arrangements for repos, including the payments of margin (whether initial or variation), the ability to substitute securities, and the retention of economic risk by the original owner, tend to support the view that repos are collateralized loans. This is certainly the way repos are viewed by market participants. However, there are analytical and statistical difficulties that result from such a treatment. On the other hand, while following the change of ownership approach is in keeping with basic statistical concepts, so that treating a repo as an outright sale (with or without financial derivative elements) will overcome some of the problems caused by the collateralized loan approach, it causes other problems. These issues are discussed further in the Section IV, Accounting Standards and Section V Statistical Implications.

¹⁶ If a central bank is one of the parties to a repo and the other party is not another monetary authority, because the credit rating of the central bank will be higher, it is possible that initial margin may be required.

¹⁷ This paradox is stated very clearly in *Statement of Accounting Standards no. 125* by the Financial Accounting Standards Board. See further in discussion on accounting standards, below.

In many respects, a repo can be seen as a “volume measure”, that is, the security that is given up will have exactly same characteristics as that returned, regardless of any changes in price that may have taken place in the meantime (abstracting from the payment of margin). So that if the value of the security has risen during the life of the repo (i.e., between the original sale and the subsequent repurchase) the “volume” that was provided is returned (usually expressed in terms of the nominal value of the security) not the value of the funds that was exchanged at the outset. Similarly, if the value of the security has fallen, the cash provider is not required to return a higher value of the security at the close of the repo’s life (again, abstracting for the payment of margin) to equal the value of the cash paid/returned. This reflects the fact that it is the original owner who bears the market risk on the security.

Securities lending

Securities lending refers to an arrangement under which a holder transfers securities to a “borrower”, with an arrangement to return the securities on a fixed date or on demand. Full, unfettered ownership is transferred to the “borrower” but the economic risks and benefits of ownership remain with the original owners. If the original owner does not retain the rights of ownership, the exchange of securities should be recorded as a transaction in the securities. The “borrower” of the securities will usually provide collateral, either in the form of cash or of other securities of equal or greater value to the securities “lent”, providing initial margin¹⁸. If cash collateral is provided, the transaction has the same economic impact as repo (discussed above); if non-cash collateral is provided, a fee is paid by the “borrower” to the “lender”. This sub-section discusses those exchanges of securities that do not involve cash. In most cases, “lenders” of securities consider the arrangements to be temporary and do not remove the securities from their balance sheets or include the collateral on their balance sheets, as they retain the rights to any dividends or interest while the securities are on loan¹⁹.

In many cases, the transfer of securities between holders is conducted by security depositories; frequently, under these circumstances, the “lender” of the security is unaware that the security it owns has been “lent” because the custodial arrangement may permit such transactions without the express permission of the owner on each occasion.

The “borrower” does not usually remove the collateral provided from its balance sheet but, on the other hand, as the securities are acquired to cover short positions, the “borrower” has the legal right to on-sell the stock. When the “borrower” on-sells the securities, a short

¹⁸ In some instances, no collateral is provided.

¹⁹ In instances where equities are loaned, they are usually done to avoid the period of loan coinciding with a shareholders’ meeting, or any other instance where voting rights are required to be exercised (such as for a takeover bid). However, it is not always possible to know when these situations will arise and the arrangements usually permit the return of the equities to the original owner for such circumstances.

should be recorded²⁰. Repayment in equivalent securities is permitted (i.e., those with the same characteristics as those “loaned” but with different certificate numbers). If the value of the securities placed as collateral falls vis-à-vis the value of the securities “loaned”, the securities “borrower” is usually required to place variation margin, to give the securities “lender” adequate, continuing protection. If the value of the securities placed as collateral increases, the securities “lender” may or may not be required to return part of the collateral, depending on country practice.

The motivation for “lending” of securities in this fashion is similar to securities-driven repos and is a commonly used technique through which brokers cover short positions. Securities lending involves securities that may be issued by residents or nonresidents, by governments or by corporations, and can be either equities or debt instruments. Securities lending increases liquidity in the securities market as well as the timeliness of some trade settlements—especially for securities that trade infrequently or in small volume.

The fee gives the “lender” an additional return on the security²¹. The fee is independent of any income that may be earned on the security (as property/investment income). Consequently, the securities lender is receiving two types of income from ownership of the securities—the fee (for providing the convenience and taking the risk of default) and the underlying property income. In securities lending, which is a securities-driven activity, the acquirer of the securities, the “borrower”, initiates the transaction which means that the bargaining advantage lies with the “lender” of the security, and, depending on the availability of the security, the level of the fee charged. The payment may be made at inception or at close out of the contract.

In the same manner that a repo represents a “volume” exchange of securities, the same applies to securities lending, that is, the market risk is borne by the “lender” of the securities. If, for example, the securities exchanged are shares, then the same number of the shares, with the same characteristics, is to be returned at the termination of the contract; if the securities are debt instruments, the returned securities are based on the same principles as for repos (usually expressed in their nominal value plus any interest that has accrued on the securities during the life of the transaction).

²⁰ In addition, chains of securities lending can be established when brokers successively on-lend securities to brokers, dealers, or other parties. When securities are “on-lent” by brokers in this fashion, the “on-lending” broker will usually record a zero net position (but should record the gross loan asset and liability position, as they are with different counterparties) and the “borrowing” broker will record a negative holding. The lending chains are reversed when the securities are returned. The multiparty complexity of security lending gives rise to potential double counting of security holdings. Compilers should, when possible, design data collection methods to eliminate double counting and ensure consistent reporting among various types of institutions.

²¹ It is not altogether clear whether this payment is more akin to a financial service or property/investment income as it has elements of both. This paper does not, however, explore this issue further.

Gold swaps

Under a gold swap, which, in principle, can only be undertaken between monetary authorities because gold swaps only involve monetary gold, gold is exchanged for foreign exchange deposits (or other reserve assets) with an agreement that the transaction be unwound at an agreed future date, at an agreed price. The monetary authority acquiring the foreign exchange will pay interest. Gold swaps are undertaken when the cash taking monetary authority has need of foreign exchange but does not wish to sell permanently its gold holdings. As gold swaps are only undertaken between monetary authorities, on-selling of gold is unlikely. The authority providing the foreign exchange, and receiving the gold, will not usually record the gold on its balance sheet; the authority providing the gold will not usually remove it from its balance sheet. Instead the authority receiving gold will usually record a reduction in foreign exchange and a loan receivable (which may or may not be included in reserve assets, depending on whether it meets the reserve asset criteria of liquidity and availability for use) and the authority receiving foreign exchange will record an increase in foreign exchange and a loan payable. In some cases, transactions in gold are recorded, in accordance with *BPM5*, paragraph 434 (see below) in which case, they have no net impact on total reserves but change each monetary authority's reserve assets' composition. In whichever manner in which the transaction is recorded, the monetary authority receiving the gold (that is, providing the foreign exchange) will receive property (investment) income on the foreign exchange provided. Gold swaps between monetary authorities do not usually involve the payment of margin.

The nature of gold swaps is similar to those of repos and securities lending in that the market risk remains with the original holders: if gold prices increase, the volume of gold returned is the same as that swapped, while the same volume of the foreign exchange (as defined at the time of the initiation of the swap) or the securities (expressed in nominal terms in the same way as for repos) is returned. There are elements of gold swaps that could make such transactions appear to have aspects of financial derivatives; these are discussed further below in Section V Statistical Implications.

While, in principle, transactions in gold as a financial asset (monetary gold) can only be undertaken between monetary authorities (or with international monetary organizations), market practice in many countries regards transactions that involve non-monetary gold between and among banks (and other financial institutions) as if they were financial assets. Inasfar as they are treated as collateralized loans, and no change of ownership occurs, there may be no need to demonetize gold. However, a similar problem to the collateralized loan approach for recording a repo arises (when two parties record ownership of the same instrument at the same time): if the gold is sold to a non-financial unit which would record it as holdings of the commodity, imbalances in global holdings of gold in aggregate (monetary and non-monetary) will result. See the discussion on this issue below.

Gold loans (or gold deposits)

Gold loans or deposits are undertaken by monetary authorities to obtain an income return on gold which otherwise earns none. The gold is “lent²²” to (usually, it is deposited with) a resident or nonresident financial institution (such as a bullion bank) or another party in the gold market with which the monetary authority has dealings and confidence and which is probably acting as an intermediary for a gold dealer or gold miner which has a temporary shortage of gold. In return, the borrower may provide the monetary authorities with high quality collateral, usually securities but not cash, and will pay a “fee” (which may be more appropriately described as property/investment income). The collateral is not taken on to balance sheet of the monetary authority. All the risks of price change reside with the “lender/depositor”. The “loan/deposit” may be placed on demand or for a fixed period but available on notice. Country statistical practice has tended to continue to record the gold loan receivable/deposit as if it were still part of monetary gold, in situations where the authorities are confident that the terms of the gold loan/deposit meet reserve asset criteria (availability, liquidity, etc.). As the authorities do not hold the physical gold, it might be argued that the loan/deposit should be removed from *monetary gold*²³ and recorded in *foreign exchange: currency and deposits in reserve assets* (there being no category for loans in *reserve assets* other than loans to the IMF). Inasfar as the gold loan may be recorded as *monetary gold* in these circumstances, there is a parallel with repos, securities lending and gold swaps: the underlying instrument is deemed to remain on the books of the original holder, rather than be recorded as a change in ownership, as the original owner remains exposed to the market risk (of a change in market price). However, unlike repos, gold loans/deposits do not involve any reciprocal payment of cash, or in some instances, any collateral at all. The loan/deposit represents solely a claim on a financial institution, in the same way as any deposit. Consequently, the transaction is not a “reverse transaction” in the same way as a repo. Gold loans/deposits could be regarded as:

- (i) transactions in non-monetary gold and become either
 - a) a claim on a resident bank (and would, therefore, no longer represent a reserve asset (or any claim on a nonresident) unless the monetary authority were able to maintain effective control) or
 - b) as an “other claim” (or “foreign currency deposit”) within reserve assets if the counterparty were a nonresident and if the gold deposit were recognized as monetary gold (again depending on the nature of “control”), or

²² In principle, under a gold loan, the gold should first be demonetized, that is, it should cease to be recorded as a financial asset and become a (physical) commodity. In practice, this is rarely, if ever, done.

²³ As the monetary authorities no longer hold the gold it could be argued that it should be demonetized. If gold is “loaned” or placed on deposit with a resident bank, it should be removed from reserve assets altogether inasfar as the gold claim asset represents a claim on a resident institution.

(ii) as no transaction at all.

As the gold is generally placed with a bank, the bank will probably record a foreign currency liability. In that case, the foreign currency assets will not equal the foreign currency liabilities if the monetary authority records the gold deposit as monetary gold. Adjustments to the system will need to be made to address this potential imbalance.

Similarities and differences

From the foregoing, what can be said about the similarities and differences of repos, securities lending, gold swaps and gold loans?

From the table below, it can be seen that while there are some differences, there are far more similarities. The major similarities are that the economic benefits and risks of ownership (right to receive property income and exposure to changes in market price) remain with the original holder in every case and that in each case on-selling of the asset (security or gold) is possible (though, in the case of gold swaps with other monetary authorities, it is unlikely). The major differences lie in economic motivation and that cash may not be exchanged in all instances. These differences may mean that the statistical treatment should be different; on the other hand, the similarities argue for a common treatment for those transactions of a similar nature; that is, those involving cash might be treated one way; those not involving cash another way.

The continued exposure to the benefits and risks of ownership is the fundamental issue and marks these transactions out from other more “normal” transaction where change in ownership is clear and the risks and benefits of ownership are demonstrably transferred. Equally, the payment for the “use” of the cash or security, which payment is independent from the security’s income (which continues to accrue to the original holder) would also argue that these transactions do not represent a change of ownership in the traditional sense. Payment of margins, or in the case of repo, the right to substitute the security also would tend to argue against a treatment that regarded these transactions as outright sales. On the other hand, the principle of ownership is at the heart of the balance of payments and national accounts and should only be violated with very convincing arguments.

Similarities and Differences between Repos, Securities lending without cash collateral, Gold swaps and Gold loans

	Repos ²⁴	Securities lending	Gold swaps	Gold loans/deposits
Purpose	Liquidity; increase income; minimize cost of borrowing	Cover “short” position; increase income	Balance of payments needs	Increase income
Legal change of ownership	Yes	Yes	Yes	Yes
On-selling possible	Yes	Yes	Unlikely	Yes
Market risk remains with original holder	Yes	Yes	Yes	Yes
Property/investment income receivable by original holder	Yes	Yes	No	n/a
Return price and date fixed (or available on demand)	Yes	Yes	Yes	Yes
Initial margin provided	Sometimes	Usually	No	Probably
Variation margin provided	Yes	Yes	No	Probably
Cash exchanged	Yes	Not necessarily	Usually	No
Collateral provided	Yes	Yes	Not usually between monetary authorities	Not necessarily
Initiated by cash taker	Yes if cash driven) No (if securities driven)	No	Yes	n/a
Fee	No	Yes	No	No
Income	Yes	No	Yes	Yes

²⁴ Including sale/buy backs, carries, stock or bond lending against cash, securities lending with cash collateral.

III. BALANCE OF PAYMENTS AND NATIONAL ACCOUNTS' TREATMENT

Exchange of value is an essential part of economic theory, involving an explicit or implicit change of ownership. When two parties come together without coercion, and at arms length, to a transaction the minimum benefit to each is the value of the transaction; both are increasing their utility by undertaking the exchange. If this were not true, it is a reasonable assumption that the transaction would not take place. In consequence, both *SNA93* and *BPM5*, as measures of economic behavior, regard change of ownership as a central principle of their systems. This is reflected in *BPM5*:

“... in the balance of payments (and in the SNA), transactions are recorded when economic value is created, transformed, exchanged, transferred, or extinguished. The time of recording for a transaction is governed by the principle of accrual accounting. Claims and liabilities arise when there is a change in ownership. The change may be a legal one or a physical or economic one involving control or possession.” (BPM5, para. 111)

The treatment of transactions in the national accounts and the balance of payments depends on both their nature and the underlying principles of *SNA93* and *BPM5*. A transaction occurs when something of value is provided by one party to another. In *SNA93* and *BPM5*, financial claims and liabilities arise out of contractual relationships between pairs of economic agents and maintaining that relationship is a central element of these systems. Failing to observe the principle that an *effective change of ownership* of an asset—i.e., one in which the purchaser obtains full rights of ownership including the right to receive property income, as well as the risks and benefits of changes in the price—should always be treated as a transaction, therefore, encounters major problems as it disturbs the frameworks, and hence the benefits, of these systems.

Therefore, while this change in ownership rule is not inviolate, departures from it occur rarely and only to improve the usefulness of the analysis and without causing difficulties elsewhere in the systems. In some instances a change in ownership is imputed even where none has occurred. These examples are given in *BPM5* paragraphs 119 and 120. These are (i) finance leasing, (ii) goods shipped between the parent of a direct investment enterprise and branches and affiliates, and (iii) goods sent for processing but do not change ownership. In certain circumstances, repos may also be counted in this category but the other way round, i.e., that a change in ownership is not recognized when it may, in fact, have occurred legally as the economic interpretation would be impaired if the ownership change were to be recognized:

“A repurchase agreement (repo) is an arrangement involving the sale of securities at a specified price with a commitment to repurchase the same or similar securities at a fixed price on a specified future date (usually very short-term e.g., overnight or one day) or on a date subject to the discretion of the purchaser. The economic nature of a repo is similar to that of collateralized loan in that the purchaser of the securities is providing funds backed by the securities to the seller for the period of the agreement and is receiving a

return from the fixed price when the repurchase agreement is reversed. The securities often do not change hands, and the buyer does not have the right to sell them. So, even from a legal sense, it is questionable whether or not a change of ownership occurs. As a result, in this Manual (and in the SNA and IMF money and banking statistics), a repo is treated as a newly created financial asset that is a collateralized loan rather than an asset related to the underlying securities used as collateral. Reflecting that interpretation, repos are classified under loans—unless the repos involve bank liabilities and are classified under national measures of broad money, in which case the repos are classified under currency and deposits. In some cases, because of legal, institutional and other considerations, national compilers may find it necessary to use an alternative treatment of repos; in such instances, this information should, if it is feasible to do so, be separately identified and reported to the IMF.” (BPM5, para. 418)

What is described in this passage is a circumstance where a legal form of ownership has occurred, but an effective, economic change of ownership has not, as the cash provider has not acquired full and untrammelled exposure to the instrument. However, as, in many cases, the cash provider has the right to on-sell, it could equally be argued that the cash provider does become exposed to the market risks associated with the security as it will need to repurchase an equivalent security when it is required to unwind the repo.

As far as the other three types of transactions are concerned, only gold swaps receive any mention in *BPM5* or *SNA93*:

“Assets created under reciprocal facilities (swap arrangements) for the temporary exchange of deposits between the central banks of two economies warrant mention. Deposits (in foreign exchange) acquired by the central bank initiating the arrangement are treated as reserve assets because the purpose of the exchange is to provide the central bank with assets that can be used to meet the country’s balance of payments needs. Reciprocal deposits acquired by the partner central bank also are considered reserve assets. Arrangements (gold swaps) involving the temporary exchange of gold for foreign exchange deposits should be treated in a similar fashion.” (BPM5, para. 434)

In other words, gold swaps are to be considered transactions in the underlying instruments (monetary gold and foreign exchange) and not as collateralized loans.

In assessing what is the appropriate treatment of repos, securities lending, gold swaps and gold loans, it is important to bear in mind that the substance of the transaction, rather than just the name used to describe it, be examined so that the principles in these systems are not overlooked.

IV. ACCOUNTING STANDARDS

The difficulty in treating these hybrid transactions is recognized by the accounting profession. In its *Statement of Financial Accounting Standards No. 125*, released in June 1996, the Financial Accounting Standards Board of the United States describes the situation as follows:

“Repurchase agreements and securities lending transactions are difficult to characterize because those transactions are ambiguous: they have attributes of both sales and secured borrowings. Repurchase agreements typically are documented as sales with forward purchase contracts and generally are treated as sales in bankruptcy law and receivers’ procedures, but, as borrowings in tax law, under court decisions that cite numerous economic and other factors. Repurchase agreements are commonly characterized by market participants as secured borrowings, even though one reason that repurchase agreements arose is that selling and then buying back securities, rather than borrowing with those securities as collateral, allows many government agencies, banks, and other active participants in the repurchase agreement market to stay “within investment and borrowing parameters that delineate what they may or may not do”²⁵.” Securities loans are commonly documented as loans of securities collateralized by cash or other securities or by letters of credit, but the “borrowed” securities are invariably sold, free of any conditions, by the “borrowers”, to fulfill obligations under short sales or customers failure to deliver securities they have sold.” (Para. 135)

After further discussing the issues at some length, FASB concludes that

“...transfers of financial assets with repurchase commitments, such as repurchase agreements and securities lending transactions, should be accounted for as secured borrowings if the transfers were assuredly temporary, and as sales if the transfers were not assuredly temporary.” (Para. 143)

The recently released *Financial Instruments: Recognition and Measurement, IAS39* (March 1999) by the International Accounting Standards Committee reached a similar conclusion:

“35. An enterprise should derecognise a financial assets or a portion of a financial asset when, and only when, the enterprise loses control of the contractual rights that comprise the financial asset (or a portion of the financial asset). An enterprise loses such control if it realised the rights to benefits specified in the contract, the rights expire, or the enterprise surrenders those rights.

“36. If a financial asset is transferred to another enterprise but the transfer does not satisfy the conditions of derecognition in paragraph 35, the transferor accounts for the transaction as a collateralised borrowing. In this case, the transferor’s right to reacquire the asset is not a derivative.

38. A transferor has not lost control of a transferred financial asset and, therefore, the asset is not derecognised if, for example, ...

²⁵ Marcia Stigum, *The Repo and Reverse Repo Markets* (Homewood, Ill.: Dow Jones-Irwin, 1989), 313

(b) the transferor is both entitled and obligated to repurchase or redeem the transferred assets on terms that effectively provide the transferee with a lender's return on the assets received in exchange for the transferred asset. A lender's return is one that is not materially different from that which could be obtained on a loan to the transferor that is fully secured by the transferred asset.” (IASC 39, paras. 35,36 and 38)

In some countries, “good accounting practice” is to have an asymmetrical treatment, that is, to record a collateralized loan when the security is repoed out and to take the security on to balance sheet under a reverse repo. The reasoning is thus: when the security is repoed out, that is, when the party is the cash taker, because the party is materially affected by the holding (as it remains the effective owner), and bears all the risks and benefits of ownership, the security is retained on balance sheet, along with the cash received and the loan payable. In this manner, supervisors and shareholders can observe what resources are readily available to the entity while also noting the exposure. On the other hand, for a reverse repo, the security should be taken on to balance sheet (and a loan receivable not be recorded) as the securities are a readily available resource, as indeed they would be if they were to be on-sold. Such an approach may have some value for individual corporate accounting and supervision but it is inappropriate for macroeconomic statistics which require consistency of treatment. Although dismissed in paragraph 36 of IASC 39, consideration needs to be given as to whether these transactions could be said to have financial derivative elements to them. The argument is based on the very nature of these agreements: they have prices for the return leg fixed at the outset of the contract such that a likelihood exists of there being a difference between the market price at the time the contracts are unwound (even if overnight) and the value of the returned asset at that time, aspects which are similar to those of a financial derivative contract.

What is a financial derivative? According to the proposed rewrite of *BPM5* on the treatment of financial derivatives

“Financial derivatives are financial instruments that are linked to a specific financial instrument or indicator or commodity, and through which specific financial risks (such as interest rate risk, currency, equity and commodity price risk, and credit risk) can be traded in financial markets in their own right in financial markets..... The value of a financial derivative derives from the price of the underlying item...

*“Financial derivatives enable parties to trade specific financial risks—such as interest rate risk, currency, equity and commodity price risk, and credit risk, etc—to other entities who are more willing, or better suited, to take or manage these risks, typically, but not always, without trading in a primary asset or commodity.” (Proposed *BPM5* rewrite on treatment of financial derivatives. Paras. 1 and 2)*

From this, for a transaction to be considered a financial derivative, it needs to involve the trading of risk, to be linked to an underlying instrument, and that it can be traded, or valued, in its own right. Buying (or selling) an instrument which it is intended to be resold (or repurchased) necessarily involves elements of risk of changes in market price. If these

transactions were regarded as transactions in the underlying asset, derivative elements become apparent. There is a forward (“strike”) price which the two parties are committed to observing, the underlying instrument has a price which is observable and it would be possible to “trade out” of the position either by on-selling the security or by taking an equal and opposite position. As the market price on the day of delivery (when the reverse legs of the transactions are to be exercised) is likely to be different from the strike price either one or the other party will make a holding gain, the other will make a holding loss: if the strike price is above the market price the party returning the asset makes a holding gain, while the party receiving it will make a holding loss. If the strike price is lower, the gains and losses are reversed. Whether these attributes give the transaction financial derivative elements is, however, not clear. There is no attempt to trade or transfer risk (in fact, the opposite is true – the original holder of the security wishes to retain exposure to the instrument). The implications of this are discussed in the next section.

V. STATISTICAL IMPLICATIONS

As noted, a claim of ownership is a central aspect of the balance of payments and the national accounts as it is important to know who has a financial claim on whom and through which type of instrument. Even so, from the above, it can be seen that, while change of ownership is an important aspect to both systems, it must be applied so that its economic interpretation is the most meaningful. Thus, in finance leasing, for example, although the legal ownership of the equipment remains with the lessor, for all intents and purposes, the lessee becomes the economic owner and is treated in the macroeconomic statistics accordingly. Moreover, as can be seen from paragraph 418 of *BPM5*, under the circumstances described therein—“the securities often do not change hands, and the buyer does not have the right to sell them”—the repos are not treated as though they have changed ownership even though there has been (a change in ownership).

Since the time the *Manual* was written, it would appear that activities on markets have changed sufficiently that that statement in para. 418 of *BPM5* that “The securities often do not change hands, and the buyer does not have the right to sell them” is no longer valid as it stands: it appears that repos can change hands and that they often are on-sold. Indeed, there are indications that the repo market is perhaps as large as one third to one half of the size of government securities on issue²⁶. The principal consideration is whether this changes the nature of the transaction and whether repos should be considered transactions in securities where they can be or are on-sold (with or without financial derivative aspects attached to them) or whether the treatment as collateralized loans should remain or whether another approach is possible.

²⁶ See IOSCO (1999) table on p.13

As should be evident from this paper, from an accounting and statistical points of view, on-selling causes difficulties whether the repos are treated as collateralized loans or as transactions in the securities. If repos are regarded as collateralized loans, when a “repoed” security is on-sold, and if the transaction is not a reverse repo, the new owner will consider that it owns the security and record it on its balance sheet. At the same time, the original owner, the cash provider, will also record ownership of the security. This poses a problem for the statistical system: not only does this overstate the assets held but it also incorrectly indicates who has a claim on the issuer, from different sectors or from different countries²⁷. Consequently, when such a situation arises, most countries accounting practices require that the cash taker report a “short” or negative position. While this does not overcome the problem of having two parties with a claim on the issuer with the same instrument, at least it avoids the overstatement in aggregate. This is the approach recommended in the *Coordinated Portfolio Investment Survey: Survey Guide*²⁸. However, having two parties with a simultaneous claim over the same securities is not satisfactory and can result in an overstatement of a country’s external debt position, as the accounting offset to the security that was repoed in, the loan receivable, is recorded gross on the asset side of the ledger and is not netted against the debt liability. An alternative is to record all securities underlying repos whether or not they can be on-sold (which, as noted, probably applies to the vast majority of instances) as transactions in the security. Such an approach may produce the easiest statistical solution as it could be applied consistently but it disturbs the economic meaning of the transactions which have many of the attributes of collateralized loans (as, for example, can be seen from the accounting standards quoted above).

For securities lending without cash collateral, the situation is similar: in most cases, the “lender” of the securities will continue to record the securities on its balance sheet, as it will not usually see itself as having permanently parted with the securities²⁹. Because securities lending is undertaken to cover a “short” position, the “borrower” will on-sell the security so that the purchaser will also record the securities on its balance sheet. To overcome the double count, the “borrower” needs to record a negative position. This has the same drawbacks as repos. As non-cash collateral is provided, and the “lender” records neither the “sale” nor the collateral on its balance sheet, the “lender” would record no transaction at all; the “borrower” will record a negative position in the security “borrowed” once the security has been on-sold

²⁷ For monetary and financial statistics, the problem of double count and allocation of the ownership of the security (who is financing whom?) is very important. If a collateralized loan approach were to be adopted, monetary and financial statistics would require additional information of the sector of counterparty, especially for consolidation of the financial sector.

²⁸ See *Coordinated Portfolio Investment Survey: Survey Guide*, IMF August 1996 paras. 88 – 102.

²⁹ Moreover, given the arrangements under which much security lending takes place – the custodian lends on general instructions, rather than having to seek explicit approval each time -- the owner may not be aware that the securities have been “lent”.

(but no change on its balance sheet in the collateral provided to the securities lender)³⁰. However, this treatment is perhaps a real reflection of the economic reality: two parties are positively exposed to the instrument, one negatively. But if no transaction is recorded between the original “lender” and “borrower”, the mutual exposure to the other counterparty is not recognized. On the other hand, if they were treated as transactions, the same issues arise as for repos: while the problem of double counting may be avoided, it fails to reflect the continuing exposure to the underlying instrument of the original owner.

Given that repos (and securities lending) provide the “lender” (of cash or security) with some form of income, it is a very different situation from a standard transaction where securities change hands. In those cases, the party selling the security no longer has claim on the income stream from the issuer and will receive no income, or any payment, from the purchaser, other than the cost of acquisition of the security. Moreover, the payment of margins, the ability to substitute the securities repoed, the “volume” nature of the transaction, the continuing exposure and the need to recognize that exposure, especially when the transaction is being used to finance the acquisition, all tend to lend strong support that effective ownership has not been transferred and that some other type of transaction—which may or may not involve recognition as a transaction—has occurred.

In making that assessment, a further issue needs to be considered: whether cash-driven repos should be recorded separately from securities-driven repos, given that the underlying motivation is different. However, in general, macroeconomic statistics cannot be based on the motivation of the party(ies) involved. If the economic impact is the same, as it is – cash is provided in return for a temporary transfer of ownership of a security – there is no *a priori* reason to treat them differently in the statistical framework.³¹

The different treatments have the following implications:

a) Collateralized loan for transactions involving cash

³⁰ Equally, the “lender” may on-sell the security received as collateral or use it for a repo. In that case, it should record a short in the security acquired from the “borrower”. Its exposure to the “borrower” remains off-balance sheet.

³¹ Under such reasoning – that motivation be a determining factor in the statistical treatment of any given transaction – it would be necessary for the economic statistician to know what is the motivation of the economic players, which is not possible; for example, it would prompt suggestion for a varying treatment for financial derivatives, depending on whether they were undertaken for hedging or speculative purposes.

For repos (including securities lending with cash and gold swaps), if treated as collateralized loans, the essential underlying nature of the transaction is recognized, it identifies the exposure to the underlying (especially useful if the transaction has been used to finance the acquisition) and indicates the leverage involved. However, the net result is that two parties can “own” the same instrument, while a third party has a negative ownership. The exposure of the reverse repoing party is not to the debt issuer but to the repo counterparty. In the event of a default, the repoing party will have recourse to the collateral (the cash) to compensate for the failure of the counterparty to return the security which may result in some (marginal) holding loss. The reverse applies to the reverse repoing party – it will retain the security which was received as collateral³².

However, the possibility of a double count could have implications for an economy’s sectoral/national positions. For example, if a resident in country A holds a security issued by a resident in country B, and then repos it to a resident in B, who, in turn, sells it outright to a resident in country C, although B’s net IIP remains unaffected, its security liability to nonresidents is overstated³³. Any analysis of holdings of B’s external debt (especially of government securities³⁴) would be affected by this overcount. The situation in country A is the reverse of that in country B in that the security claim (on country B’s government, for example) is not actual while its debt position is correctly stated – funds have been borrowed and should be recorded accordingly.

For *reserve assets*, as the collateralized loan approach retains on balance sheet the underlying (usually securities) that have been repoed out, the result is a “grossing up” of reserves as strictly, repoed out securities are not available to meet a balance of payments need³⁵. In effect, if a country used the securities it held as part of its reserve assets for repoing, providing there was no margin call, there would be no limit to which the reserves could be subject (even while increasing the loan liabilities of the monetary authorities). To overcome this eventuality, even while retaining the securities on repo on balance sheet, a better approach would be to remove from *reserve assets* and to reclassify them to *portfolio investment* for the life of the repo.

³² Unless repoed out again, in which case its position is largely neutral, at least, as far as the first repo is concerned – cash in matches cash out.

³³ **Depending on how a country calculates its income flows to nonresidents, this may mean that twice the income to nonresidents is deemed payable than it should be.**

³⁴ Transactions in government debt and the government debt outstanding, especially with nonresidents, is usually the most examined and the most used security in any country’s repo market.

³⁵ Conversely, for a reverse repo: as, under the collateralized loan approach, the securities acquired under a reverse repo are not taken on to balance sheet, they are, nonetheless, available to meet in a balance of payments. If the loan receivable from the reverse repo is not included in reserve assets (as it may not meet the criteria for inclusion) the reserve assets of the country undertaking a reverse repo (from reserve assets) would be understated.

These problems may be overcome if an “of which” or a memorandum item is included within loans and securities, by both parties, to identify those transactions/positions that are related to repo.

b) Transactions in the underlying instrument

If repos, securities lending with cash and gold swaps are treated as transactions in the underlying instrument, the opposite situation from the treatment as collateralized loans applies: there is a loss of information on exposure and leverage, the true underlying nature of the transaction is removed but there is a gain that only one party is recorded as owner of the underlying instrument at any one time and there is no overstatement (grossing up) of either reserves or external debt.

As noted above, a possible refinement is to record them as having financial derivative elements attached to them. However, while having certain derivative aspects, the accounting profession and most market practitioners do not regard them as meeting the criteria for financial derivatives, not least because no risk is transferred.

However, if countries were to prefer to record reverse transactions as transactions in the underlying instrument, it is recommended that a memoranda item³⁶ be provided for “securities (or gold) on repo” when the security has been repoed out; similarly, an “of which” or a memorandum item be recorded for “securities (or gold) acquired under repo”.

c) Transactions involving monetary gold

For transactions involving monetary gold, a further complication arises as to the counterparty. For gold swaps, where the counterparty is not a monetary authority, if these transactions are treated as collateralized loans, so that the gold remains on the books of the original owner, the result would be that the recipient of the gold does not record receipt of the gold: instead, a drop in cash and an increase in loan receivable are recorded. However, if the gold is then on-sold outright, the new holder should record a holding of the commodity gold, not a financial asset. This would be true of a gold miner, gold manufacturer but it should also be recorded as commodity gold by a financial institution. The result would be that there would not only be two parties reported to be holding the swapped asset but that there would be an increase in nonmonetary gold with no reduction in monetary gold, unless the “middle party” were to record a negative asset in nonmonetary gold. In practice, however, if gold is held by a financial institution, it is usually recorded as a foreign currency asset. The result is that monetary gold, which has no liability counterpart, will be recorded by a financial institution as a liability (probably

³⁶ An “of which” is not possible in this approach for securities that have been repoed out as they are no longer recorded on balance sheet.

included in foreign currency deposits) prompting an imbalance in the system. For gold loans/deposits, a similar problem arises as the counterparty is always a non-monetary authority.

- d) No transaction is recognized where cash is not involved

For those transactions where cash is not involved, a possible solution would be not to recognize the transaction at all. The advantage of this approach is usually that for the parties involved no change is recorded on their balance sheets, in recognition of the fact that the original owner is still essentially exposed to the instrument/issuer. The disadvantage of this approach is that the same as for collateralized loans: in effect, the “lender” is exposed to the “borrower” of the security and has no claim on the issuer. In the event of default, the same issues would arise. Similarly, if the security is on-sold, as it is likely to be, there would be two parties recording ownership, with a negative claim by the on-seller, which distorts the sectoral/national asset position as noted above.

- e) Recognizing a transaction when no cash is involved

The advantages and disadvantages of this approach are the opposite of those above in d).

VI. RECOMMENDED TREATMENTS

In light of the forgoing, the Fund recognizes that no single approach is entirely satisfactory. As noted by FASB, these transactions are ambiguous, being, in effect, hybrid instruments. However, in weighing all the various arguments for and against the various treatments, it is recommended that:

1. For repos:
 - (i) that they be regarded as collateralized loans
 - (ii) that both the loans (for both the cash provider and the cash taker) and the associated underlying instrument that is on repo be recorded as an “of which on repo” (or as a memorandum item) so that they are identifiable, preferably by counterparty
 - (iii) that in the event of on-selling, the on-seller record a short
 - (iv) that, if on-sold by reverse repo, the short seller should record gross the repo and the reverse repo on balance sheet as they are with different counterparties and that the loan receivable should identify an “of which on repo”
 - (v) that, for reserve assets, even while retaining the securities that are on repo on balance sheet, they should be removed from *reserve assets* and be reclassified to *portfolio investment*. This is the recommendation in the *Provisional Guidelines on the Data Template on International Reserves and Foreign Currency Liquidity*. Also, (BOPCOM99/15) discusses the external debt issues in more detail
 - (vi) that, if a transaction in the underlying instrument is recorded (for operational reasons or for reasons of convention in the economy) that they be identified as an “of which” item

for those received on repo (by the cash provider) and as a memorandum item for those out on repo (for those provided by the cash taker)³⁷.

2. For securities lending without cash collateral

- (i) that they not be regarded as a transactions
- (ii) that the securities “lender” record an “of which on securities lending” (or as a memorandum item) on balance sheets, preferably by counterparty
- (iii) that the securities “borrower” record an “of which acquired under securities lending” (or as a memorandum item), preferably by counterparty, if the securities acquired have not been on-sold
- (iv) that the securities “borrower” record a short if the securities “borrowed” have been on-sold and identify the counterparty from which the securities were “borrowed”

3. For gold swaps

- (i) that they be recorded as collateralized loans when exchanged for cash
- (ii) that the cash provider may or may not record the loan asset receivable in reserve assets, depending on whether it meets the reserve assets criteria
- (iii) that the cash provider record a memorandum item “gold held under gold swap”

4. For gold loans/deposits

Gold swaps pose particular difficulties because of the implicit change in nature involved in the transaction (from monetized to nonmonetized). For monetary statistics, the present treatment is to record a transaction. To change to recording no transaction would involve making substantial changes to some time series. On the other hand, the *Provisional Operating Guidelines for the Data Template on International Reserves and Foreign Currency Liquidity* treats gold loans/deposits as if there had been no transaction. The full implications on monetary statistics need to be fully explored before a recommendation can be made on the appropriate treatment of these transactions.

5. For monetary statistics

that counterparty information to all these types of transactions (especially those involving cash) be provided for monetary and financial statistics purposes.

Selected Bibliography

Bailey, J., “Banks’ gilt repo transactions” *Bankstats*, Bank of England , London, November 1998,

³⁷ Bearing in mind that an “of which” cannot be recorded for the latter as it is not retained on balance sheet

Bank For International Settlements, *Implications of repo markets for central banks*, Basle, March, 1999

Bond Market Association, *Research Quarterly*, New York, March 1999

Federal Reserve Bank of New York, *Securities Lending*, August 1988 (unpublished)
“Repo Rate Patterns for New Treasury Notes” *Current Issues in Economics and Finance*, Vol. 2, No. 10, September 1996

Financial and Accounting Standards Board, *Financial Accounting Series, Statement of Financial Accounting Standards No. 125*, Norwalk, Conn, June 1996

Gray, Simon, *Repo of Government Securities*, Centre for Central Banking Studies, Bank of England , London, November 1998

Hamilton, R., Mackie, F., and Narain, A., *Financial Market Data for International Financial Stability*, Centre for Central Banking Studies, Bank of England , London, March 1999

International Accounting Standards Committee, *Financial Instruments: Recognition and Measurement (IAS 39)*, London, March 1999

International Monetary Fund *Balance of Payments Manual*, Fifth Edition, Washington, D.C., 1993
Coordinated Portfolio Investment Survey: Survey Guide, Washington, D.C., 1996

Inter-Secretariat Working Group on National Accounts, *System of National Accounts*, Brussels/Luxembourg, New York, Paris, Washington, D.C., 1993

Jordan, B.D. and Jordan, S. D., “Special Repo Rates: An Empirical Analysis” *Journal of Finance*, Vol. LII, No. 5, December 1997

Reserve Bank of Australia, 1998 Annual Report and Financial Statements, August 1998

Technical Committee of International Organization of Securities Commissions (IOSCO) and Committee of Payments and Settlement Systems (CPSS), *Securities Lending Transactions: Market Development and Implications*, July, 1999T

Appendix

Examples

A. Repos

- (i) Bank A, the cash taker, enters into a repo with Bank B, the cash provider, for the exchange of government securities for 100 in cash. The government securities have a nominal value and a current market value of 100. The repo is for three days. No price changes occur during that period. The security acquired is not on-sold during the life of the repo.

If the repo were to be treated as collateralized loan:

Cash taker:

<i>Opening balance sheet</i>		<i>Transactions of 1st leg</i>		<i>Balance sheet after 1st leg</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 200	Deposits 300	Cash +100	Loan +100	Cash 300	Deposits 300
Secur- ities 150	Shareholders' Funds 50			Secur- ities 150	Loan 100
					Shareholders' Funds 50
<u>350</u>	<u>350</u>	<u>+100</u>	<u>+100</u>	<u>450</u>	<u>450</u>

Transactions (reverse leg)

*Closing balance sheet
(after unwinding)*

Assets	Liabilities	Assets	Liabilities
Cash -100	Loan -100	Cash 200	Deposits 300
		Secur- ities 150	Shareholders' Funds 50
<u>0</u>	<u>0</u>	<u>350</u>	<u>350</u>

Cash provider:

<i>Opening balance sheet</i>		<i>Transactions of 1st leg</i>		<i>Balance sheet after 1st leg</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 250	Deposits 275	Cash - 100		Cash 150	Deposits 275
Secur- ities 50	Shareholders' Funds 25	Loan +100		Loan 100	Shareholders' Funds 25
—	—	—		—	—
300	300	0		300	300

<i>Transactions (reverse leg)</i>		<i>Closing balance sheet (after unwinding)</i>	
Assets	Liabilities	Assets	Liabilities
Cash +100		Cash 250	Deposits 275
Loan - 100		Secur- ities 50	Shareholders' Funds 25
—		—	—
0		300	300

There would also be entries for interest paid by the cash taker to the cash provider in the income account.

- (ii) If the value of the security falls to 95 during the period, if variation margin were provided by the cash taker to the cash provider in the form of additional securities, as these would held off-balance sheet, there would be no entries on the balance sheets of either party, either when the margin was provided or when it was returned. However, if the cash provider were to on-sell the securities, it would record a short position (see (iii)).

See the example below on *derivatives* where the transaction is considered to be a sale/purchase of the securities.

(iii) If A on-sells the security, the additional entries would be:

Cash provider:

<i>Balance sheet after 1st leg</i>		<i>Transactions (on-selling)</i>		<i>Balance sheet after on-selling</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 150	Deposits 275	Cash +100		Cash 250	Deposits 275
Loan 100				Loan 100	
Secur- ties 50	Shareholders' Funds 25	Securities -100		Secur- ties -50	Shareholders' Funds 25
300	300	0		300	300

(iv) If the repo were to be treated as a transaction in securities, the entries would be:

Cash taker:

<i>Opening balance sheet</i>		<i>Transactions of 1st leg</i>		<i>Balance sheet after 1st leg (before unwinding repo)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 200	Deposits 300	Cash +100		Cash 300	Deposits 300
Secur- ities 150	Shareholders' Funds 50	Securities -100		Secur- ities 50	Shareholders' Funds 50
350	350	0		350	350

Transactions (reverse leg)

*Closing balance sheet
(after unwinding)*

Assets	Liabilities	Assets	Liabilities
Cash 100		Cash 200	Deposits 300
Secur- ities -100		Secur- ities 150	Shareholders' Funds 50
0		450	450

Cash provider:

<i>Opening balance sheet</i>		<i>Transactions of 1st leg</i>		<i>Balance sheet after 1st leg (before unwinding repo)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 250	Deposits 275	Cash - 100		Cash 150	Deposits 275
Secur- ities 50	Shareholders' Funds 25	Secur- ities 100		Secur- ities 150	Shareholders' Funds 25
<u>300</u>	<u>300</u>	<u>0</u>		<u>300</u>	<u>300</u>
<i>Transactions (reverse leg)</i>		<i>Closing balance sheet (after unwinding)</i>			
Assets	Liabilities	Assets	Liabilities		
Cash 100		Cash 250	Deposits 275		
Secur- ities -100		Secur- ities 50	Shareholders' Funds 25		
<u>0</u>		<u>300</u>	<u>300</u>		

N. B. If the transaction were treated as a transaction in securities, if there would be a payment of variation margin, and if the margin were in securities, there would be no transaction recorded. If received in cash, it would be recorded as a loan or as a deposit. If the securities margin were on-sold, the cash provider would record a short position.

B. Securities lending

Security dealer, C, undertakes a securities “borrowing” with a bank, D to acquire 100 shares in Company XYZ Inc., valued at 5 on the day of the transaction. C undertakes to return 100 shares in XYZ Inc. in two weeks. C lodges government securities with D worth 520, as collateral. The price of the shares in XYZ Inc. or the government securities do not change over the period of the agreement. C sells the shares and receives cash on the day of the exchange. C then reacquires 100 shares in XYZ Inc. at 5 and returns them to D.

(v) If the exchange of shares is taken to represent no change of ownership (and hence no transaction) there would be no entries on the D’s balance sheets either when the shares are exchanged or when they are returned: D would continue to record the shares on its balance sheet throughout the duration of the “borrowing” and equally will not record on its balance sheet the government securities provided as collateral. C will record the on-selling transactions:

Security Borrower

<i>C's opening balance sheet (prior to the securities borrowing)</i>				<i>Transactions (on-selling)</i>				<i>C's balance sheet prior to re-acquisition of XYZ shares)</i>			
Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
Cash	600	Loans	500	Cash	500	Cash	1100	Loans	500		
Shares	350	Shareholders'		Shares	-500	Shares	-150	Shareholders'			
Govt		Funds	1150			Govt		Funds	150		
Securities	700					Securities	700				
	1650		1650		0		1650				1650

<i>Transactions (acquisition of XYZ shares for return to D)</i>				<i>C's balance sheet (after re-acquisition of XYZ shares)</i>				<i>C's balance sheet after return of XYZ shares to D)</i>				
Assets		Liabilities		Assets		Liabilities		Assets		Liabilities		
Cash	-500			Cash	600	Loans	500	Cash	600	Loans	500	
Shares	500			Shares	350	Shareholders'		Shares	350			
Shareholders'						Govt	Funds	1150	Govt		Funds	1150
				Securities	700				Securities	700		
	0				1650		1650		1650		1650	

From this, it can be seen that C does not record on its balance sheet the acquisition of the shares obtained from D but the sale by C to the third party is recorded as a transaction (and thus produces a negative position). When the shares have been (re-)acquired (probably on the open market) for return to D, these entries are reversed. Note that C’s balance sheet does not

change between the time of reacquisition of the shares and their subsequent return to D because these (reacquired) shares have not appeared on C's balance sheet.

(vi) If the price of the shares "lent/borrowed" increases from 5 to 6 on the first day of the following week after the initial transaction, and the transaction has been treated as though no change in ownership has occurred, C will provide 100 in extra (non-cash) collateral to D. However, neither party will record this as a change of ownership and so no transaction is recorded. However, if the price remains at 6 until the maturity of the transaction, and no variation margin is paid, C will record the following:

Security Borrower

<i>C's opening balance sheet (prior to the securities borrowing)</i>		<i>Transactions (on-selling)</i>		<i>C's balance sheet prior to re-acquisition of XYZ shares)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 600	Loans 500	Cash 500		Cash 1100	Loans 500
Shares 350	Shareholders' Funds 1150	Shares -500		Shares -150	Shareholders' Funds 150
Govt				Govt	
Securities_700_				Securities_700_	
1650	1650	0		1650	1650
<i>Transactions (re-acquisition of XYZ shares for return to D)</i>		<i>C's balance sheet (after re-acquisition of XYZ shares)</i>		<i>C's balance sheet after return of XYZ shares to D)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash -600		Cash 500	Loans 500	Cash 500	Loans 500
Shares 600*		Shares 350	Shareholders' Funds 1050	Shares 350	Shareholders' Funds 1050
		Govt		Govt	
		Securities_700_		Securities_700_	
0		1550	1550	1550	1550

As a consequence, C has suffered a holding loss of 100 but D's position is protected, that is, because of the nature of the agreement D, receives back the same volume of shares, not the same value. If, on the other hand, the share price of XYZ Inc. had fallen, C would have enjoyed a holding gain and D a holding loss. The important point is that D's position is the same as it would have been had there been no "lending".

* In principle, the short should be revalued from -500 to -600 in the Other Changes in Assets Account. For simplicity of exposition, this step has not been presented.

(vii) If we turn now to the treatment of the exchange where it had been recorded as a transaction in securities, and the situation is that of the first instance above, where there is no price change in the shares of XYZ Inc. or the government securities during the life of the agreement, the entries would be:

Security Borrower

C's opening balance sheet (prior to the securities borrowing)

Assets		Liabilities	
Cash	600	Loans	500
Shares	350	Shareholders'	
Govt		Funds	1150
Securities	700		
	<u>1650</u>		<u>1650</u>

Transactions (recording the "lending" as a transaction in securities)

Assets		Liabilities	
Shares	500		
Govt			
Securities	-520		
Loan (imputed)	<u>20</u>		
	0		

C's balance sheet prior to on-selling of XYZ shares)

Assets		Liabilities	
Cash	600	Loans	500
Shares	850	Shareholders'	
Govt		Funds	1150
Securities	180		
Loan	<u>20</u>		<u>1650</u>
	1650		1650

Transactions (on-selling)

shares)

Assets		Liabilities	
Cash	500		
Shares	-500		
	<u>0</u>		

C's balance sheet (prior to re-acquisition of XYZ shares)

Assets		Liabilities	
Cash	1100	Loans	500
Shares	350	Shareholders'	
Govt		Funds	1150
Securities	180		
Loan	<u>20</u>		<u>1650</u>
	1650		1650

Transactions (re-acquisition of XYZ)

Assets		Liabilities	
Cash	-500		
Shares	500		
	<u>0</u>		

C's balance sheet (prior to return of securities "borrowed")

Assets		Liabilities	
Cash	600	Loans	500
Shares	850	Shareholders'	
Govt		Funds	1150
Securities	180		
Loan	<u>20</u>		<u>1150</u>
	1650		1150

Transactions (recording the return of the securities "borrowed" as a transaction in securities)

Assets		Liabilities	
Cash	500		
Shares	-500		
	<u>0</u>		

C's closing balance sheet (following return of "borrowed" securities)

Assets		Liabilities	
Cash	600	Loans	500
Shares	350	Shareholders'	
Govt		Funds	1150
Securities	700		
	<u>1650</u>		<u>1650</u>

(viii) If, however, the price of the shares in XYZ Inc. had risen from 5 to 6, while the price of the government securities remained unchanged, and the transaction were treated as a transaction in securities, the entries would be as follows:

<i>C's opening balance sheet (prior to the securities borrowing)</i>		<i>Transactions (recording the "lending" as a transaction in securities)</i>		<i>C's balance sheet prior to on-selling of XYZ shares)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 600	Loans 500			Cash 600	Loans 500
Shares 350	Shareholders' Funds 1150	Shares 500		Shares 850	Shareholders' Funds 1150
Govt Securities 700		Govt Securities -520		Govt Securities 180	
		Loan (imputed) <u>20</u>		Loan <u>20</u>	
		0		1650	1650
<u>1650</u>	<u>1650</u>				
<i>Transactions (on-selling shares)</i>		<i>C's balance sheet (prior to re-acquisition of XYZ shares)</i>		<i>Transactions (re-acquisition of XYZ)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 500		Cash 1100	Loans 500	Cash -600	
Shares -500		Shares 350	Shareholders' Funds 1150	Shares 600	
		Govt Securities 180			
		Loan <u>20</u>			
		1650	1650	0	
<u>0</u>					
<i>C's balance sheet (prior to return of securities "borrowed")</i>		<i>Transactions (recording the return of the securities "borrowed" as a transaction in securities)</i>		<i>C's closing balance sheet (following return of "borrowed" securities)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash 500	Loans 500			?	?
Shares 950	Shareholders' Funds 1150	Shares -600			
Govt Securities 180		Govt Securities 520			
Loan <u>20</u>		Loan <u>?</u>			
1650	1650	Imbalance			

C's balance sheet at this point becomes difficult to interpret: if the shares returned to D are a different value from the government securities received back from D, there is an imbalance

which cannot be explained by a revaluation through the Other Changes in Assets Account. Perhaps the only fashion in which this could be accommodated would be to regard these transactions as having financial derivative aspects to them.

C. Financial derivatives?

The following example indicates how a (e.g., repo) transaction would be recorded were it to be regarded as having a financial derivative element to it:

Two entities enter into a repo for a thirty day period. On the first day of the contract, the cash taker, E, repos to the cash provider, F, a government security with a current market price of 100 (and a nominal value of 100)³⁸ and receives in return 100 on which it will pay 10% pa interest. On the thirtieth day, when the contract is to be reversed, the security has fallen in value to 95. No variation margin is provided. F returns to E the securities, now valued at 95, and receives 100 in cash in return. As a result, F would record a sale of the security for 95 and a transaction in a financial derivative of 5 to match the increase in cash; E records a reduction in cash of 100, matched by the purchase of the security for 95 and a closing out of a financial derivative liability of 5.

For E, the cash taker, the entries would be:

<i>E's Opening balance sheet</i>				<i>Transactions of 1st leg</i>				<i>Balance sheet after 1st leg (before unwinding repo)</i>			
Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
Cash	200	Deposits	300	Cash	100	Cash	300	Deposits	300	Secur-	
Secur-	150	Shareholders'		Secur-	-100	Secur-	50	Shareholders'		Funds	50
		Funds	50					Funds	50		
	<u>350</u>		<u>350</u>		<u>0</u>		<u>350</u>		<u>350</u>		<u>350</u>
 <i>Transactions (reverse leg)</i>				 <i>E's closing balance sheet (after unwinding)</i>							
Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
Cash	-100	Derivative	-5	Cash	200	Deposits	300	Secur-		Shareholders'	
Securities	95			Secur-	145	Shareholders'		Funds	45		
	<u> </u>		<u> </u>		<u> </u>		<u> </u>		<u> </u>		<u> </u>

³⁸ Accrual of interest on the security is ignored in this example. In some countries, the accrual of interest is included in the price; in others, it is ignored and calculated separately.

D. Gold swaps

(ix) The monetary authorities of country G undertakes a gold swap with the monetary authorities of country H in which G provides to H 10 ounces of gold, with a current market price of US\$300 per oz, in exchange for US\$3000 in currency and deposits. It is intended that the transaction be reversed in one month but is available on demand. During that period, the price of gold, expressed in US dollars, does not change.

Entries for G, if the swap is considered to a collateralized loan and the gold is retained on G's balance sheet:

Cash taker

<i>G's opening balance sheet (prior to the gold swap)</i>		<i>Transactions (recording the gold swap as a loan)</i>				<i>G's balance sheet after gold swapped for foreign exchange)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities		
Monetary gold 4000				Monetary gold 4000		Loan 3000	
Foreign exchange 2000	Shareholders' Funds 6000	Foreign exchange 3000	Loan 3000	Foreign exchange 5000	Shareholders' Funds 6000		
<u>6000</u>	<u>6000</u>	<u>3000</u>	<u>3000</u>	<u>9000</u>	<u>9000</u>		

<i>Transactions (unwinding the gold swap)</i>		<i>G's closing balance sheet after foreign exchange returned to F)</i>	
Assets	Liabilities	Assets	Liabilities
		Monetary gold 4000	
Foreign exchange -3000	Loan -3000	Foreign exchange 2000	Shareholders' Funds 6000
<u>-3000</u>	<u>-3000</u>	<u>6000</u>	<u>6000</u>

Entries for H, if the swap is considered to a collateralized loan and the gold is retained on G's balance sheet:

(x) If the price of gold were to fall (for example, from US\$300/oz to \$250/oz) during the period of the gold swap the entries would be the same⁴⁰. The reason for this is that the gold in a gold swap, when treated as a loan, is essentially provided as collateral. While there may have been a legal change in ownership, in practice, the effective ownership remains with G; the transaction has been to “borrow” foreign exchange, and to provide gold as collateral. When the loan is unwound, the same amount of foreign exchange is returned (plus some interest).

(xi) Were the gold swap, where the price of gold remains unchanged, to be treated as a transaction in monetary gold, the entries for G would be:

<i>G's opening balance sheet (prior to the gold swap)</i>		<i>Transactions (recording the gold swap as a transaction in monetary gold)</i>		<i>G's balance sheet after gold swapped for foreign exchange)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Monetary gold 4000		Monetary gold -3000		Monetary gold 1000	
Foreign exchange 2000	Shareholders' Funds 6000	Foreign exchange 3000		Foreign exchange 5000	Shareholders' Funds 6000
<u>6000</u>	<u>6000</u>	<u>0</u>		<u>6000</u>	<u>6000</u>
 <i>Transactions (unwinding the gold swap)</i>		 <i>G's closing balance sheet after foreign exchange returned to F)</i>			
Assets	Liabilities	Assets	Liabilities		
Monetary gold 3000		Monetary gold 4000			
Foreign exchange -3000		Foreign exchange 2000	Shareholders' Funds 6000		
<u>0</u>		<u>6000</u>	<u>6000</u>		

In this instance, the entries for H would be:

⁴⁰ Except that the closing balance sheet would record a lower value for monetary gold, having been adjusted through the revaluation account.

<i>H's opening balance sheet (prior to the gold swap)</i>		<i>Transactions (recording the gold swap as a transaction in monetary gold)</i>		<i>H's balance sheet after gold swapped for foreign exchange)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Monetary gold 8000		Monetary gold 3000		Monetary gold 11000	
Foreign exchange 5000	Shareholders' Funds 13000	Foreign exchange -3000		Foreign exchange 2000	Shareholders' Funds 13000
13000	13000	0		13000	13000

<i>Transactions (unwinding the gold swap)</i>		<i>H's closing balance sheet after foreign exchange returned to E)</i>	
Assets	Liabilities	Assets	Liabilities
Monetary gold -3000		Monetary gold 8000	
Foreign exchange 3000		Foreign exchange 5000	Shareholders' Funds 13000
0		13000	13000

In this case, there has been no change in either net or gross international reserve assets.

- (xii) If the gold price were to fall from US\$300 to US\$250, and if the transactions were to be considered to be a transaction in monetary gold, the entries would be as follows:

For G:

<i>G's opening balance sheet (prior to the gold swap)</i>		<i>Transactions (recording the gold swap as a transaction in monetary gold)</i>		<i>G's balance sheet after gold swapped for foreign exchange)</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Monetary gold 4000		Monetary gold -3000		Monetary gold 1000	
Foreign exchange 2000	Shareholders' Funds 6000	Foreign exchange 3000		Foreign exchange 5000	Shareholders' Funds 6000
6000	6000	0		6000	6000

*Transactions (unwinding
the gold swap)*

Assets	Liabilities
Monetary gold 2500	
Foreign exchange -2500	
0	

*E's closing balance sheet
after foreign exchange
returned to F)*

Assets	Liabilities
Monetary gold 3333	
Foreign exchange 2500	Shareholders' Funds 5833
5833	5833

Note: the value of the monetary gold on G's closing balance sheet has been adjusted to take account of the drop in price that affects all its gold holdings, both those that remained that were not involved in the gold swap and those re-acquired. There were 13.3 ozs held at the close, which at US\$250/oz equals 3333. These valuation changes should be put through the Other Changes in Assets Account but, for simplicity, this step has not been presented.

For H, the entries would be:

*H's opening balance
sheet (prior to the
gold swap)*

Assets	Liabilities
Monetary gold 8000	
Foreign exchange 5000	Shareholders' Funds 13000
13000	13000

*Transactions (recording
the gold swap as a trans-
action in monetary gold)*

Assets	Liabilities
Monetary gold 3000	
Foreign exchange -3000	
0	

*H's balance sheet after
gold swapped for foreign
exchange)*

Assets	Liabilities
Monetary gold 11000	
Foreign exchange 2000	Shareholders' Funds 13000
13000	13000

*Transactions (unwinding
the gold swap)*

Assets	Liabilities
Monetary gold -2500	
Foreign exchange 2500	
0	

*H's closing balance sheet
after foreign exchange
returned to E)*

Assets	Liabilities
Monetary gold 6666	
Foreign exchange 5000	Shareholders' Funds 11666
11666	11666

Note: the value of the monetary gold on H's closing balance sheet has been adjusted to take account of the drop in price that affects all its gold holdings, both those that remained that were not involved in the gold swap and those re-acquired. There were 26.6 ozs held at the

close, which at US\$250/oz equals 6666. This valuation change should be put through the Other Changes in Assets Account but, for simplicity, this has not been presented.

E. Gold loans

Gold swaps are complicated because of gold’s dual function: as a financial asset (monetary gold) and as a commodity (all other gold). This involves the process of “(de)monetization” whenever its function changes. Monetary gold can only be held by monetary authorities as part of international reserves. When a gold loan takes place, in effect, the gold is transformed into non-monetary gold and that requires additional entries.

(xiii) Central bank, J, “loans” 10 oz of gold, at US\$300/oz, to a domestic financial institution, K, in return for which a loan/deposit receivable/payable is created and, as collateral, K places US\$3100 in US government securities, priced in both nominal and in current price terms. The collateral does not change ownership; it is recorded off balance sheet. Under the terms of the “loan”, K agrees to return the gold on demand; otherwise, the collateral will be exercised. Unless so demanded, the loan/deposit ends in 30 days when the gold and the securities are returned to their original owners. The agreement allows for all the market risk for both the gold and the US government security to reside with the original owners. In other words, whether the price of gold rises or falls, K returns to J 10 oz of gold; similarly, regardless of the movement in the price of the securities, J will return US\$3100 in US government securities, as priced on the first day of the loan. All property income on the securities remains receivable by K (unless K defaults on the terms of the agreement); J receives a payment from K for the use of the gold (it is usually classified as “interest” but it may also be considered a payment for a service—“the provision of gold”).

If the transaction is not considered to involve a change in ownership of the gold (or of the securities) J’s entries would be:

<i>J’s opening balance sheet</i>		<i>Other changes in volume of assets (Demonetization)</i>		<i>J’s balance sheet following demonetization</i>	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Monetary gold	4000	Monetary gold	-3000	Monetary gold	1000
Foreign exchange	2000	Physical gold	3000	Physical gold	3000
				Foreign Exchange	Shareholders’ Funds
				2000	6000
	6000		0	6000	6000

(Reserve assets = 6000)

(Reserve assets = 3000)

Transaction

J’s balance sheet

(loan/deposit of gold to/with K)

Assets		Liabilities
Physical gold	-3000	
Loan receivable	3000	Shareholders' Funds
	<u>0</u>	

following loan/deposit to/with K

Assets		Liabilities
Monetary gold	1000	
Loan Receivable	3000	
Foreign Exchange	2000	Shareholders' Funds
	<u>0</u>	<u>6000</u>

(Reserve assets = ?)

After the gold “loan”, reserve holdings of J will be determined by two factors: the quality of the loan receivable from K and the liquidity and accessibility that J has to the US government securities in the event of a default by K. If J perceives its asset (the loan) or the collateral (the US government security) as meeting the criteria for reserve assets, then J may record the loan receivable as part of its international reserves, depending on whether a claim on a resident entity would constitute a reserve asset. If J sees any reason why the loan or the collateral cannot be used for reserve purposes, it should not record them as part of reserves. If the loan receivable from K, a resident, is to be included in reserve assets, the question arises as to which instrument it should be classified to. The practice has tended to be record the loan as part of monetary gold, which would mean that it will be “monetized” again. In that case, the gold loan becomes “monetized” as follows:

*Other changes in volume of assets
(Monetization)*

Assets		Liabilities
Monetary gold	3000	
Loan receivable	-3000	
	<u>0</u>	

*J's balance sheet
following monetization*

Assets		Liabilities
Monetary gold	4000	
Foreign exchange	2000	Shareholders' Funds
	<u>6000</u>	<u>6000</u>

(Reserve assets = 6000)

The net result is that no transaction is recorded by the monetary authority. There are unsatisfactory aspects to this situation. Firstly, the gold would be recorded in two places at the same time, in different classifications. On the one hand, were the gold loan to be recorded as part of reserve assets, it would be monetary gold. On the other hand, the gold, the actual

physical gold, which was demonetized and either held by K or K has sold into the market (or had it exported), will be recorded as part of the inventory of the commodity gold. Secondly, if the gold loan receivable is included as part of international reserves by J, there is no counterpart entry in the system to K's loan payable to J. As a consequence, the system will be out of balance on two counts: for the commodity and for the loan financial instrument, the result of the dual role played by gold.

There are, perhaps, three ways in which this problem can be overcome. The most satisfactory manner in which these imbalances can be avoided is for gold loans not to be classified as *monetary gold*, for which there is no counterpart in the system. The second manner is for a gold loan to be recorded as a transaction in the commodity gold, thereby overcoming the problem created by the dual nature of gold. The entries would all be the same as those above up to the step prior to monetization; the transaction would still be recorded as a loan receivable/payable as no cash has been received (and the collateral remains on K's balance sheet and is not recorded on J's). The difference lies in the way in which the loan receivable is recorded: in treating the transaction as an outright sale, the loan receivable would not be considered part of monetary gold. The question then remains whether there is anywhere in the system that allows a (gold) loan receivable from a resident to be considered part of international reserves and if so, under which instrument. A third approach would be to create a fictitious loan liability on K's balance sheet (or in the aggregate statistics). The implied counterpart will need to be a non-resident so that international assets (and the country's net worth) are not overstated. However, the problem with this approach is that while it may allow the macroeconomic statistics for the domestic economy to appear to overcome the situation, it does not address the imbalance internationally, as the fictitious loan liability will not have a matching loan asset held by a non-resident.